GRAPHOLITE

User Manual

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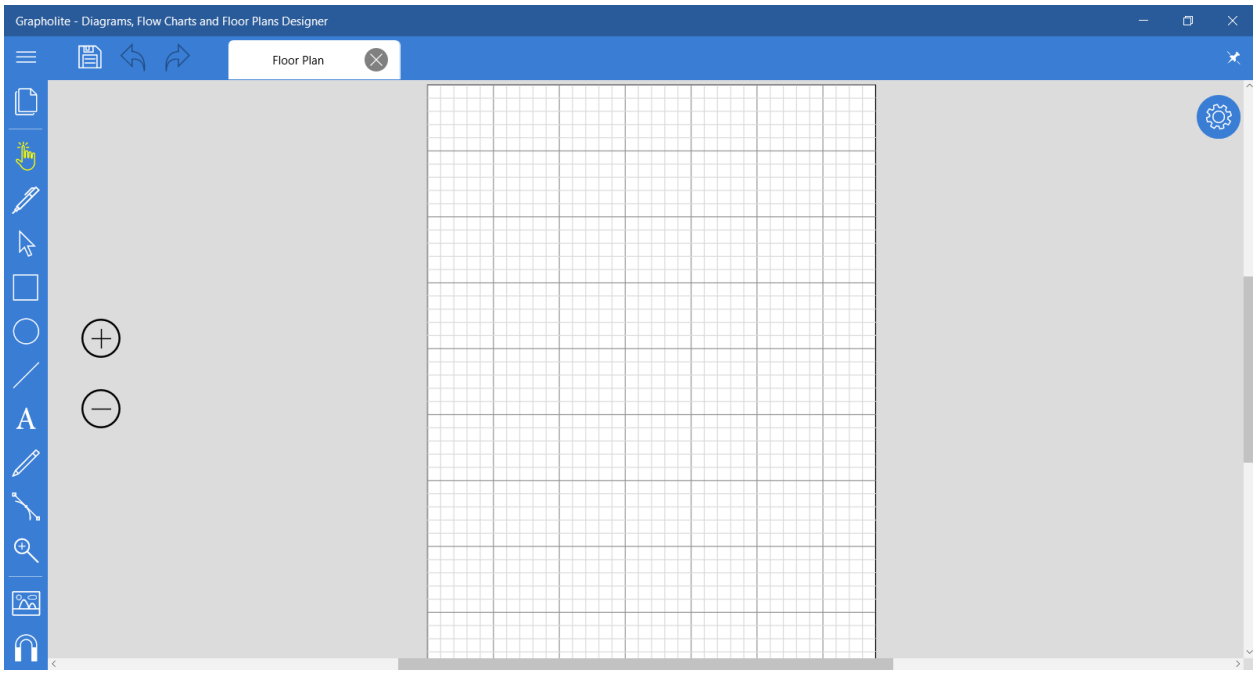
ABOUT THIS USER MANUAL

Grapholite is a cross-platform designer of diagrams and business graphics available for Windows 10 (as a touch-enabled Windows Store app), iPad, Android, Windows Phone and a classic desktop application for Windows. All versions of the software are compatible in regards to file formats and have virtually identical set of features.

This user guide is based on the app version for Windows 10 because this version supports all work modes for all input interfaces: touchscreen, pen, mouse and keyboard. In spite of this fact, the user guide can be applied to any software version. (User interface for different platforms may slightly vary.)

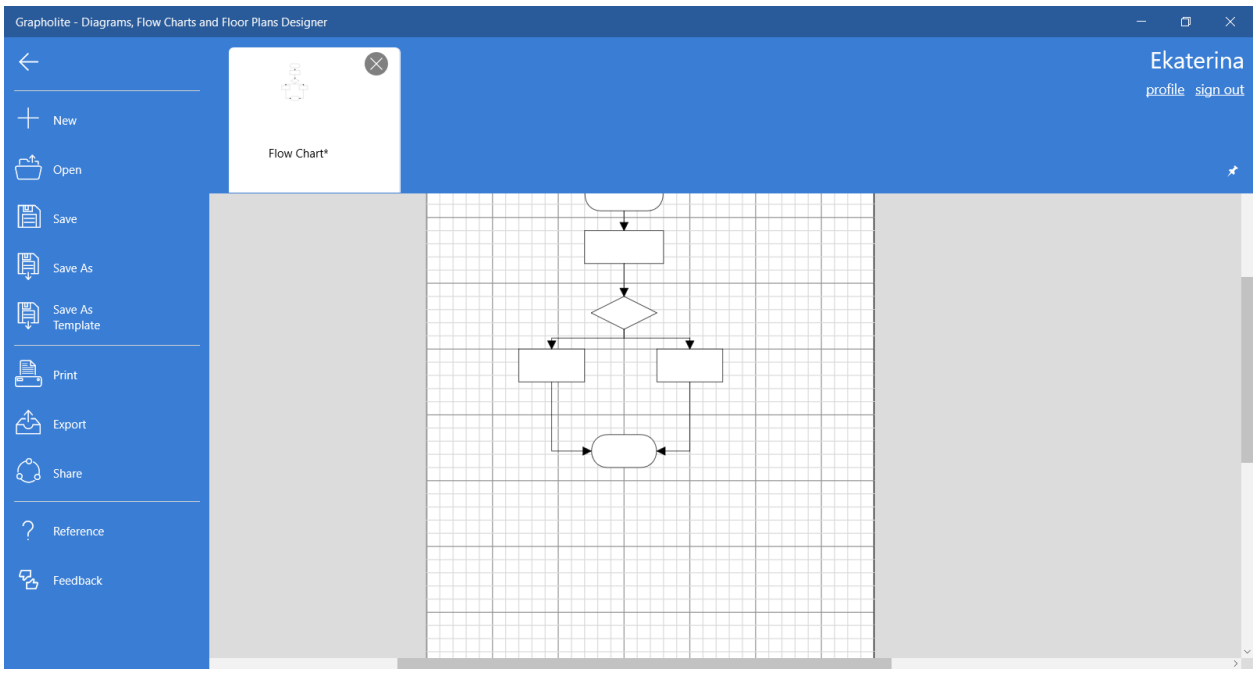
USER INTERFACE OVERVIEW

Grapholite Diagrams is a professional and state-of-the-art diagramming tool that offers the most up-to-date user interface that will allow users to create business and technical drawings through any interface: mouse or touch.



Grapholite diagrams editor is quite laconic to leave more free space for mobile devices with low resolution or small screens according to the latest Windows design guidelines. Therefore, diagram area takes bigger screen area. On the left of the screen, you will see a toolbar that contains a number of tools that will help you create and edit the diagrams. They include Manipulate tool, Draw and recognize, Select, Freehand, Pan, Eyedropper, Picture and other tools.

The toolbar also provides quick access to Save, Undo/Redo commands as well as access to the file menu.



Grapholite file menu includes common app commands:

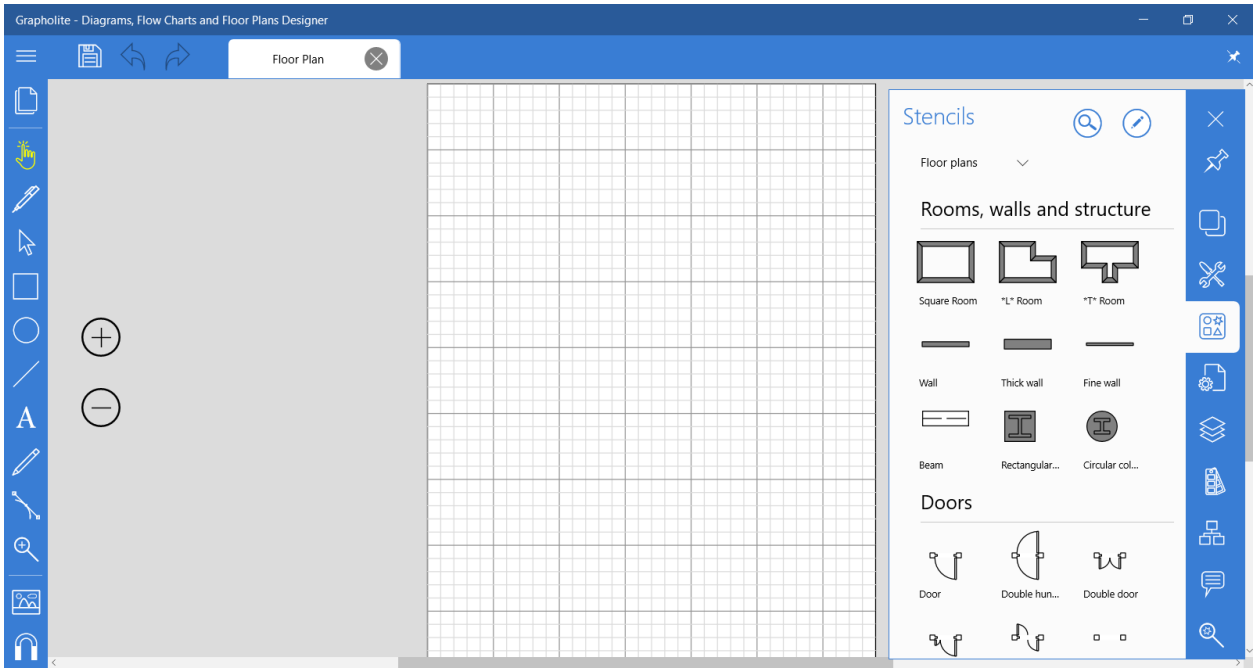
- New – create a new diagram;
- Open – open existing diagram from your local storage or OneDrive;
- Save – saves current diagram;
- Save as – allows saving the diagram to the selected location;
- Save as template – saves current diagram as a template. You can use this function to save page setting such as page size, grid step, and measurement units for further use to create new documents. More complicated templates may include corporate logos or watermarks;
- Print – provides access to print settings and allows sending of the created diagrams to hard copy;
- Export – exports the created diagram to the external format for further use: PDF, PNG, JPEG, SVG, VDX Visio Drawing;
- Share – allows sharing a diagram to the other apps;
- Reference – opens app's user guide;
- Feedback – allows users to contact Grapholite team;

The file menu shows diagram thumbnails on the tab to make it intuitive for a user to switch between multiple diagrams in the editor.

Grapholite file menu appears only when necessary (when you click on the toolbar button) and automatically hides when you don't need it any longer.

The icon in the top right corner of the app opens additional panels: Page properties (), Properties (), Stencils (), Arrange (), Layers (), Themes and styles (), Structure and layout (), Notes (), Icon Finder ().

You can pin this panel to make them visible all the time (it's handy when you have a big screen), otherwise it will automatically hide once you're done working with it.



Grapholite Diagrams was initially developed for hybrid devices and its interface was designed considering the idea that most controls and UI elements should be equally convenient to manage using any interface and input tools: mouse, keyboard, stylus, and touch screen. We tried to minimize UI difference on different devices and input modes; it helps reduce application learning curve and provides the ability to switch between the input modes without the need to re-start the application and even to use all input tools simultaneously.

In spite of this fact, in some situations we dynamically change application behavior depending on the device mode. For example:

- Some UI elements (for example, scroll bar) are hidden when touch screen is used;
- Zoom tools are visible only when a keyboard interface is used as there is a special gesture for this command on touch screen;
- Context menu shows upon the right mouse click. In touch mode, you need to long tap to call a context menu.
- All panels are hidden automatically except the toolbar and a button in the corner; it makes sense when a small touch screen is used. It's also possible to pin control panels which is more suitable when a user works on a desktop.
- All frequently used commands are available on hot keys or in the context menu adjusted for touch interface;
- Default action is changed depending on the used interface. Touch screen – scrolling; mouse – selecting with lasso; stylus – drawing and recognizing of the drawn shapes. They can be changed by force selection of the corresponding tool.

Below you will find some tips and tricks on how you can manipulate some Grapholite tools with different input methods.

GRAPHOLITE TIPS AND TRICKS FOR MOUSE AND TOUCH INTERFACES

Panning:

Mouse: Select the Pan tool in the Tool menu available on the left of your screen. Hold left mouse button and move the document. Or you can just hold the Space keyboard button pressed and pan the diagram with a mouse pointer.

Touchscreen: You can pan the document at any moment without the need to switch the tools. This is a default option in the touchscreen mode. Just touch the screen (any diagram place, except the selected diagram element) and move the document. You can also pan with two fingers touching the document at any place and in any mode.

Scrolling:

Mouse: Scroll your mouse wheel or use scroll bars to scroll the document vertically. Shift + mouse wheel will scroll the document horizontally.

Touchscreen: No scrollbars are available in the touchscreen mode. Just move the document up or down, to the left or to the right with your fingers.

Zoom:

Mouse: Select Zoom tool in the Tool menu available on the left of your screen. A little flyout menu will appear. It contains the following options: Page width, 100%, Document. There are also zoom buttons that are always available on the left of the screen. You can use them to zoom in and out even when the other Tool mode is selected. Ctrl + mouse wheel will scale the document as well.

Touchscreen: In the touchscreen mode, zoom buttons on the left of the screen are hidden, because users can zoom the document with fingers. Pinch to zoom out. Spread to zoom in.

Adding diagram elements:

Mouse: A diagram element is added to the document by a single mouse click on it in the Stencils library. You can also drag and drop an element to the particular part of the diagram.

Touchscreen: Tap the stencil or drag and drop to add it to the diagram.

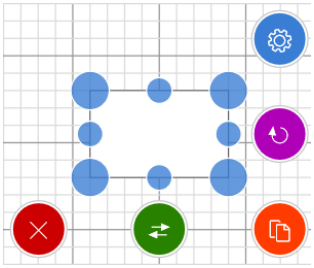
Editing stencils:

In order to edit stencils you need to switch to the Manipulate tool.

Mouse: Click the shape to select it.

Touchscreen: Tap the shape to select it.

A selected shape has a number of control points that will help you manage element's size and shape.



Frequently used options are available through the corresponding icons:

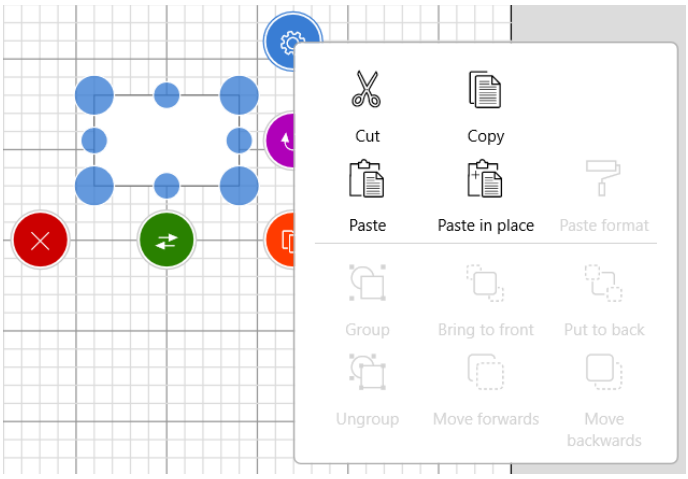
1 – Delete;

2 – Create connection: Drag to another shape to create a connection. Click or drag to the empty diagram area to create a connected shape of the same type;

3 – Duplicate: Click to create a duplicate. Drag to move a copy;

4 – Rotate;

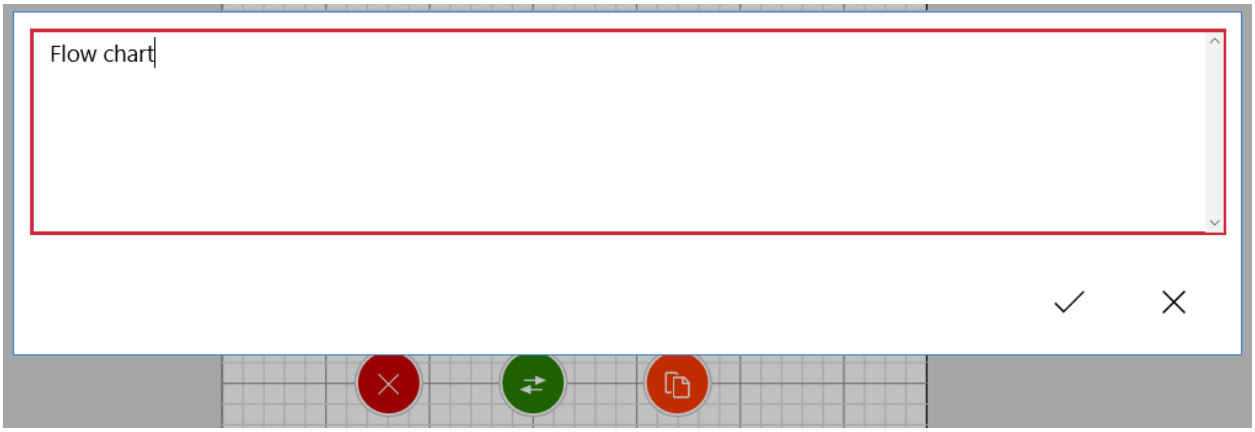
5 – More options (Copy, Select, Edit, Undo, Group, Add picture, Draw and recognize) available in the context menu.



Adding text labels to the diagram elements is easy:

- Select an element and start typing the text using the keyboard;
- Select an element and click it once again to access the text input window.

Confirm changes and the text is added.



Touchscreen: The same functions are available in the touchscreen mode.

Selecting diagram elements:

Touchscreen: Tap to select an element. Tap and hold on the empty diagram area to select diagram elements with lasso. You can also switch to the Select tool > Lasso or Multi select mode.

Mouse: Click on the necessary diagram objects with pressed Shift or switch to Multi Select mode to select multiple objects.

Click with pressed Alt to select by lasso. The diagram element under the mouse pointer will be ignored (not selected) and you will start lasso selection as if the mouse pointer was on the empty diagram space.

If you need to select a single diagram element which belongs to the group, you need to select the entire group at first and then click or tap on the necessary object once again to select it for further editing. The rest of the group elements won't be affected.

Calling context menu:

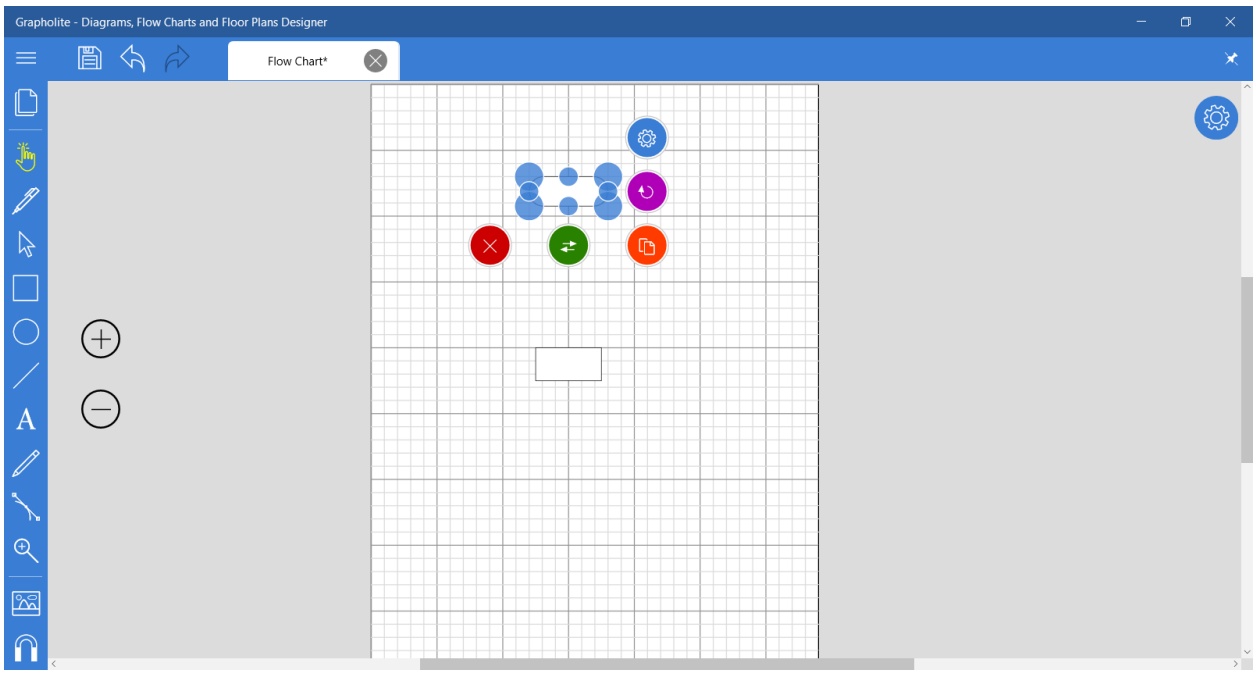
Mouse: Right mouse click on any diagram area.

Touchscreen: Tap and hold on any diagram area, then release without any gestures.

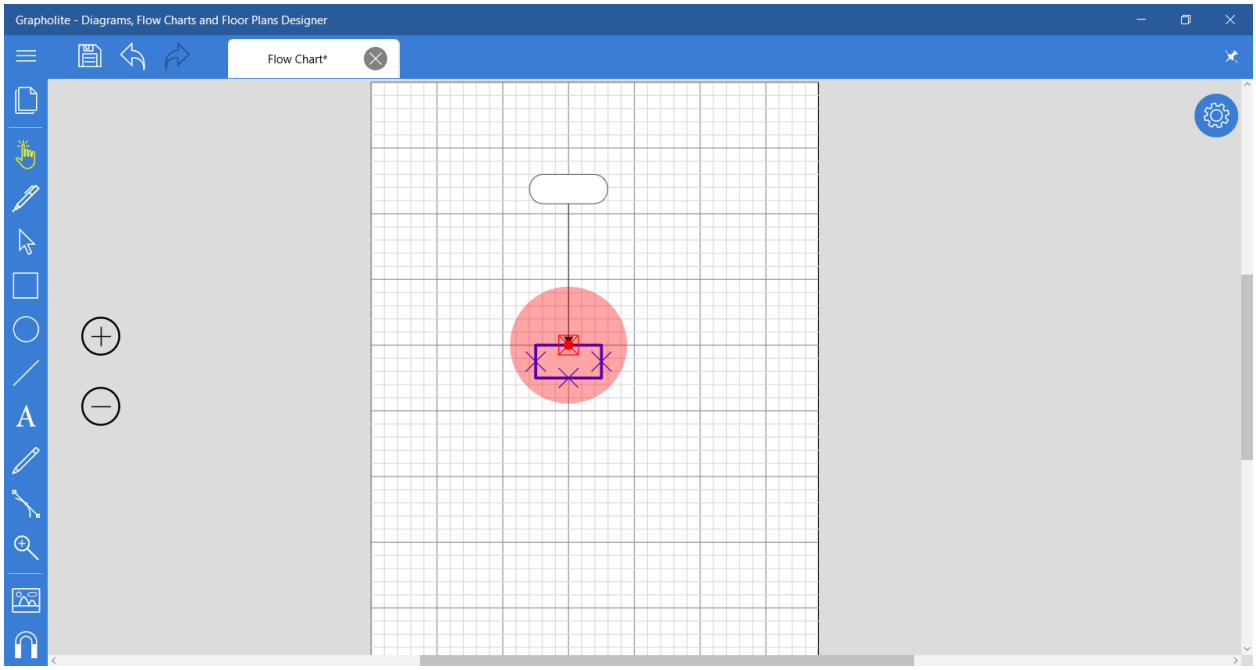
Connections

In some diagrams such as flowchart and org charts, shapes should be connected to show how the workflow proceeds from one shape to another. Adding connections is quite easy.

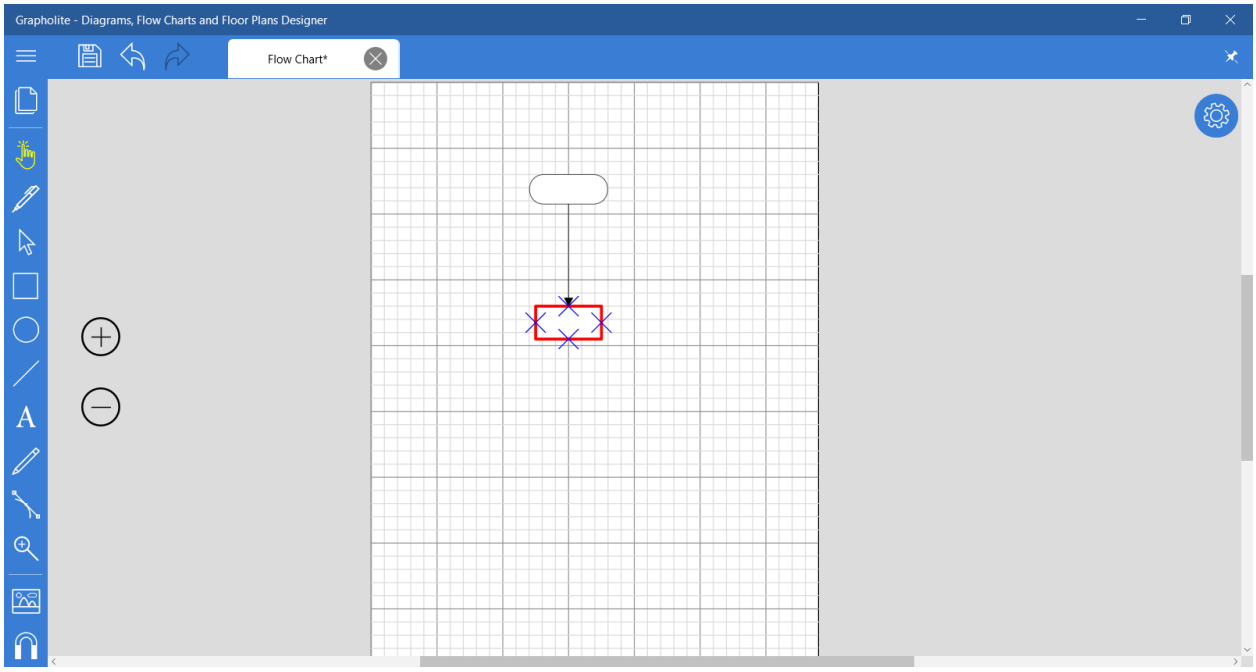
1. Tap a shape to select it.



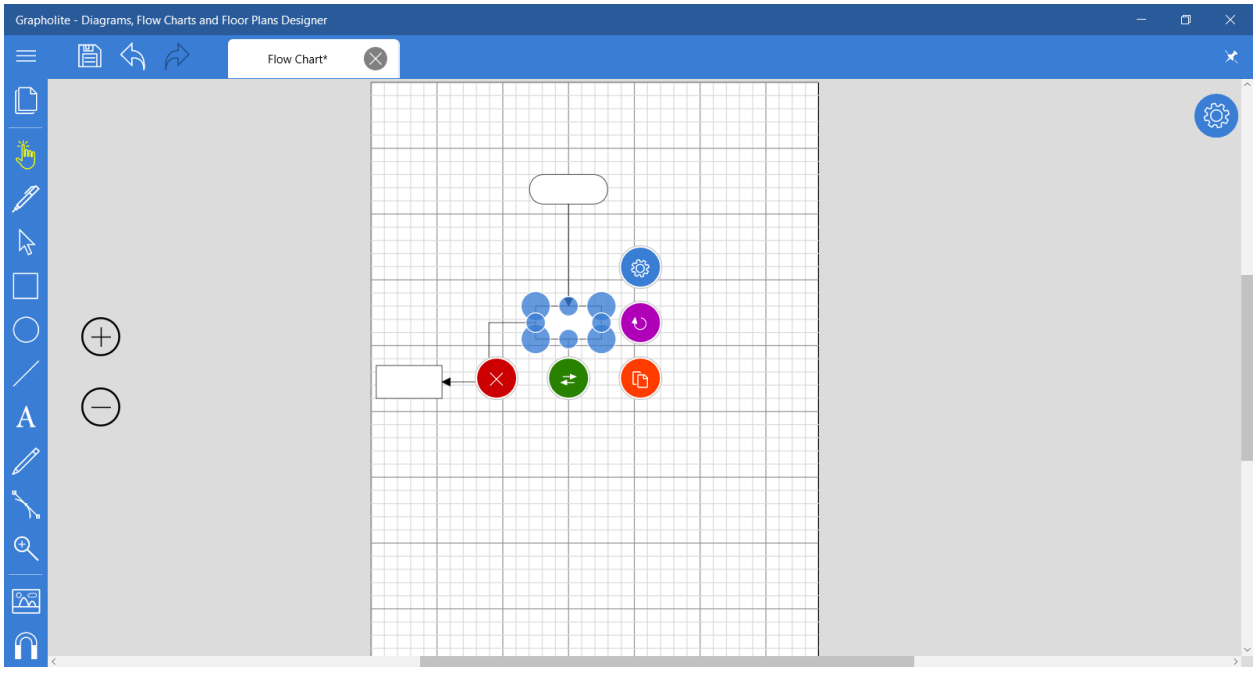
2. Drag the connection icon to the shape you want to connect to. Initial connection port is selected automatically: it will be the closest port to the connected shape.
3. When you reach the connected shape, you will see all possible ending ports you can connect to. They are marked with little blue crosses. Drag the connector to any of them. Once you reach any port you will see a red circle at the port you are going to connect to; this means that you reached the port correctly and the connection is created. Drop the connection. This is a point connection and means that the connector will always connect to the selected connection port even when you move the shape.



4. If you want to allow the connector to move around the shape when it moves on the diagram area, you need to drag the connector to any connection port of the shape you want to connect to. When a shape is indicated with a red rectangle release the mouse button. This is a dynamic connection. This means that the connector will be able to change connection ports if the shape is moved around. Setting dynamic connections is preferable because you won't need to edit connections when moving the shapes around the diagram. Grapholite will find the best connection options for you.



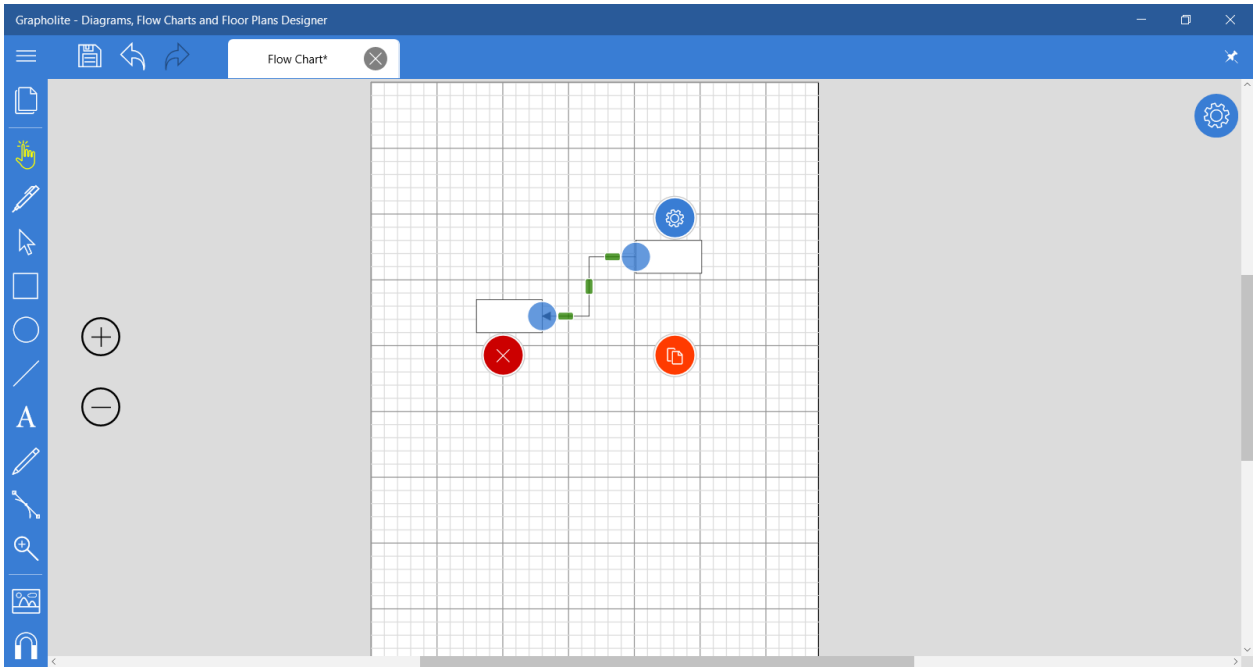
A connection is also created automatically when you drag the connector to an empty diagram area. In this case, a copy of the shape is created and it is automatically connected to the original one. This is an easy way to design diagrams with many similar elements quickly.



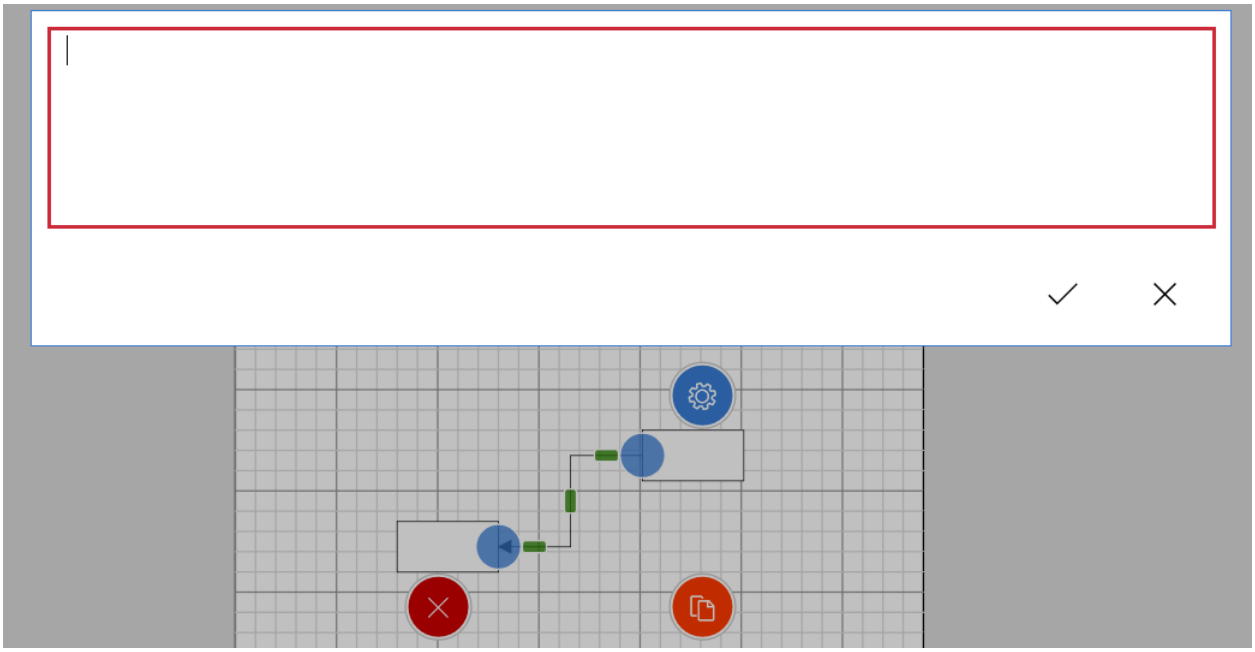
Editing connections

Though our automatic connection layout mechanism is quite good, you might want to change connector appearance.

1. Tap a connector to select. You will see start and end ports marked with blue circles, control points responsible for the connector trajectory marked with little green rectangles, delete and duplicate options as well as a context menu.



2. Move port marks to edit start and end points of a connector.
3. Move green control points to change connector trajectory. If any other connections are located near to or cross the edited connector, they will automatically re-layout in the most optimal manner.
4. Tap the selected connector once again and you will be able to add a text label. They are used to specify an obligatory condition that is not indicated by a separate shape.



5. If you are not satisfied with the changes you've done you can re-set them. Tap the context menu icon and select "Reset connector route" item. The connector will get back to the automatically set route.

GRAPHOLITE TOOLBAR

Grapholite offers a rich set of tools that will help users manage diagram appearance, view and mutually layout on the form. It's possible to change type of a tool by clicking on the Tools icon on the left of your screen. Tap it and select the necessary tool.

Grapholite toolbar is located on the left of your screen. It is always visible for quick access to the most frequently used tools and commands. Let's review all the included tools.

PAGES

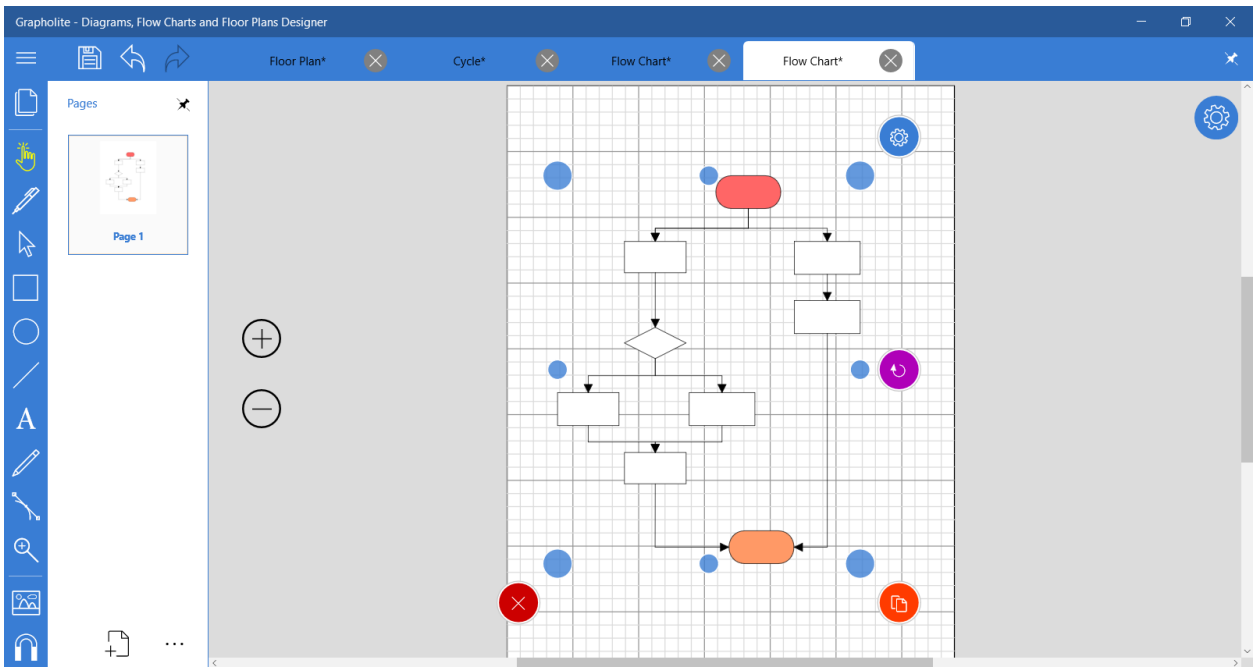
A new diagram opens with just a single page, but users can add as many pages as they want. Using multiple pages for a drawing may be helpful in the following cases:

- Keeping related diagrams in the same file. For example, for a floor plan project for multilevel houses, you can keep layout of each level on a separate page in a single document.
- Keeping all revisions of a single diagram in one file to see how a project has progressed.
- Link pages together. For example, you can use hyperlinks to go from a flowchart diagram shape to a detailed procedure on another page.

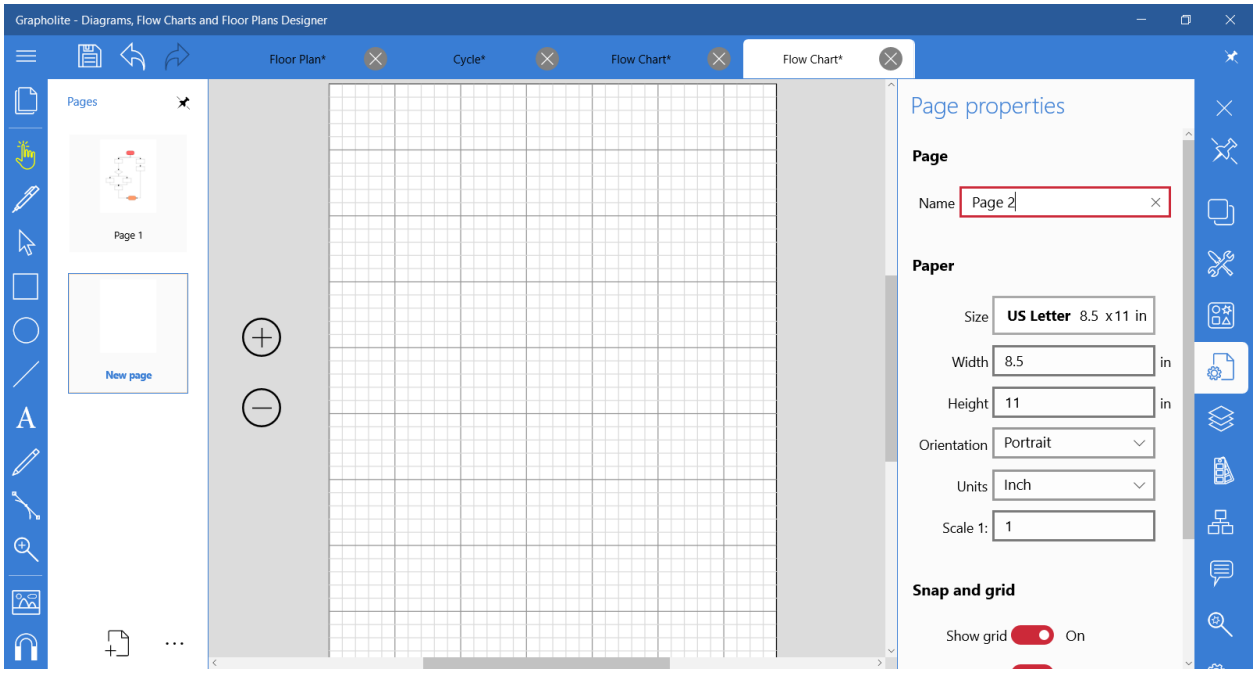
Each new diagram page inherits the size, orientation, scale, measurement unit, and grid settings of the page currently displayed in the diagram area by default. However, you can change any of those settings for the new page.

To add a new page you need to:

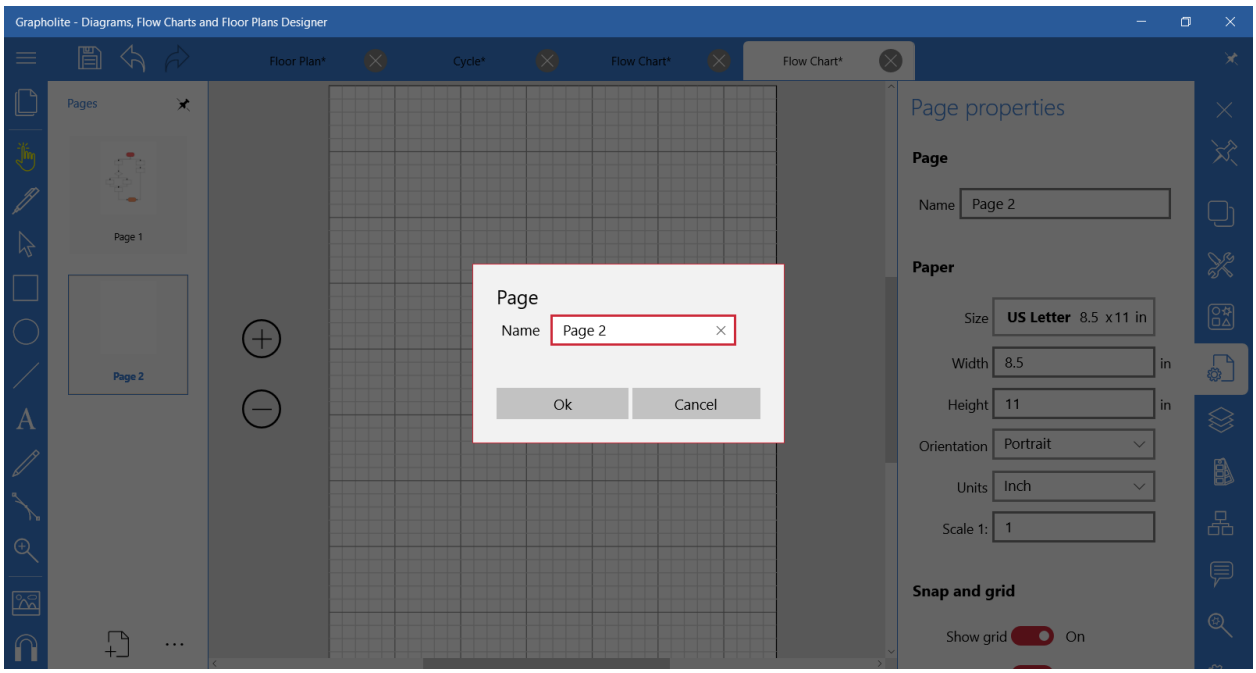
1. Click Pages icon on the toolbar. And you will open another panel that shows a list of diagram pages as thumbnails.



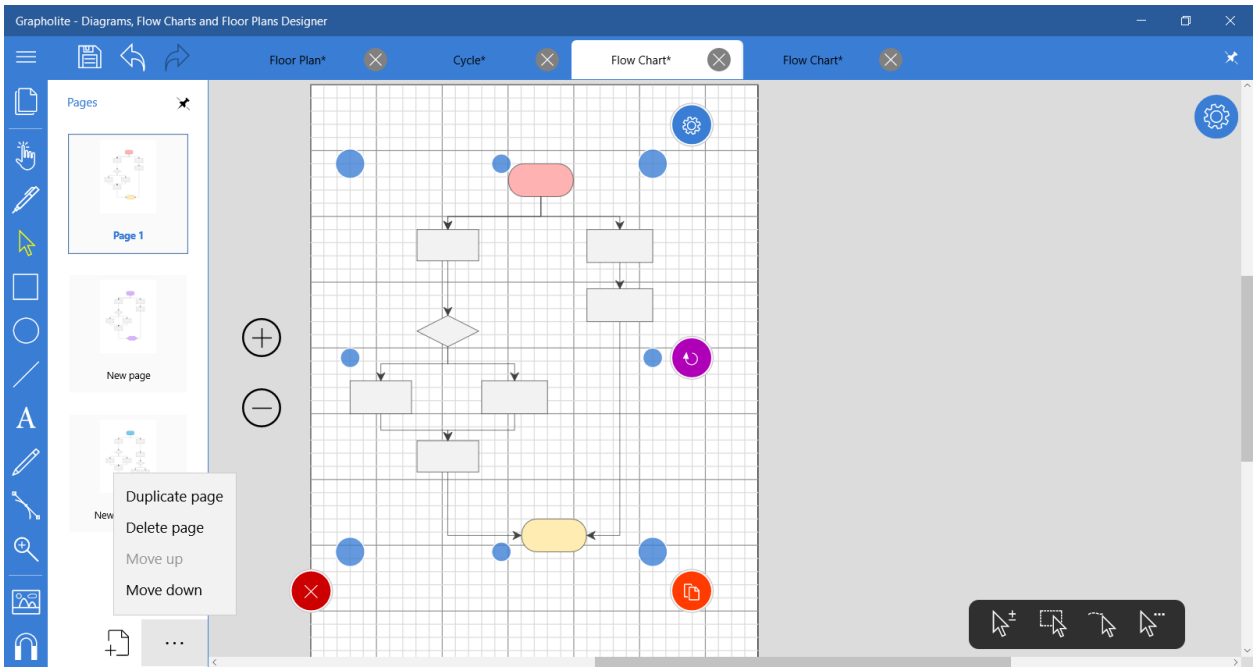
2. Click Add new page to add a page. You can add as many pages as you want.
3. Click the **Page Properties** panel, and setup page name and other page properties if necessary.



Or you can alternatively double click on the page thumbnail on the pages panel to rename a page.



You can also duplicate a page, delete it and move up or down in the list. These options are available in the "More options" menu.

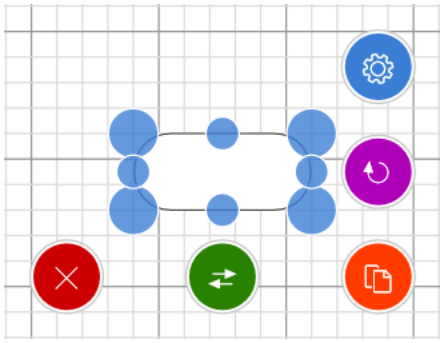


MANIPULATE TOOL

Manipulate tool lets you edit the parameters of certain diagram objects (shapes and connections) by dragging manipulators on the diagram area.

Tap or click on the element to select it. Now you can drag and drop it where you chose on the diagram area. Each selected shape has control points (little circles on the corners and midpoints); you can use them to extend

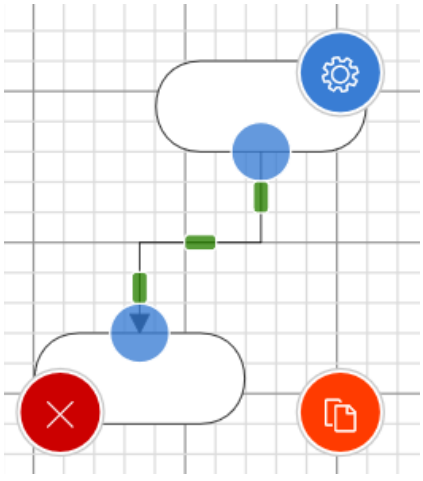
the dimensions of the shape. Just click or tap them and drag. To rotate an element click the curled arrow icon and drag it.



You can also delete the shape by clicking the cross icon . It's possible to quickly duplicate the shape by just tapping the duplicate icon . You can drag the icon to the diagram area you choose to conveniently locate the duplicated shape on the diagram area.

Manipulate mode also allows adding connections by dragging the two-way arrow icon to another shape or to an empty diagram area. In this case, you will create a copy of the shape you dragged connection from and a newly created shape will be connected to the original one.

You can edit lines and connectors as well. Tap or click it to select. End points are marked with blue circles. In case of connectors with more than two segments one control point at each middle segment is responsible for changing the segment.



Drag the blue circles to change start and end ports of a connector. You can select another port of the same shape; they are marked with violet crosses and when you reach one of them, a red circle will indicate it. Now

you can drop the connector. Deleting ( ) and duplicating ( ) a connector is available via the corresponding buttons.

Manipulate tool is smart and can determine the interface you use and changes its behavior correspondingly.

- Stylus: it works as the Draw and Recognize tool;
- Mouse: it works as the Select tool;
- Touchscreen: it works as the Manipulate tool (but it additionally allows panning with one finger gesture).

DRAW AND RECOGNIZE TOOL

Draw and recognize tool is helpful when you use a stylus or your fingers for drawing a diagram or some its elements. Using stylus in the Manipulate mode works as Draw and Recognize tool as well.

Though drawing with a mouse is also possible. This mode lets you draw shapes directly on the diagram area without the need to look for the necessary shape in the stencils library. Grapholite tries to detect what shape you have drawn and helps you out by straightening the lines and converting corners, if any. Grapholite can recognize the following shapes: rectangles, circles, ellipses and diamonds. If the shape you drawn did not straighten it means Grapholite didn't recognize your shape and you need to undo and try again. It helps if your last line (or end of you line) overlaps the beginning of this line; otherwise Grapholite will not recognize your shape. It is able to recognize only closed shapes (the exceptions are a straight line and a connection).

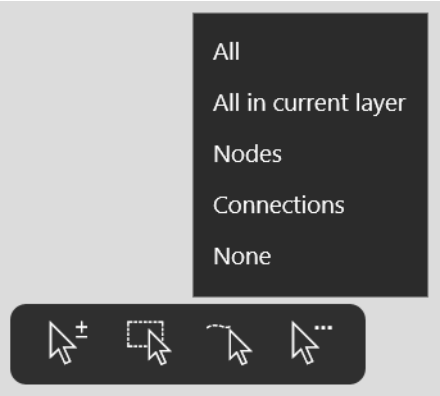
Even if Grapholite didn't recognize your drawing, it becomes a diagram element and can be edited. Click it to select and you will see the control points on the corners and midpoints. Use them to resize the drawing. Rotation is available via the curled arrow button; click it and drag to rotate. You can also delete it and duplicate using the corresponding buttons. Additional options can be accessed via the context menu.

Grapholite can also recognize a line drawn from one shape to another as a connector and denote it correspondingly.

SELECT TOOL

Use the **Select tool** to specify the diagram elements you will modify using other tools or commands.

Switch to the Select tool in the Toolbar available on the left of the screen. You will see a little flyout menu on the right bottom of your screen.



It offers the following options:

Select many

This option allows selecting multiple diagram items by just clicking each of them. The selected elements are grouped inside the selection for further manipulations. The selection area has control points similar to those a single selected shape has – little circles on the corners and midpoints of the selection. You can use them to change the dimensions of the selection and all the selected elements will be resized. Rotate the selection by clicking and dragging the curled arrow button. You can also delete and duplicate the selection. Context menu options are accessed by clicking the Settings button.

In the mouse mode, you can select multiple objects by keeping Shift button pressed and clicking the necessary diagram elements.

Select by lasso

Click the corresponding button in the Select flyout menu. With the Select by lasso function enabled you can start the selection at any diagram area, including diagram objects; they will not move and selection will start right over them. This is useful if your diagram has a lot of objects and no empty space is available next to the area you want to select.

1. Click and hold the mouse button a short distance away from the diagram elements you want to select to establish the selection starting point.
2. Move the cursor and you will see that the selection box grows.
3. When you release the mouse button, the objects inside the selection are bundled for editing.

Note: Partially selected elements are not included in the selection. Please make sure to select the whole diagram object.

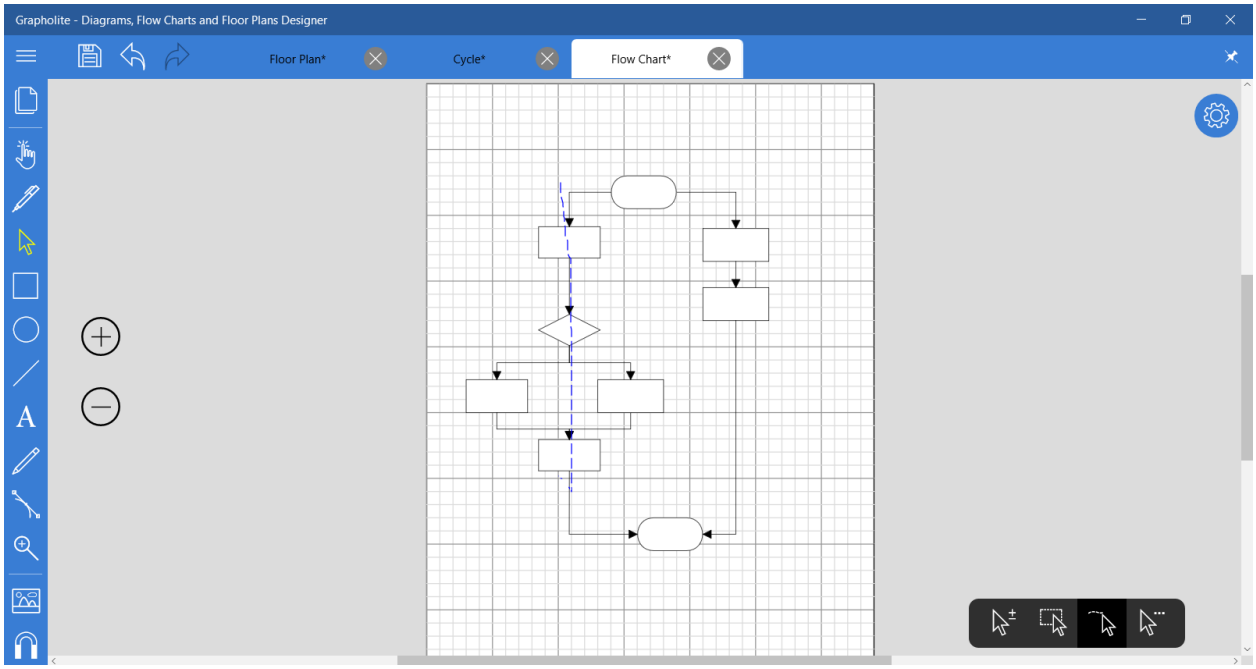
You can also select by lasso regardless of where the selection start point is located (empty diagram area or diagram object) in the following ways (even if the Select by lasso function is disabled):

- For mouse: click Alt and start dragging a mouse pointer. Drop when all necessary elements are selected;
- For touchscreen: long tap on any diagram area and start moving your finger on the screen. Drop when all necessary elements are selected.

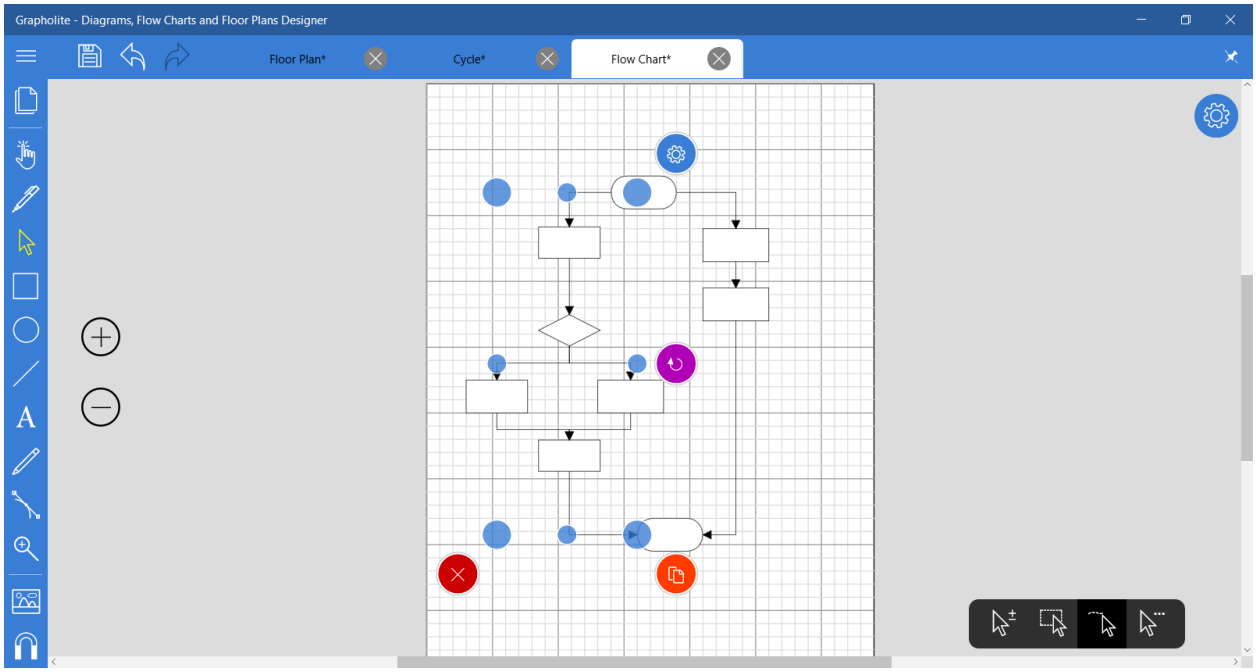
Note: If the object selected is part of a group, the group will be selected, and any actions performed will affect the entire group as if it were one object.

Select on path

Click the corresponding button in the Select flyout menu. Now you can select the diagram objects along the path you indicate. Click on the diagram area and start moving the cursor, you will see a blue dashed line that indicates your path.

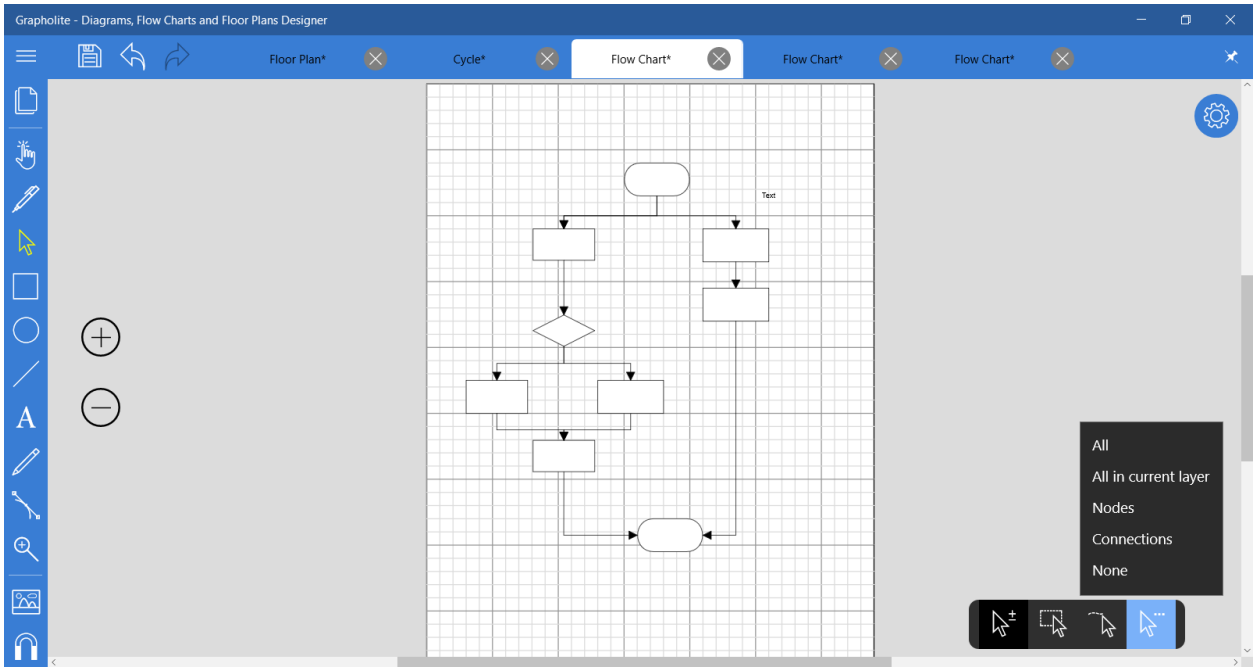


Once you reach the last desired element to select, release the mouse button and all diagram elements along your path will be selected.



Additional options

There are also additional select options that provide quick access to particular diagram elements.



Select all

This option will allow you to select the entire diagram. You can select all diagram elements by pressing Ctrl+A.

All in current layer

This option allows selecting all diagram elements in the current layer.

Select nodes

This option allows selecting all nodes in the diagram. Deleting or duplicating the elements selected in this way will affect only shapes of the diagram. Connectors will remain unchanged.

Select connections

This option allows selecting all connections in the diagram. Deleting or duplicating the elements selected in this way will affect only connectors. Shapes will remain unaffected.

None

This option resets current selection.

RECTANGLE

Quick access to a rectangle shape . Click it and start drawing a rectangle on the diagram where necessary. The rectangle has all properties of a common diagram element, you can edit and connect it to the other diagram elements.

ELLIPSE

Quick access to an ellipse shape . Click it and start drawing an ellipse on the diagram where necessary. The ellipse has all properties of a common diagram element, you can edit and connect it to the other diagram elements.

LINE

Quick access to a line shape . Click it and start drawing a line on the diagram where necessary. The line has the following properties: edit and delete it. When created, a line snaps to vertical, horizontal and diagonal direction.

TEXT

Quick access to a text element . Click it and place a text control on the diagram where necessary. Click the Text element once again to edit text. The text has the following properties: edit, duplicate, rotate. Font properties (font, size, bold, italics) are available in the flyout menu.

FREEHAND

The **Freehand tool** is most useful when making quick, free-form design notes. Use this tool to draw irregular hand-drawn lines that follow the movement of your pointer. Enable the freehand mode on the Toolbar available on the left of your screen. Click and hold to place the starting point of your drawing. Drag the cursor to draw and release the mouse button to stop drawing. The segments smoothen when you finish the sketch.

All lines drawn in this mode become diagram elements. You can select them and see the control points on the corners and midpoints. Use them to resize the drawing. Rotation is available via the curled arrow button; click it and drag to rotate. You can also delete and duplicate it using the corresponding buttons. Additional options can be accessed via the context menu.

If you select the “Edit shape” item in the context menu you will be switched to the Shape mode where you are able to edit the drawing.

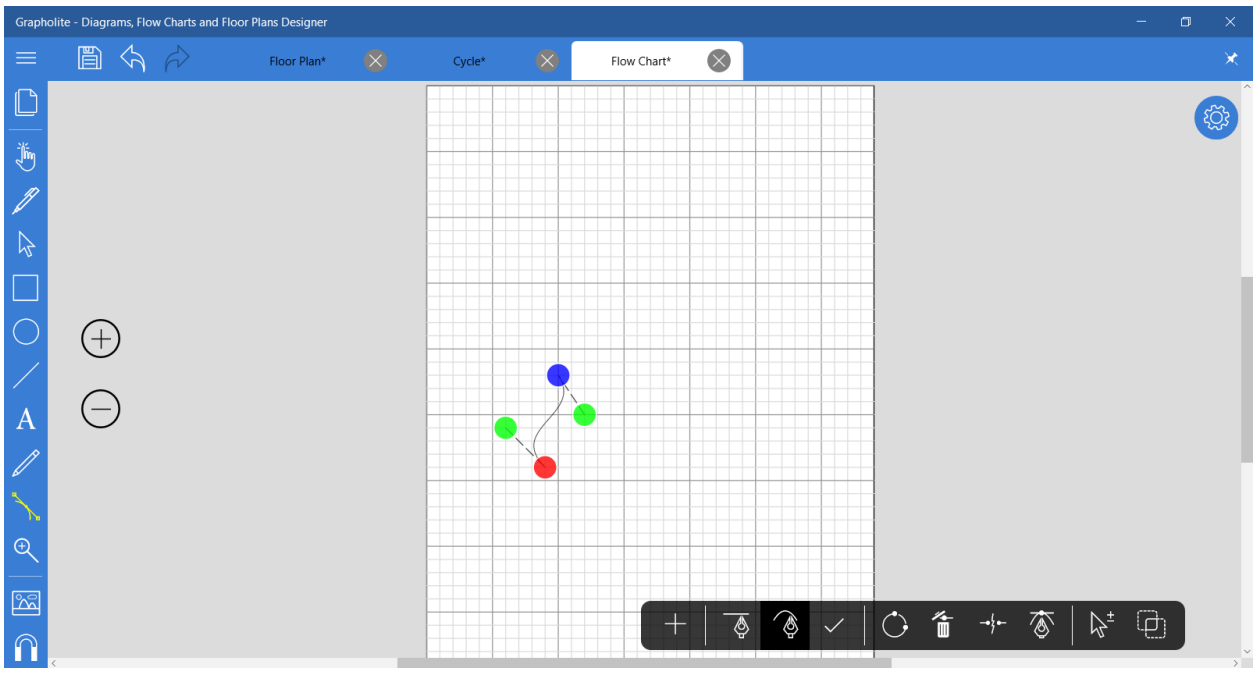
SHAPE EDITOR TOOL

Shape Editor Tool is used for creating lines and shapes and for editing these lines and shapes.

Switch to the Shape Editor on the Toolbar available on the left of your screen. You will see a flyout menu.

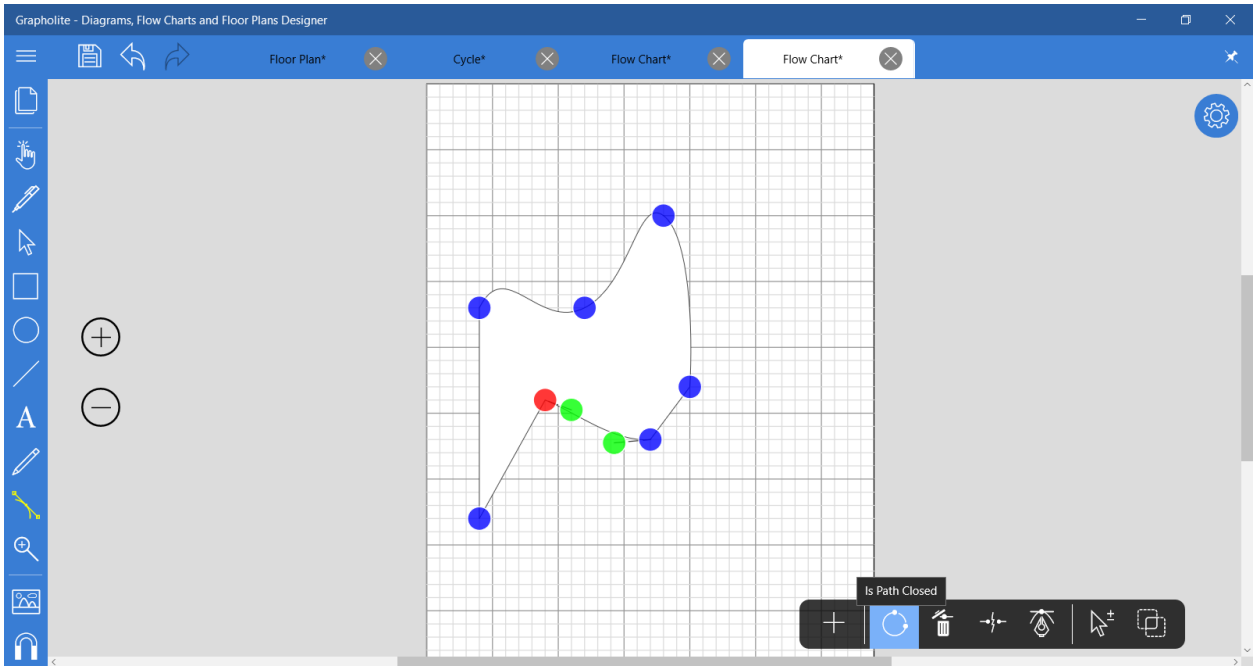
There you can select line type: a straight line or a curved line. Click on the corresponding icon to select. Click on the page where you want to begin and then click the end point of the first segment. The line will appear on the second click. You can continue adding segments by clicking on the page.

If don’t need to add any new segments to the shape click Done adding new segments to be able to edit your custom shape.



To edit segment trajectory you just need to select with a mouse click or tap on it. You will see blue circles (or a red and blue one) at the end points. You can drag them to change location of the end points. There are also two green circles responsible for the line trajectory. A click on the line adds a new control point that will help you setup your shape precisely. Drag them to make a straight line curved. You can also drag the line itself to change its shape and trajectory.

To create a closed path click the last control point on top of the first or select the corresponding option in the flyout menu: Is Path Closed .



When a control point or points have been selected, three additional options are enabled. **Delete** option will delete the selected control points. **Break at Points** will break the line or path at the selected point into two lines or paths. **Point type** will set type of the trajectory control points that are connected to the selected point: **Symmetric** – trajectory points connected with a dash line will change symmetrically on the same distance of the selected control point; **Smooth** – both trajectory points connected with a dash line will change, but the distance from the selected point may vary; **Independent** – trajectory points will change independently from each other; **Straight** – makes an incoming segment a straight line.

Click on the **Select many** menu item to switch to the multiple selection mode: you will be able to add control points to selection with every mouse click or tap on it.

Start drawing new shape will allow you to finish editing the current shape and proceed to creating a new one.

This tool helps creating non-standard shapes and lines to include in the diagram.

ZOOM

The **Zoom Tool** is used to change the zoom level of your drawing. Switch to the Zoom mode in the tools menu (on the left of your screen). If you click the diagram area, the zoom is applied to the whole diagram. The diagram will zoom one step for each mouse click. You can also click-and-drag the mouse pointer to create a zoom rectangle. The content of this rectangle will be enlarged so that its biggest dimension fits the corresponding dimensions of the diagram window.

To reset magnification level to 100% just click the corresponding button in the Zoom flyout menu that appeared when you enabled the Zoom mode.

This menu also provides the following options:

Whole page: use it to resize the document to the window so that it is completely visible.

Page width: use it to resize the document so that it fits the page width.

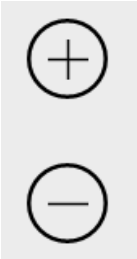
Zoom to 100%: use to see the actual size of your diagram.

Dynamic zoom: move a slider to resize a diagram dynamically, or use “-” and “+” to do it more precisely.

Grapholite supports all device-specific zoom commands for both mouse and touchscreen.

Mouse-specific zoom

When you create diagrams with a mouse, you always see the zoom in and zoom out buttons on the left of your screen. Therefore, you can resize the document at any moment by clicking on them. You can also magnify the document by pressing the Ctrl button and scrolling mouse wheel up (to zoom in) or down (to zoom out).



Touchscreen zoom

In the touchscreen mode, no zoom buttons are available on the left of the screen because there are special gestures to resize the diagram. Just spread your fingers to zoom in and pinch to zoom out.

PAN

The **Pan tool** is the simplest tool in the Tools list. It performs one very basic task – it just allows you to move or pan the diagram. This is especially demanded when you have zoomed in the diagram. To use it, you just need to select this tool from the Tools menu available on the left bottom corner of your screen. Click or tap anywhere on the diagram area and move in any direction to pan.

In the mouse mode, you can scroll the document vertically and horizontally using the scroll bars.

In the touchscreen mode, you can pan the document at any moment without the need to switch the tools. This is a default option in the touchscreen mode. Just touch the screen and move the document.

CONNECT

It’s possible to connect shapes not only automatically but also manually with a special Connect tool.

This tool is likely to be used with mouse.

Switch to **Connect** on the Toolbar available on the left of your screen. Click a shape and drag a connector to another shape. To keep the connector attached to a specific port on a shape, drag from a connection port (marked with a little violet cross) of the first shape to a connection port on the second shape. The connector endpoint turns red when the connector reaches the connection point. This is a point connection.

This means that the connector will always connect only the selected ports even if the shapes are moved on the diagram area.

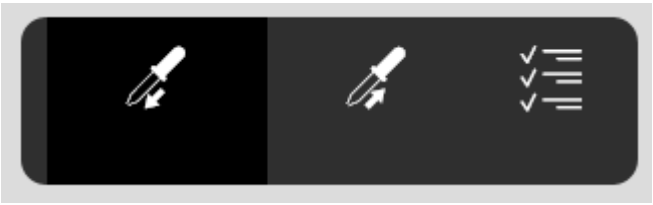
If you want to allow the connector to move around the shape when it moves on the diagram area, hover mouse pointer over the first shape and you will see that it became red. Drag to the center of the second shape. When the second shape becomes red as well release the mouse button. This is a dynamic connection. This means that the connector will be able to change connection ports if the shape is moved around.

You can select connector type in the flyout menu at the bottom of your screen; you can make it Straight, Stepped, Rounded and Curved.

To change the type of an existing connector, select it and click the corresponding connector type on the flyout panel. The connector will be changed according to your selection.

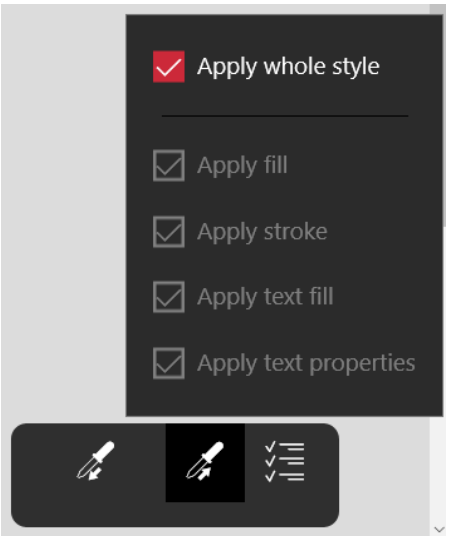
EYEDROPPER TOOL

The **Eyedropper tool** is used to pick up a style from one of the diagram elements. This is a very useful tool because there will be many times when you want to apply similar styles to various diagram objects and you don't want to go all the way through the style chooser menu. In this case, simply switch to the **Eyedropper tool** in the Toolbar available on left of your screen. Click on the diagram element you want to select to pick up its style. In the little flyout menu you will see that the selected option automatically switches from the Select source to Apply.



This means that now you are ready to apply the selected style. Click on the diagram object you want to style.

You can apply the whole style including fill, stroke, text fill and text properties, or you can select one or more options and combine them in the way you like.



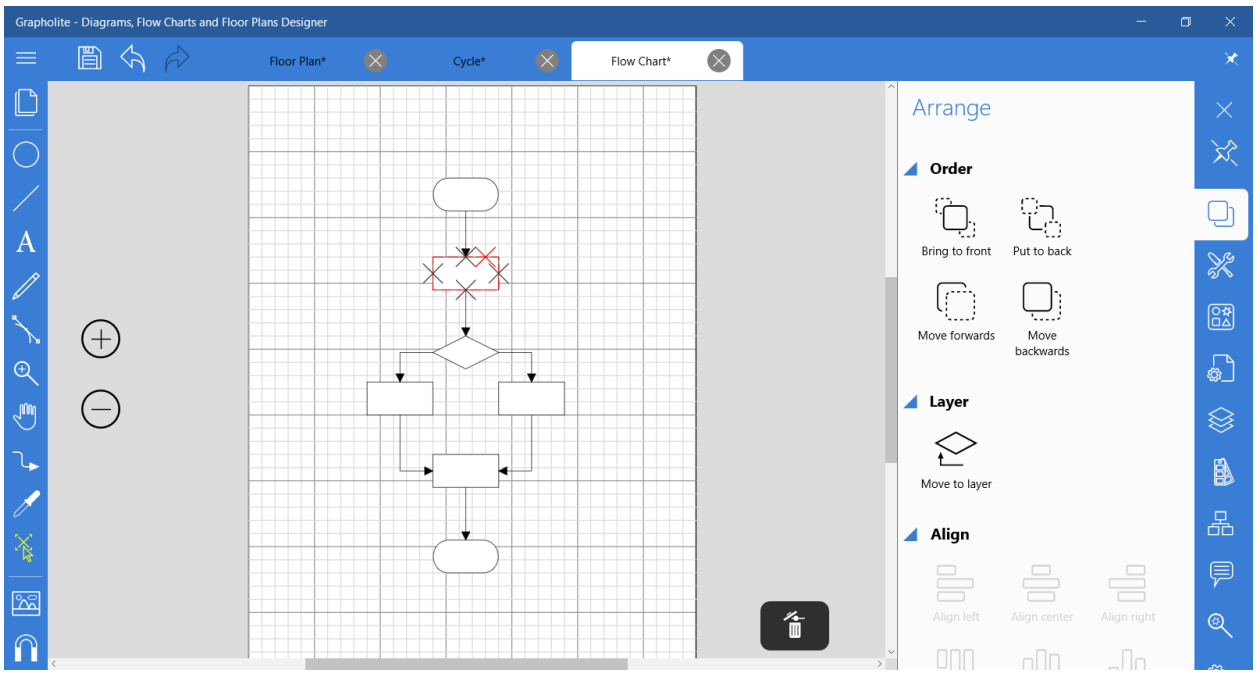
EDIT CONNECTION POINTS TOOL

A connection point is a special point on a shape that you can attach connectors to. It looks like a little cross (x). When you glue a connector to a connection point, they stay connected, even if one of the shapes is moved. Use connection points when you want connectors or shapes to stay connected to specific points on a shape.

Add connection points

If the shape you want to attach a connector to doesn't have a connection point where you want it, you can easily to add one.

1. Select the shape.
2. Select the Edit Connection Points tool in the Toolbar located on the left of your screen.
3. Click where you want to add a connection point.



If you're having a hard time moving the connection point to exactly where you want it, try different snap settings.

Delete connection points

1. Select the shape.
2. Select the Edit Connection Point tool in the Toolbar located on the left of your screen.
3. Click the connection point you want to delete. The connection point turns red.
4. Click Delete point button on the right bottom point of your screen, or just press DELETE key on your keyboard.

NOTE: you can delete and move only custom connection points. The standard connection points will remain unchanged.

INSERT PICTURE TOOL

You can insert image files into a diagram. They appear as a common diagram element with all the same options: you can change its size using the control points located on the image corners and midpoints, rotate it, move to any diagram area, duplicate or delete the picture, you can even connect the image to the other diagram elements and make them connect to the inserted image.

Here's how you insert a picture:

1. Click **Insert picture** icon on the toolbar panel on the left of your screen.

2. Select the Insert picture option.
3. Locate the folder that contains the picture you want to insert, click the picture file, and then click Insert picture.

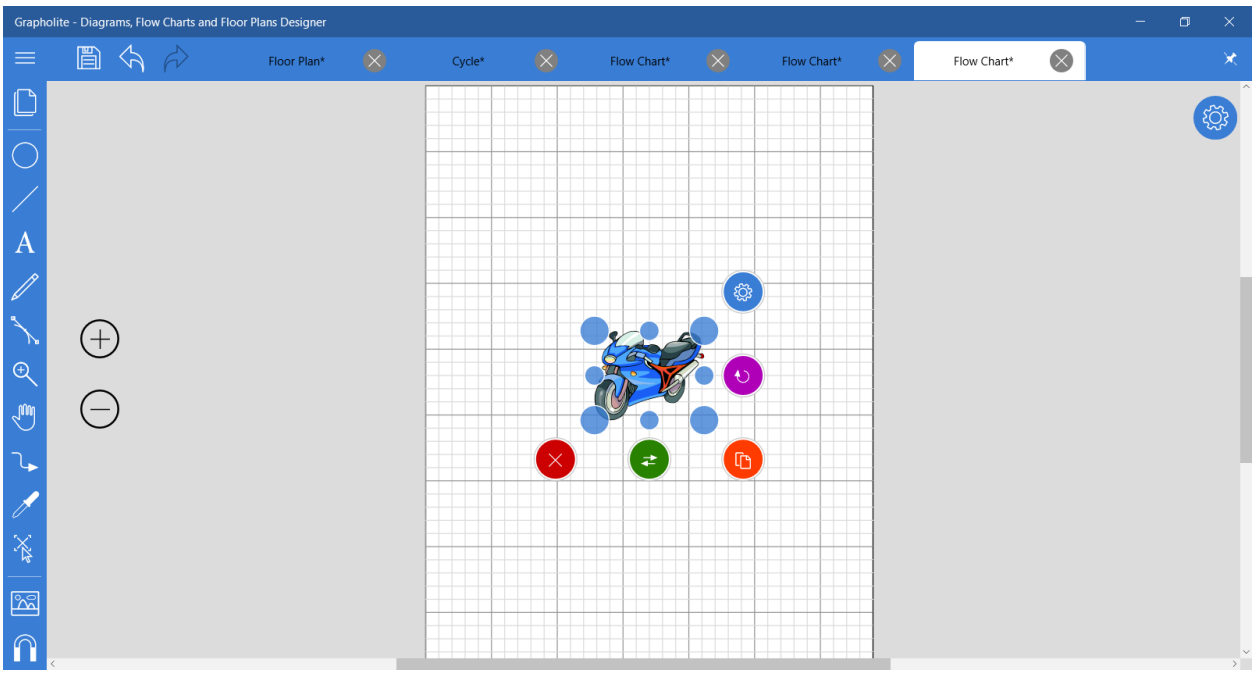
It is also possible to insert pictures just captured from the device camera. This is very useful when you are on the go.

To add a picture in this way you need to:

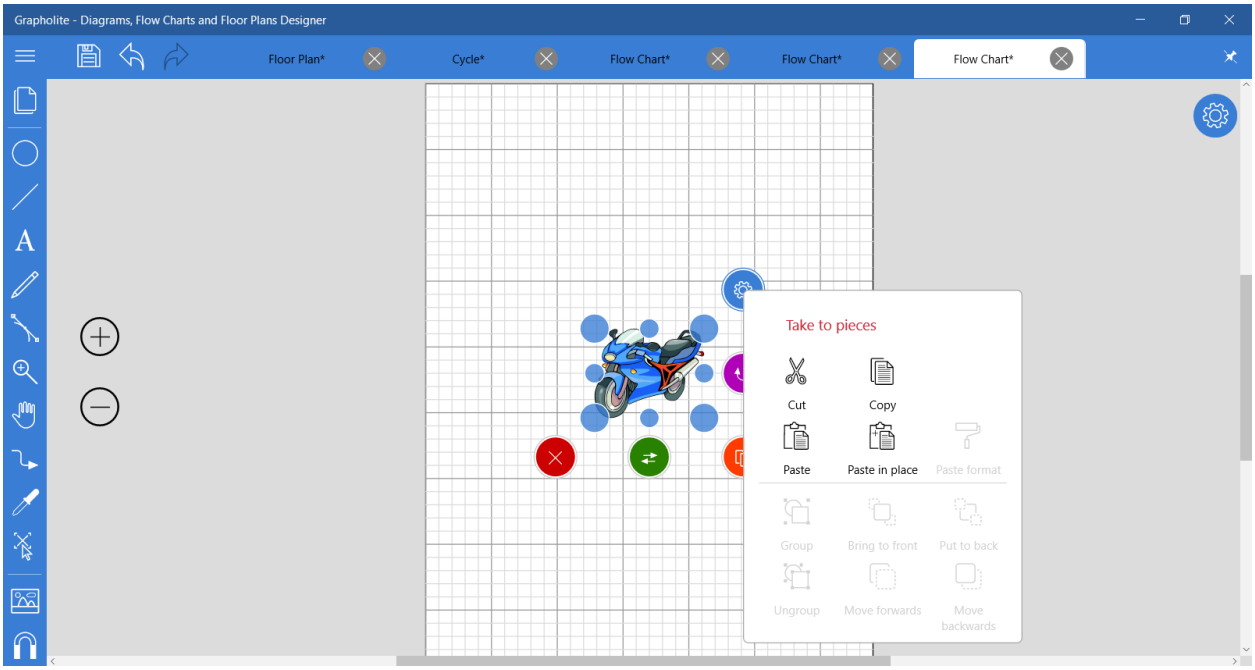
1. Click **Insert picture** icon on the toolbar panel on the left of your screen.
2. Select the Capture image option.
3. You will be asked to provide Grapholite with access to your camera. Select Allow to proceed with capturing the image.
4. Take a photo you like by clicking on the screen. You can setup camera options (photo resolution, timer, etc.) or click Back to get back to the diagram.
5. You will see a taken photo on the screen. If you are not happy with it, it's possible to retake it. You can also crop it to suite your needs. Once you are satisfied with the image, click Ok and the taken photo will be added to a diagram.

Pictures inserted into a diagram with the help of camera are considered to be common diagram objects and have all the same options and settings.

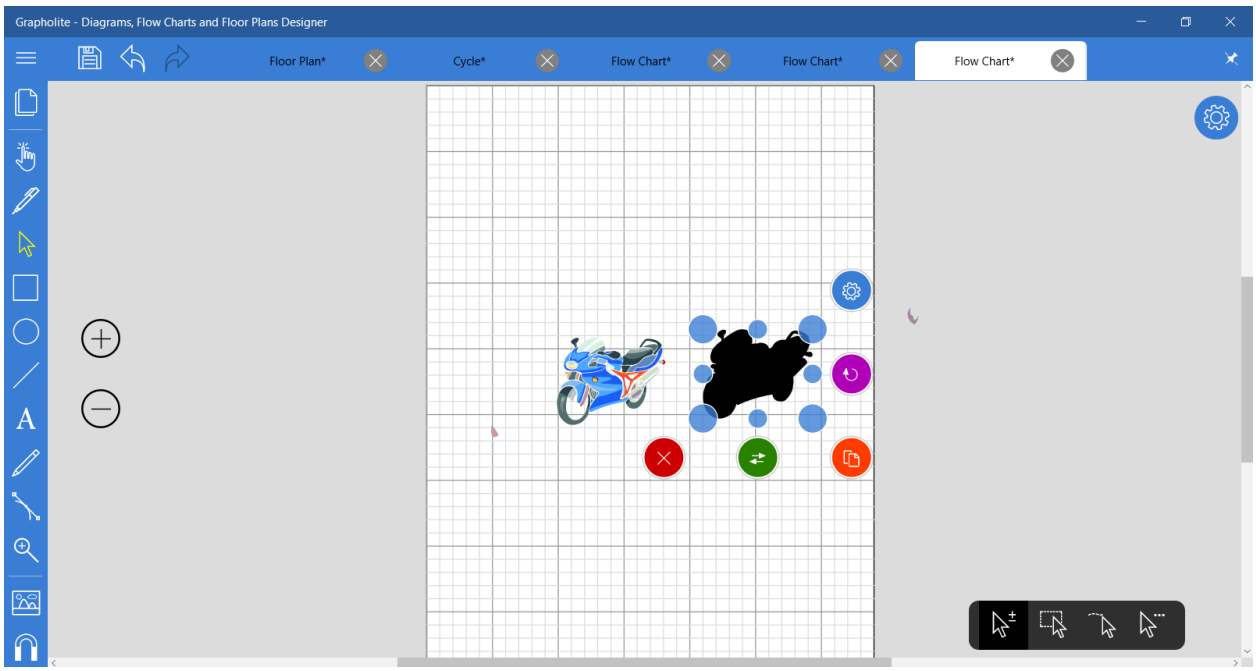
Insert SVG drawing allows adding an *.svg object to the diagram. Initially it is inserted as a single diagram object with all corresponding abilities.



But you may need to edit this drawing. You just need to select the “Take to pieces” item in the context menu.



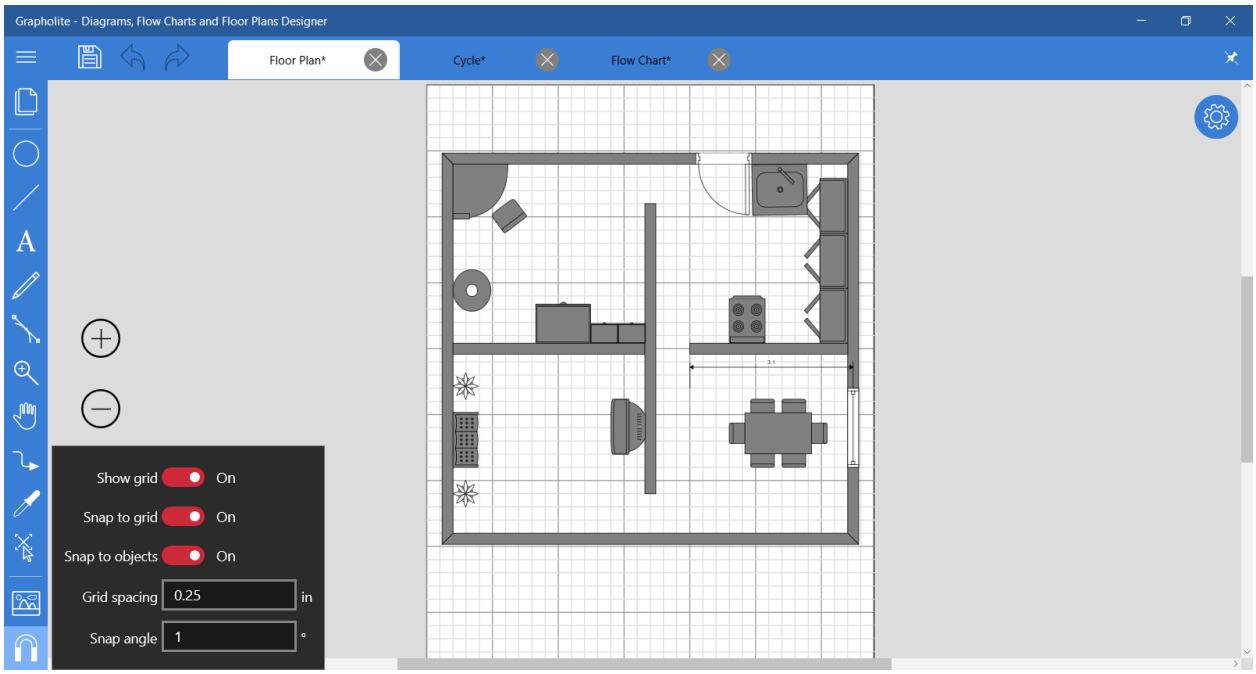
The object will be taken into separate pieces that can be edited, deleted, resized. Each of these composite elements is deemed a separate diagram element with the corresponding diagram element features.



When you're done editing your SVG object, you can use the Convert to complex shape function to make it a single diagram object.

GRID SETTINGS

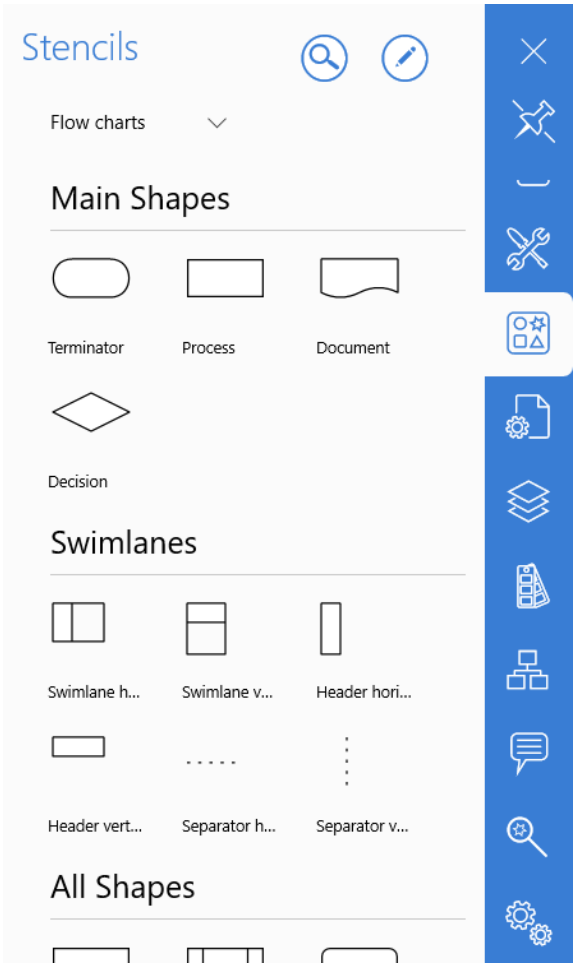
Quick access to grid settings . You can easily access snap and grid settings by clicking on the icon: Show grid, Snap to grid, Snap to objects, Grid spacing, Snap angle.



ADDITIONAL GRAPHOLITE PANELS

In the top right corner of your screen, you can see an icon by clicking on which you will get access to the main Grapholite panels such as Page properties, Arrange, Stencils, etc. By default, the panels automatically hide when they are unused. Nevertheless, if it's more convenient for you, you can pin them to make visible all the time.

STENCILS ( )



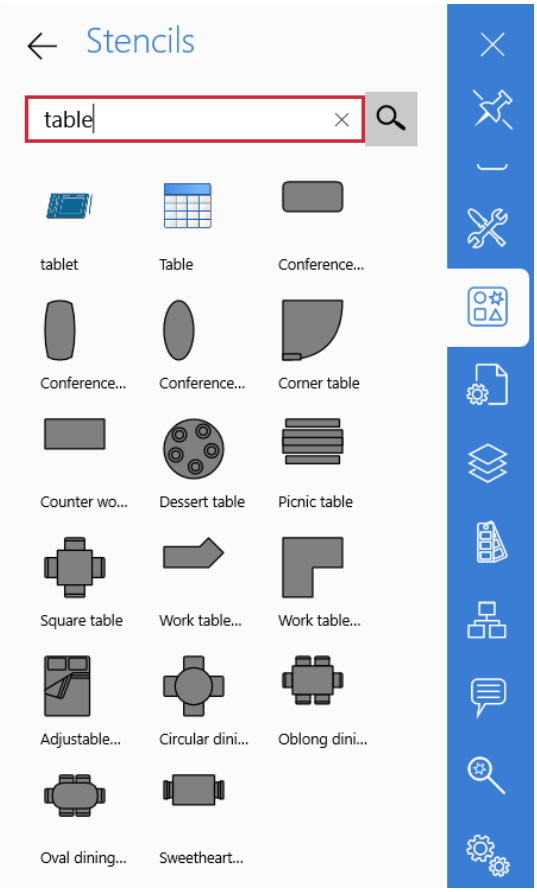
Stencils panel contains a structured library of shapes and tools for quick search and access to them. Shapes are stored in the sets grouped by the type of diagram they are used in. Every diagram type includes one or multiple shape sets for this type of drawing. For example, flowchart library has a set of all shapes necessary to denote workflow objects, the other set contains shapes for workflow phases, etc. Floorplans include shape sets for walls, windows and doors and sets of furniture for different rooms.

At every single moment, the panel shows only one set of shapes. You just need to select the necessary set in the dropdown menu.

You can access any shape set when designing any diagram type even if you selected a different diagram type on the home screen.

Searching shapes

Search will help you find the necessary shape faster. Instead of browsing the stencil libraries and shape sets, you can just type in the keywords and get all related shapes. To start searching, click the search icon ( ) and type in a keyword in the search bar that will appear. Search results will be displayed below the search bar on the panel.



The search in not case-sensitive. Partial matches are found as long as the word contains the typed in keyword. To get back to the stencils library, click the Back icon.

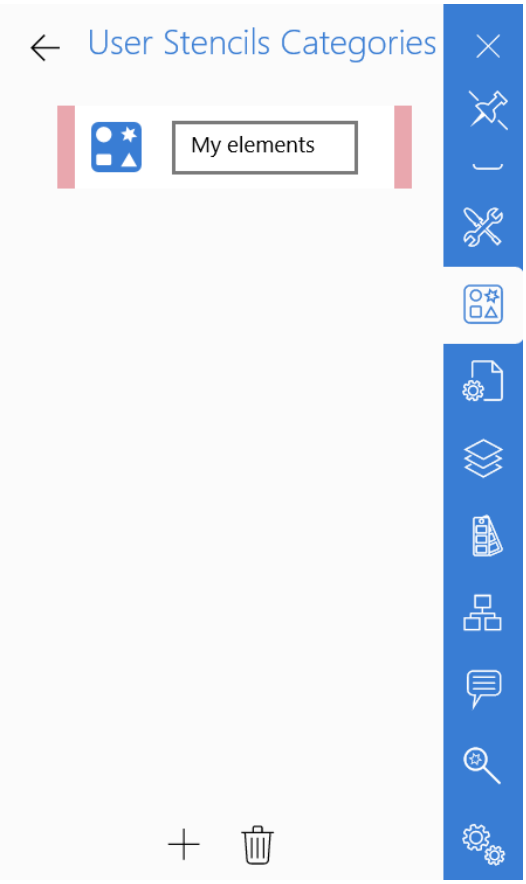
Adding custom stencils

Grapholite makes it possible to add custom libraries and shape sets. You can create unique shapes with custom settings and add them to the User defined stencils. The created shape becomes a template and when you drag and drop it onto the diagram area, a copy (or an instance) of the template is created. The stencil itself stays in the shape set and can be re-used to create new copies.

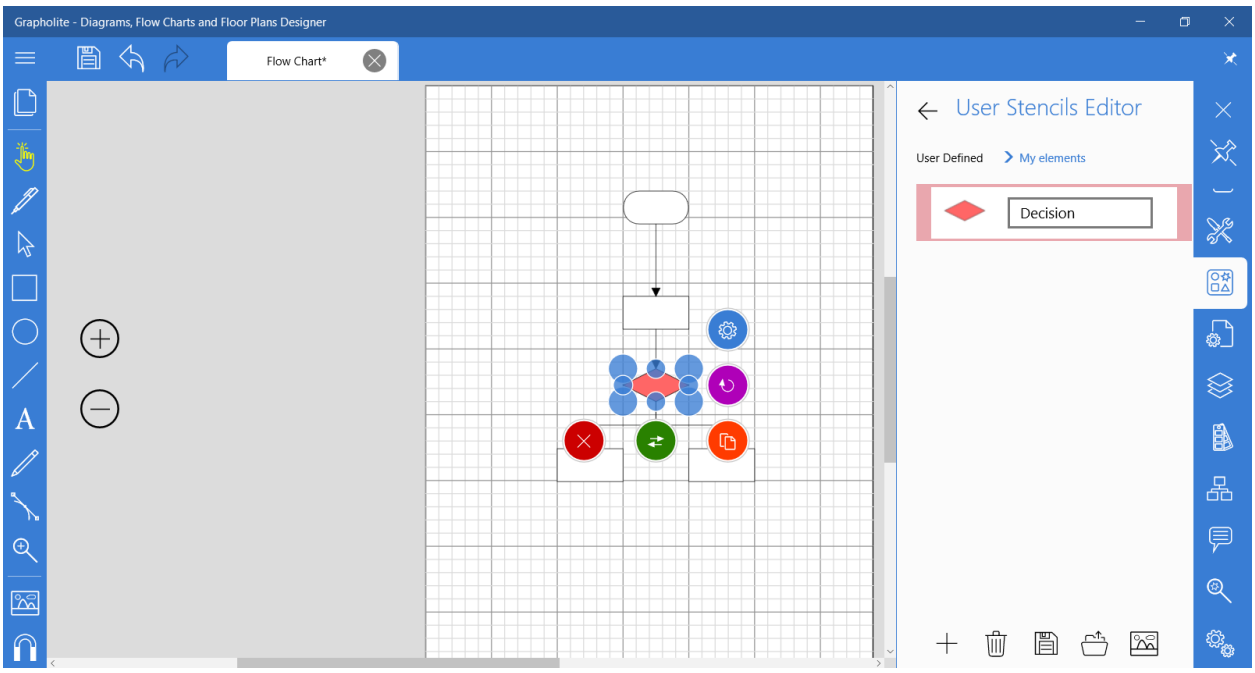
To create a User defined set of shapes:

1. Click the User Stencils Editor icon ( ).

2. In the Editor, you will be able to add new shape sets. Click on the dropdown list to get to the list of shape sets where you can add new sets.
3. Here you can rename the default shape set or add a new one by clicking the plus icon. Select the created shape set click Back to get back to the editor.



1. If you want to add a shape that you created in the current diagram, you just need to select it and click the Plus icon. The selected shape will be added to the set as a stencil. You can name it appropriately to make it easy to find it in the library later. You can select multiple diagram objects and they will be added as a single grouped stencil.



You can delete stencils from the list, export, import from file and import images to be used as stencils.

2. Click Back to close the editor and get back to the User defined library. Here you will find all shapes you added in the editor. They are ready for use in your diagrams – just drag and drop them.

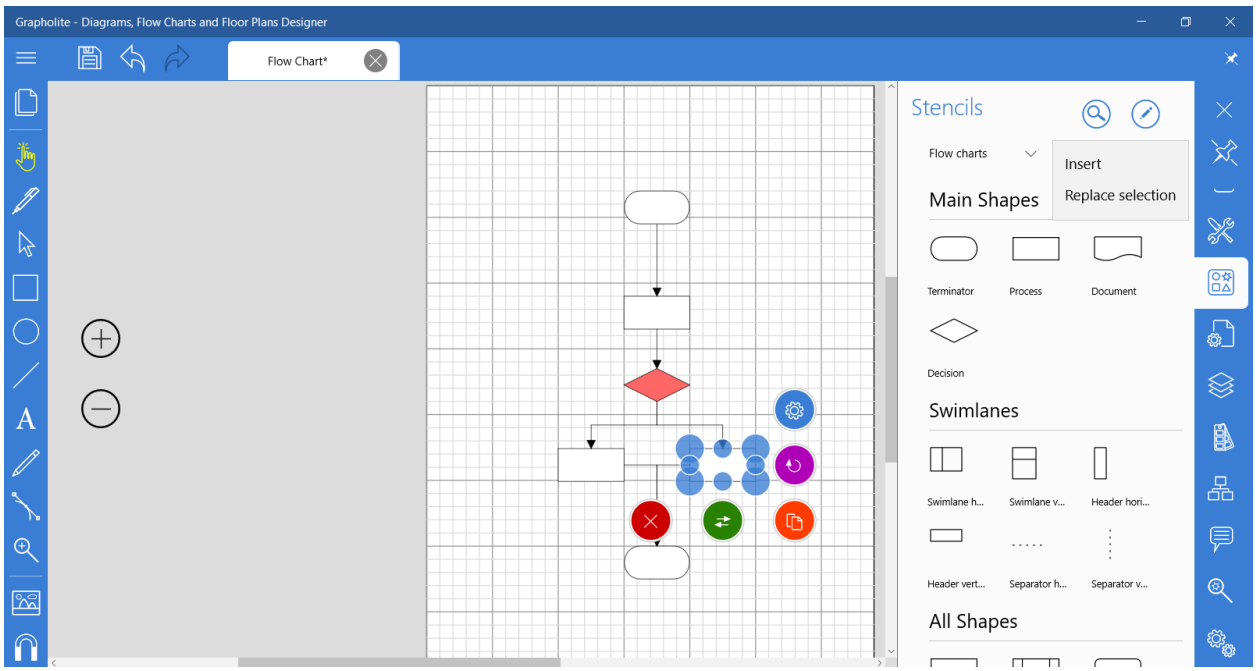
Replacing shapes

When designing a diagram you may see that it would be better to use the other shape instead the one you've already added. Deleting the shape is not the option, because it can contain some important information you don't want to lose, it can be styled and you will need to re-style and re-connect a new shape that you would add instead of the unsuitable one.

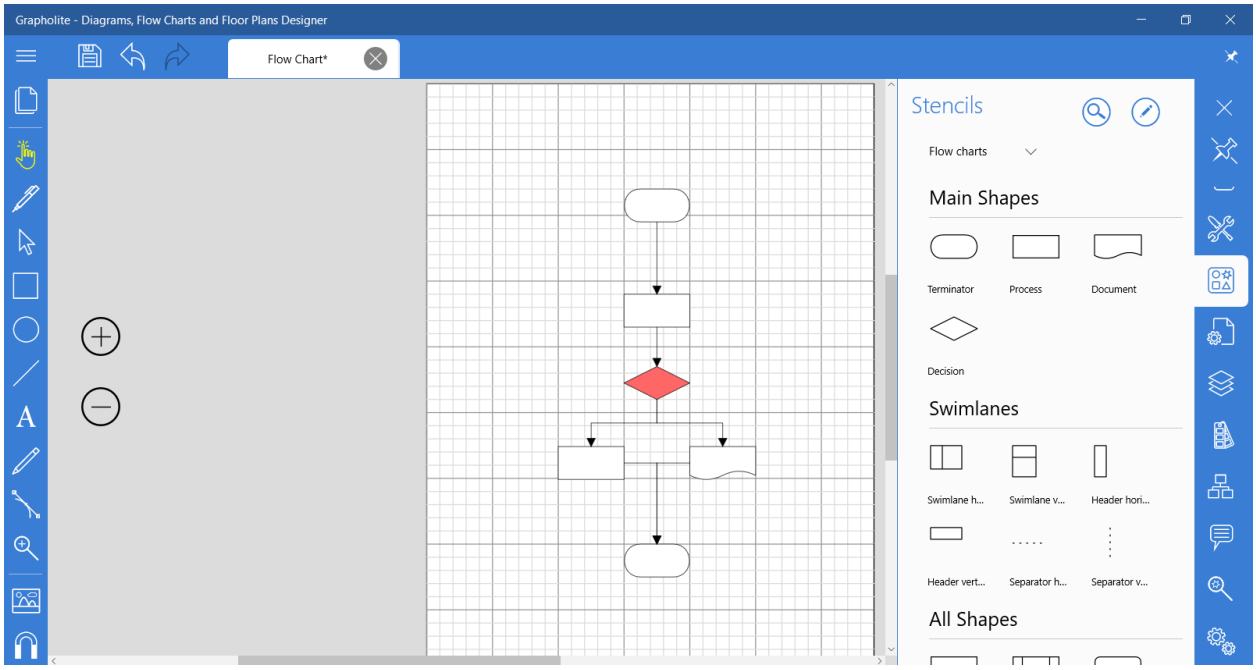
There is a solution – you can just replace the shape saving all relevant settings including text, style, connections, etc.

To replace a shape:

1. In the diagram, select the shape you want to replace.
2. Right-click (or long tap) the shape you want to be a replacement for the selected one on the stencils panel.



3. Click “Replace selection”. The selected shape will be replaced and all its settings will be applied to the new one.



ARRANGE ( )

The Arrange panel includes controls which will help you organize and arrange diagram items in the diagram area. To apply the available commands you need to select several diagram objects.

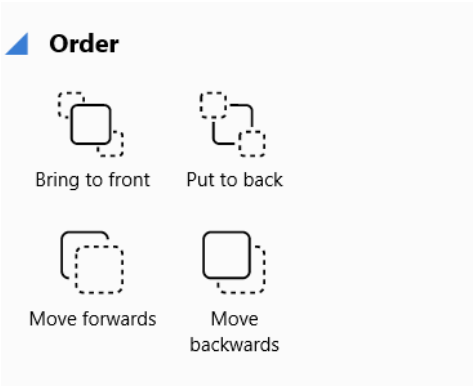
After you selected the needed diagram objects you can group them.

The grouped objects (shapes with connections) can be resized, copied, rotated and you can change order of the group (move it backwards, forward, bring to front or put to back). It is possible ungroup the grouped objects at any moment by pressing the corresponding icon.

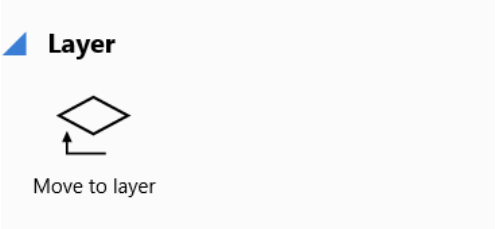
Diagram items may cover each other in the diagram area. You can select an item, or a number of separate items or a group of items and click Bring to front button to make them lay on top of all other diagram objects, so no other item will cover the selected one.

The Put to Back button does the opposite of Bring to Front: all other items will be on top of the selected item so that it doesn't cover any others.

The Move Forwards and Move Backwards buttons send the selected object (s) one step up or down in the diagram objects order.

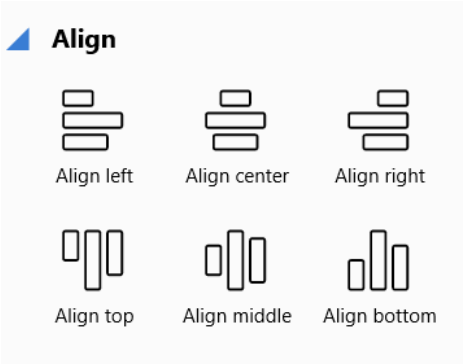


You can move the selected diagram elements to any layer. You just need to select an object, click the Move to layer button and select the desired layer.

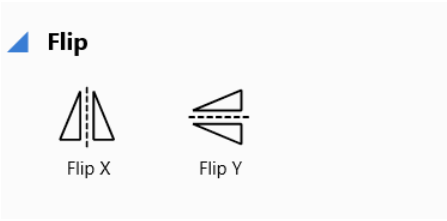


You can use the Align buttons to precisely align the selected items in the diagram area. To use this button, select the objects you wish to align.

Then select the alignment from the Align section.

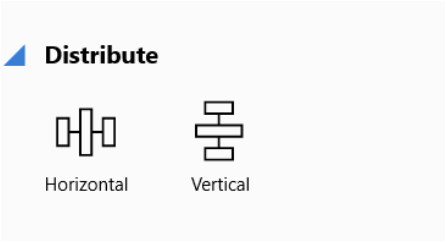


The Flip buttons make it possible to flip your diagram horizontally and vertically.

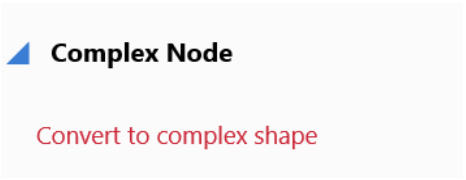


The Make Same Size buttons allow you to make two or more items have the same height, width, or both. Just select the items by clicking on each item in the Select mode. The first item you select will be a reference point and its height, width or both will be applied to the rest of selected elements when you click the corresponding button.

The Distribute buttons allow you to make three or more selected diagram elements have the same vertical, horizontal, or both distance from each other.

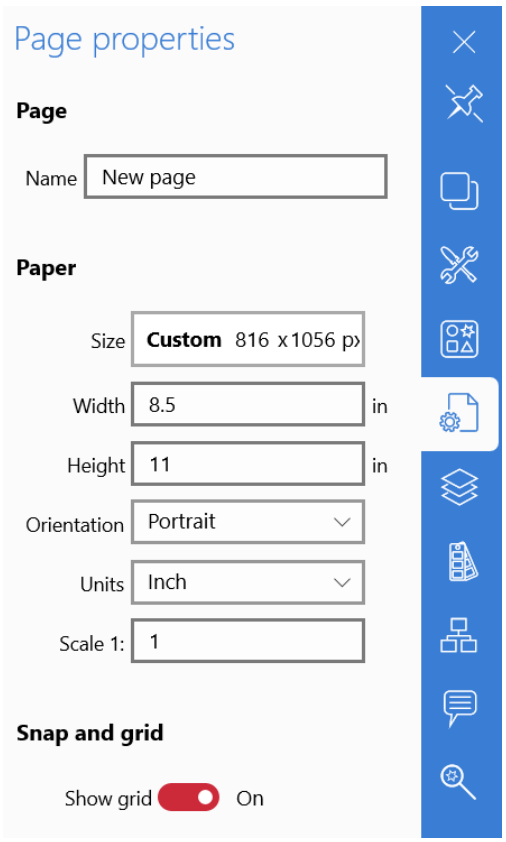


Complex node option allows making complex shapes consisting of multiple shapes. Select the diagram objects you want to combine and click “Convert to complex shape”. The selected shapes will be combined in a single shape; you will be able to move, resize, style, connect or even add this complex shape to the Custom shape set.



PAGE PROPERTIES ( )

Page properties panel includes options to set up the page. From here, you can control the basic settings of your diagram.



Page:

Name

Sets name of a page. It makes senses to give different names to the pages, if you have multiple pages in your diagram document.

Paper:

Size

Allows setting paper size by selecting from the list of standard sizes: A0, A1, A2, US Legal, US Letter, etc.

It's also possible to set custom page size, when necessary. You just need to set *Width* and *Height* to desired values.

Orientation

Use this property to set page orientation. Just select from the list: portrait or landscape.

Units

This property sets measure units for the current page. Available measure units: millimeter, centimeter, meter, inch, foot, yard, and pixel.

Scale

This property sets scale measurement on the page (as on geographic maps). It is mainly used in floor plans. For example, you can set a scale of 1cm=1m and now you can draw the entire house on a single page. All figures on the dimensions will be actual.

Snap and grid

Show grid

Manages grid visibility. You can enable and disable it.

Snap to grid

The property sets if all the diagram objects should be snapped to grid. You can enable and disable it.

Snap to objects

The property sets if the added or moved diagram objects should be located on the diagram area relatively to the other diagram elements. If the property is enabled you will see temporary blue lines determining the boundaries, midpoints and distance between the nearby diagram objects when you locate a shape on the diagram area. This is a very helpful tool which will help you add new shapes and arrange the existing ones easily and precisely, so your diagram will look neatly and professionally.

Grid spacing

This property sets grid step.

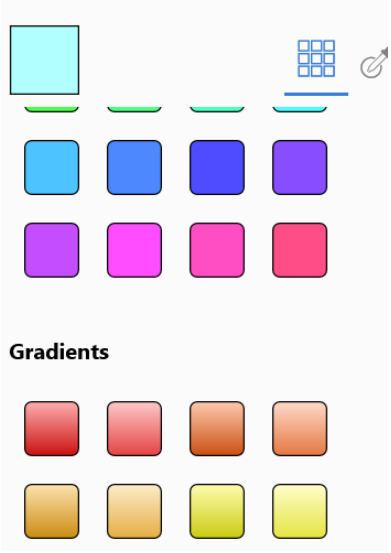
Snap Angle

This property sets step for rotation angle. For example, if you set 5, you will be able to rotate the diagram object to 0, 5, 10, 15, etc. degrees with every move. If you set 0, there will be no snap and you will be able to rotate the diagram element in any way.

This option is useful for specific diagrams such as electrical circuits where all elements are located vertically, horizontally and sometimes diagonally. So, setting snap angle to 45 will help a lot.

FILL EDITOR

Fill property is available for the following diagram items: shape, shape text, shape styles. There is a number of preset solid and gradient fills.

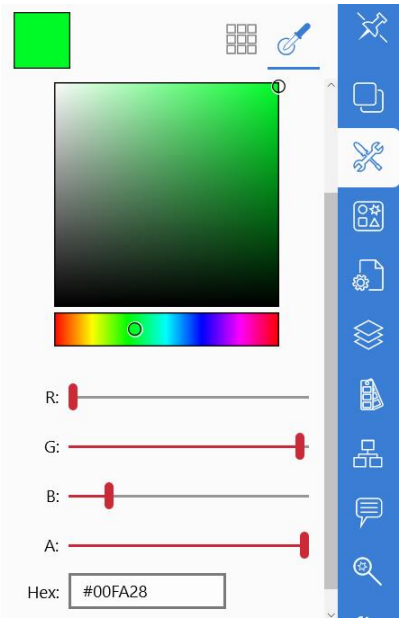


If none of the preset colors or gradient fills in the list suits you, you can use fill editor to precisely set up custom fill.

You can specify fill type: Solid, Gradient or Radial.

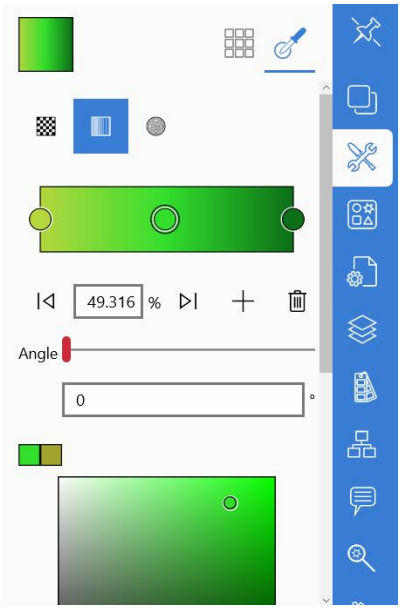
Solid fill

Solid fill allows setting up a single color. You can select with a mouse using color picker, set it up using sliders or entering a hex color code.



Gradient fill

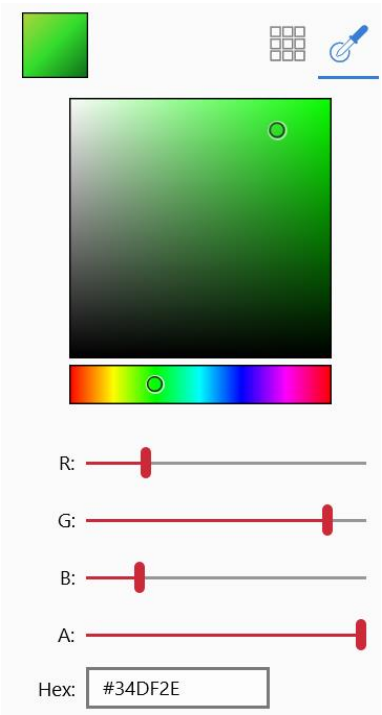
Basically you can set start and end colors for the gradient fill. You can also setup a multiple color gradient fill by adding intermediate color points. Just click on the gradient path to add a new color point or click + below the path. A new color point will be added exactly in the middle between the two existing points and next to the selected color point.



You can select the necessary stop point by just clicking on it on the gradient path or using the arrows below the path. The selected color point can also be deleted.

You can set fill angle by dragging a slider or entering numbers.

Below you will see a color picker where you can select colors for the stop points with a mouse or touch.



Sliders allow more precise setting of the color. Or, alternatively, you can just enter a hex color code, if you have such specific information.

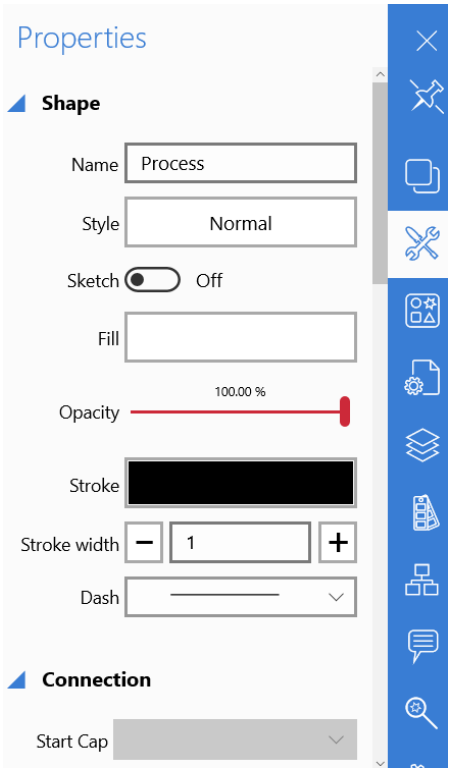
Radial fill

Radial fill has the same options, as gradient fill: start color, end color, ability to add multiple colors, and precisely set up the necessary colors.

Note: start color in Radial fill is in the center.

PROPERTIES ( )

This panel provides access to all available properties of a selected diagram object. You can fine-tune a shape or a connection using the simple settings.



Shape settings

Name

Sets diagram object name.

Style

This property will help you set style for the current object. Click it to get access to the list of pre-designed styles of the Default theme. Select from this list. The style will be applied to the selected object only. More information on how to work with the Theme editor is available in the special section of this user guide: Themes and styles

Sketch

This is a unique option that makes the shapes look as if they were drawn by hand. It's a very convenient way to indicate diagram parts that are not finalized yet and need more attention when you are designing a diagram. Just enable it to make diagram objects look like sketch.

Fill

Sets fill of the selected object. You can choose from the list of basic colors or gradient fills. If none of the preset fills suits you, you can use a fill editor to setup custom fill. More information on how to use the fill editor is available in the special section of this user guide: Fill editor.

Opacity

This property sets opacity of the selected diagram element. You just need to move the slider on the left to make it completely transparent. Move the slider to the right to make the object dense.

Stroke

Stroke sets color of the shape contour. Click on it to proceed to the list of basic colors. Select from this list or you can fine-tune color in the Fill editor. More information on how to use the fill editor is available in the special section of this user guide: Fill editor. Click Back to return to the Object properties panel.

Stroke width

This option sets width of the shape contour. Click “+” to make it thicker, and click “–“ to make it thinner. The default value is 1.

Dash

Sets line type of the shape contour. You can select from the line, dashes, points and various combinations.

Connection

Start cap

Sets start cap of the selected connection. You need to select from the dropdown list.

End cap

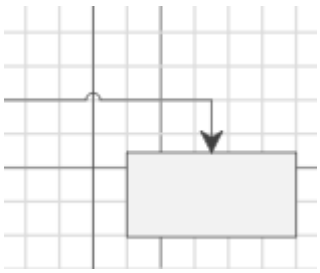
Sets end cap of the selected connection. You need to select from the dropdown list.

Route

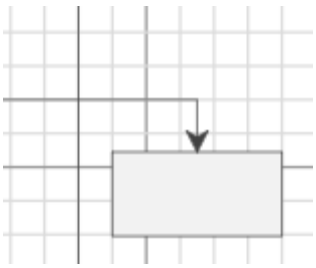
Sets route pattern for the selected connection. You need to select from the dropdown list.

Line jump

If this option is enabled, the intersection of the connectors will be drawn with a small line jump. Otherwise there will be a simple intersection.



Line jump enabled



Line jump disabled

Text settings

Font

Sets font type for the selected shape. You need to select from the dropdown list.

Size

Sets text size. Set it manually in the textbox or select from the dropdown list.

You can make the text *Bold* or *Italic* with a single click on the corresponding icons.

Fill

Sets text fill. You can choose from the list of basic colors or gradient fills. If none of the preset fills suits you, you can use fill editor to setup custom fill. More information on how to use the fill editor is available in the special section of this user guide: Fill editor.

Background

Sets background color of the text. You can choose from the list of basic colors or gradient fills. If none of the colors in the list suits you, you can use fill picker to make your selection more accurate. You can specify fill type: Solid, Gradient or Radial. More information on how to use the fill editor is available in the special section of this user guide: Fill editor.

Inside shape

This property sets if the text will be located inside or outside of the selected shape. Just toggle the switch to set the necessary location of the text. If you select “Outside of shape” option, the text will be located outside the shape and the additional control point will appear next to it. This control point will help you select a more precise location of the text. Just drag it to move the label. If you select “Inside shape” option, you can also setup text location within the shape. Use the buttons below the switch to setup the desired position of the label inside the shape.

State properties

Visible

Using this property, you will be able to manage visibility of the diagram object. Just select a shape or a connection and click the icon to make the selected element invisible.

Locked

The use of this property allows locking of the selected diagram element to prevent it from any changes, accidental or intentional. If the option is enabled, the control points become grayed out to indicate that you won't have access to the following object properties and won't be able to change them: location and size. The other object properties such as color, style, fill, stroke, etc. can be changed on the corresponding panel. The available manipulations are Copy, Duplicate, Delete and Create connection. To unlock the locked object, you will need to go to the Layers panel (since you can't select it with a mouse or by tapping on it because it is locked), and disable the Locked property by clicking the corresponding icon next to the required diagram object.

Locking objects is useful if you want to place an object behind others and don't want to accidentally move it while clicking on the objects in front of it.

Obstacle

The property sets if the selected diagram object is an obstacle for connectors. If it's enabled, all the connectors will route around the selected diagram element. If the option is disabled, connectors will route on top of such an object.

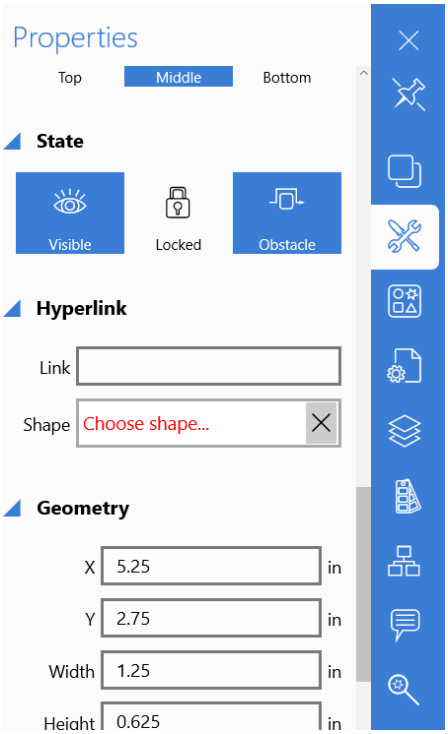
Hyperlink properties

Hyperlink

You can add hyperlinks to your diagrams. Just select a shape and set http address of a page you would like to go to. A little call out will appear next to the shape. Clicking on it will forward you to the web browser where the set web page will open. To remove the hyperlink just click the cross button.

You can also add hyperlinks to the diagram shapes.

1. Select a shape you want to set a hyperlink from.
2. Click the Shape box. You will be asked to select a shape you want to link to.



3. Select any shape on the diagram, even if it is located on the other drawing page.

Geometry properties

The following properties allow users to set diagram elements position, orientation and size in a more precise manner than if it was done visually, by hand or mouse.

X

Sets position of the selected diagram object on the X-axis.

Y

Sets position of the selected diagram object on the Y-axis.

Width

Sets width of the selected diagram object.

Height

Sets height of the selected diagram object.

Rotation

Sets rotation angle of the selected diagram object.

Corner

This property sets rounding of the corners. It is applied to rectangles, chevron diagram elements and connections (when the latest has several route turnings).

Thickness

Sets thickness of the diagram element. Can be applied to wall elements in floor plans.

STRUCTURE AND LAYOUT ( )

Here you will be able to arrange diagram elements in the way that will make your diagram look more professional and readable. With a few clicks, you will be able to position all or selected diagram objects in many different ways to address your needs.

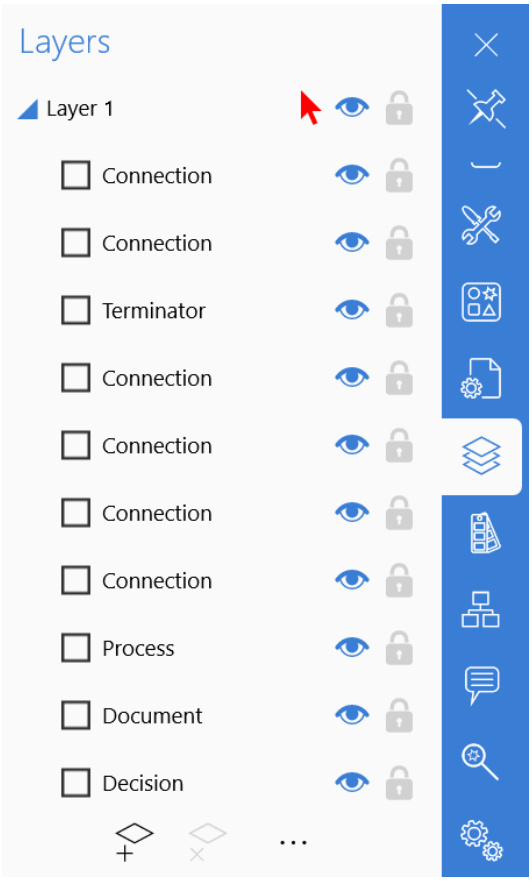
This panel includes different setting for different diagram types.

More information about structure and layout settings for flowcharts can be found in the Designing Flow charts section.

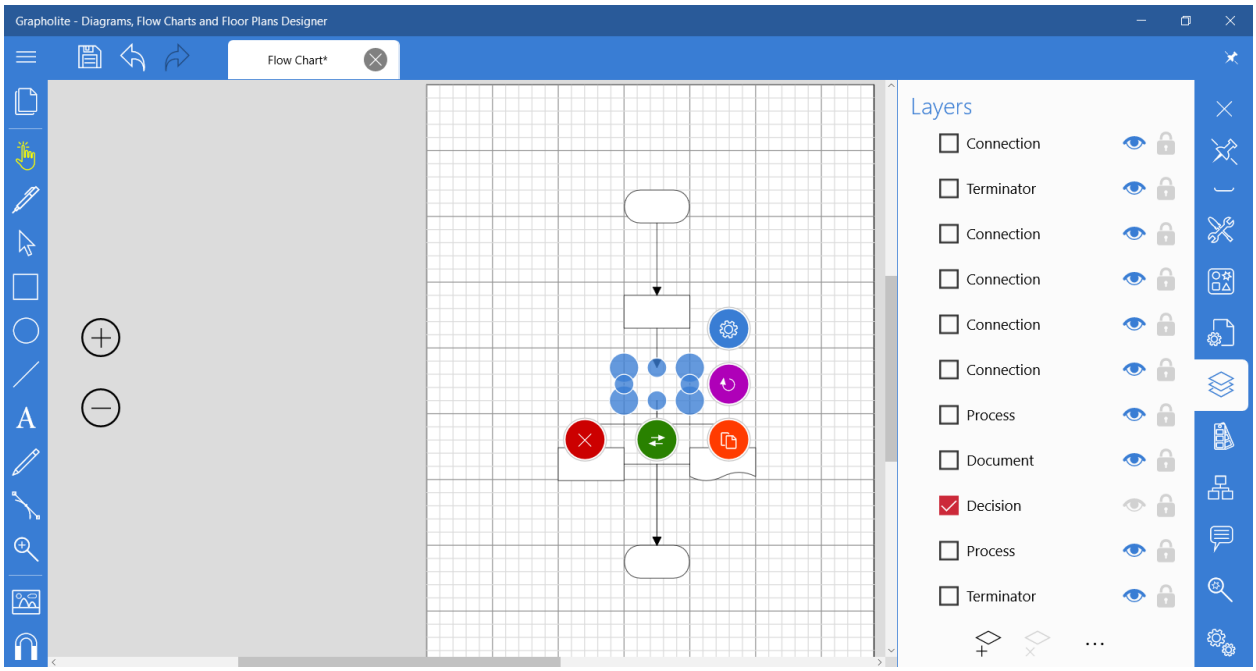
More information about structure and layout settings for org charts and mind maps can be found in the Designing Org charts section.

LAYERS ( )

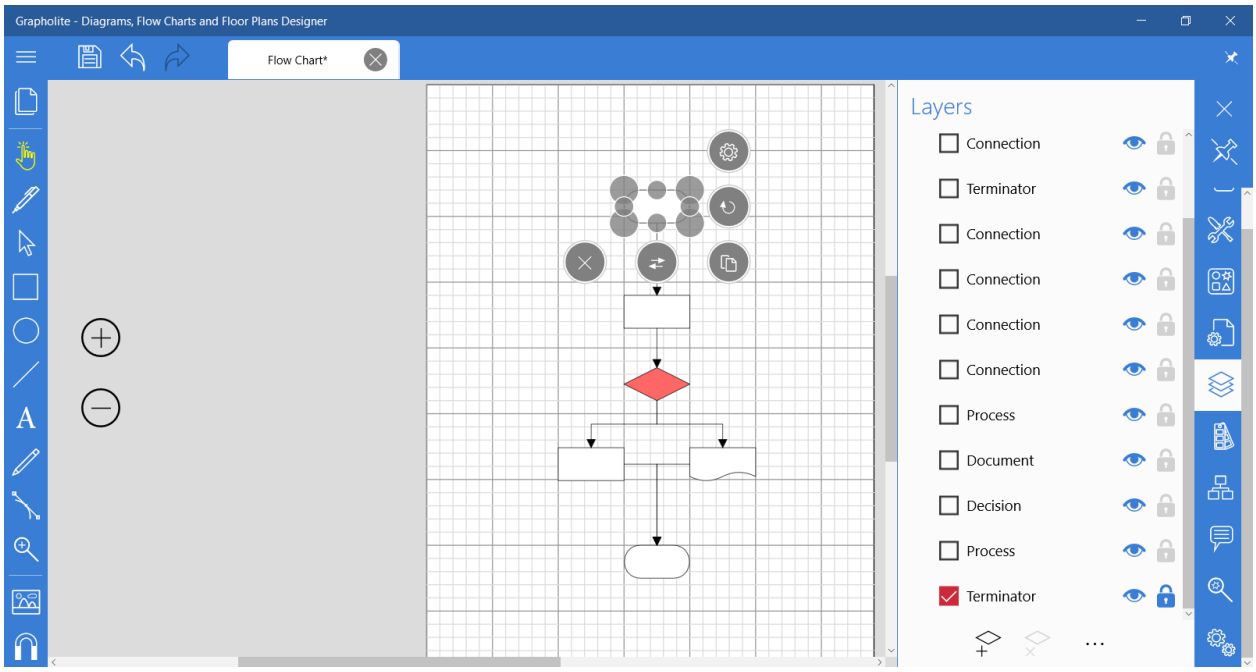
Diagrams can also be structured with an object tree in layers. This way it's possible to keep a clear view even in big diagrams. The object tree and layers contain a list of all diagram elements including shapes and connectors. They are listed in the order they are drawn.



In the tree, you can select the diagram element and you get it selected (with all control points and shortcut options) on the diagram area. It's possible to manage objects visibility by clicking the eye icon ( ) next to the object name. If the element becomes invisible, it's just hidden and all its properties, options and connections (if the hidden object is a shape) stay active and you can make the object visible when necessary.



You can also lock the diagram elements to prevent them from accidental change. Click the lock icon ( ) and you will see that all the control points of the selected object are grayed out and you are not able to move it or change its size.

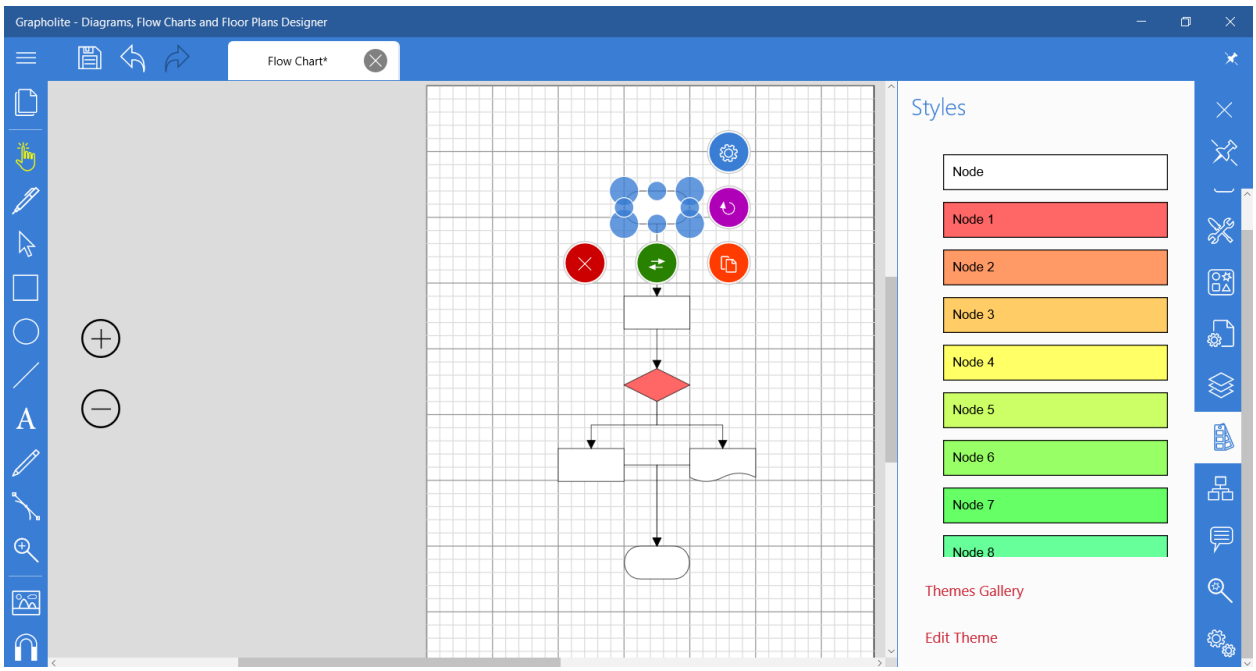


But you can easily create connected duplicates (that will be locked as well), copy, delete and connect the locked elements to any other shape. To unlock the diagram object you need to click the lock icon once again.

THEMES AND STYLES ( )

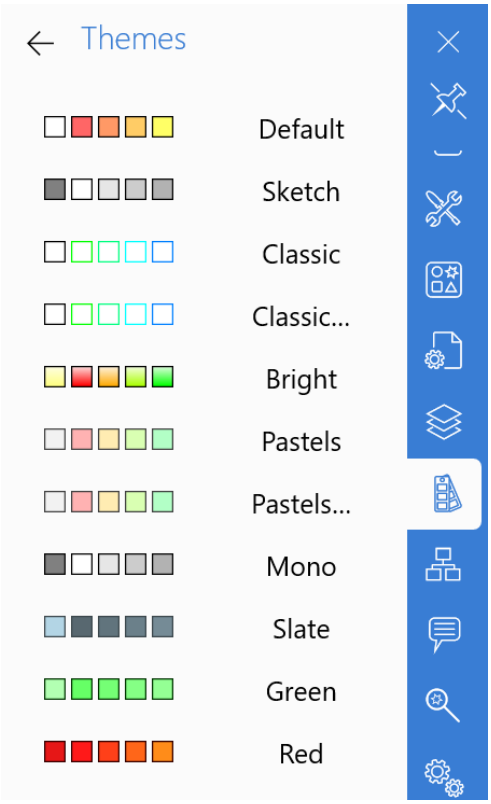
Theme in Grapholite is a set of colors, borders, textures, lines, text and effects that can be applied to the entire document by a single mouse click. Using themes will help you make your diagrams look more coordinated and professional.

The Styles panel shows all styles of the currently selected theme. The Default theme is set by default. Click on any diagram element to see what style is applied to it. You can easily change style of the selected object within the list of theme styles.

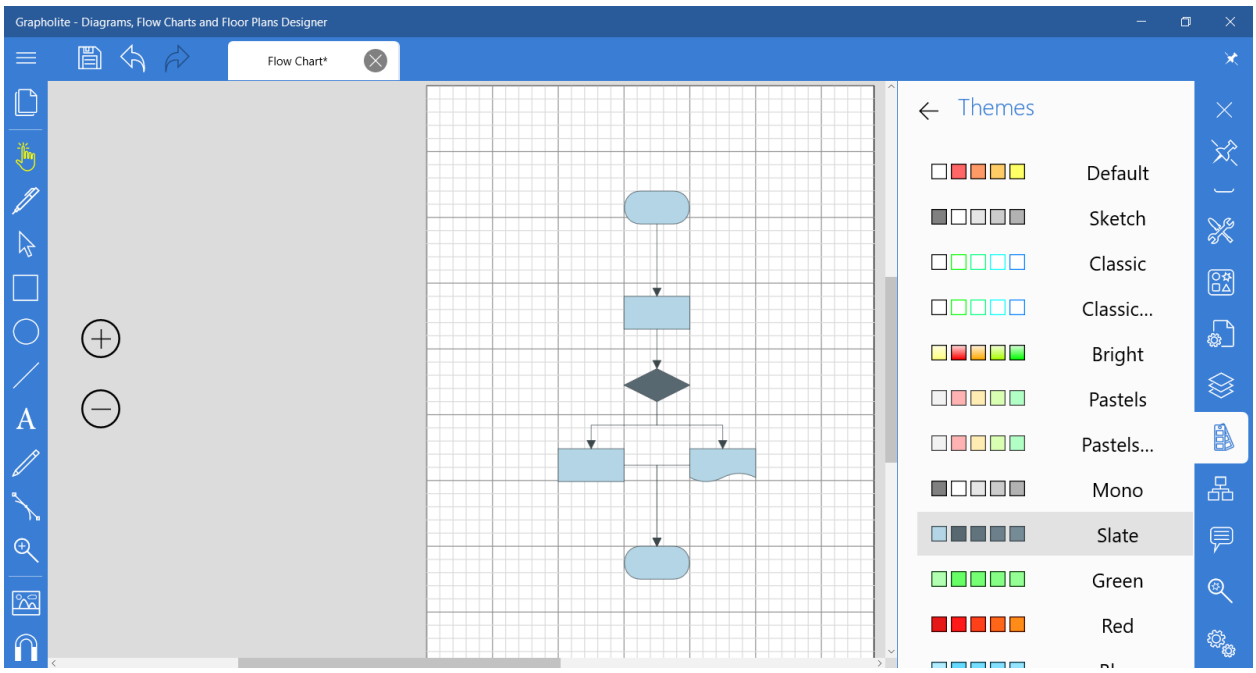


To change the theme:

1. Click Themes Gallery on the bottom of the panel. You will see a list of all available themes.



2. Click on a theme to apply it to the document.
3. Click back to see all styles available in this theme.
4. Style diagram objects with a single click on the necessary style.



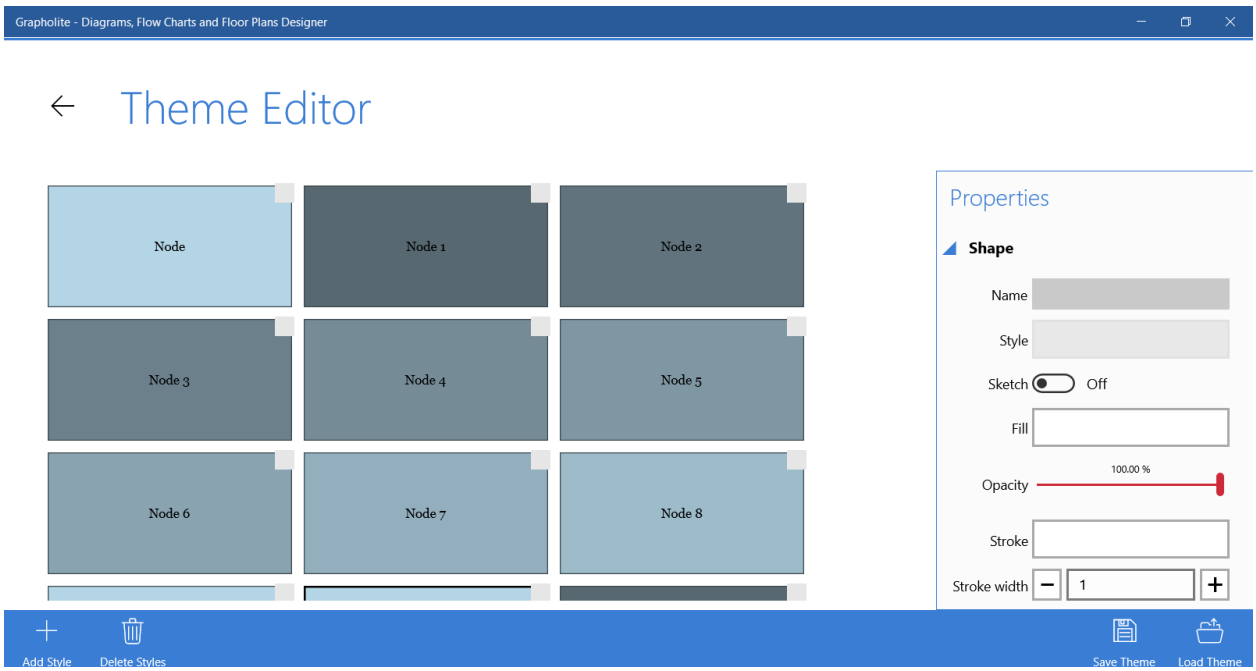
After applying a theme to the entire drawing all objects will match that theme. Nevertheless, you can override the theme for any particular diagram element by selecting it and using the options available on the Properties panel. Once you override the theme for an object, that object remains overridden in that document. You can force overridden diagram elements to revert to the original theme. Select the overridden object and apply to it any style from the list.

Editing a theme

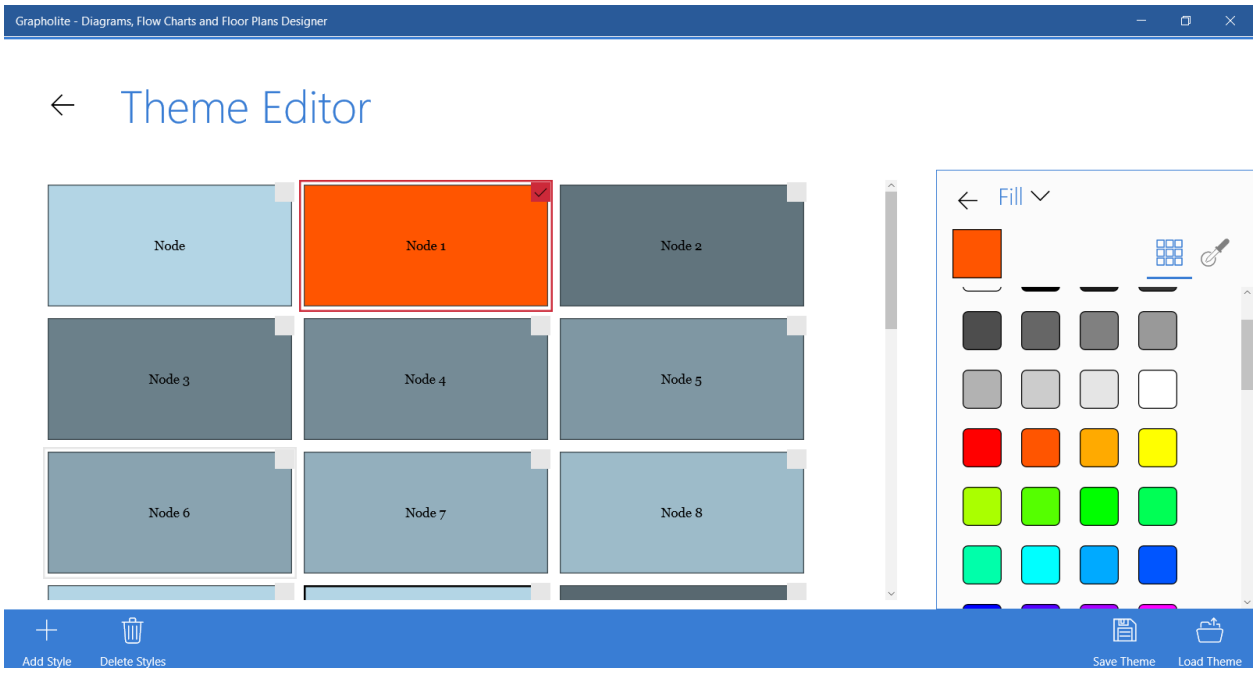
If none of the themes and styles pre-defined in Grapholite suits your diagram look and feel, you can edit the existing theme or add a new one. It's possible to re-define all theme styles including colors, borders, textures, lines, text, effects, etc.

To edit a theme:

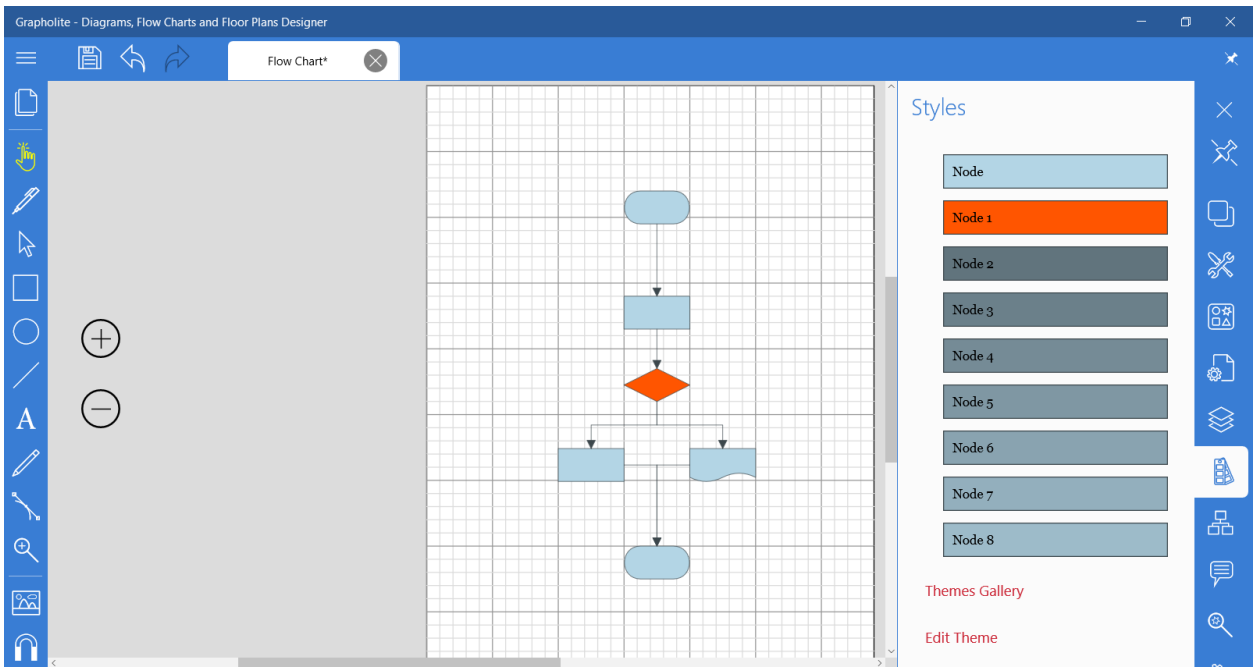
1. Click Edit Theme at the bottom of the panel. You will get to the Theme editor. The main screen area displays all styles of this theme.



2. Select the necessary style to get access to its settings that are visible on the right of your screen. Now you can change any style properties including fill, opacity, stroke, text font, size, background, connection, etc. More information of how to use the fill editor is available in the special section of this user guide: Fill editor. All changes will be immediately applied to the style.



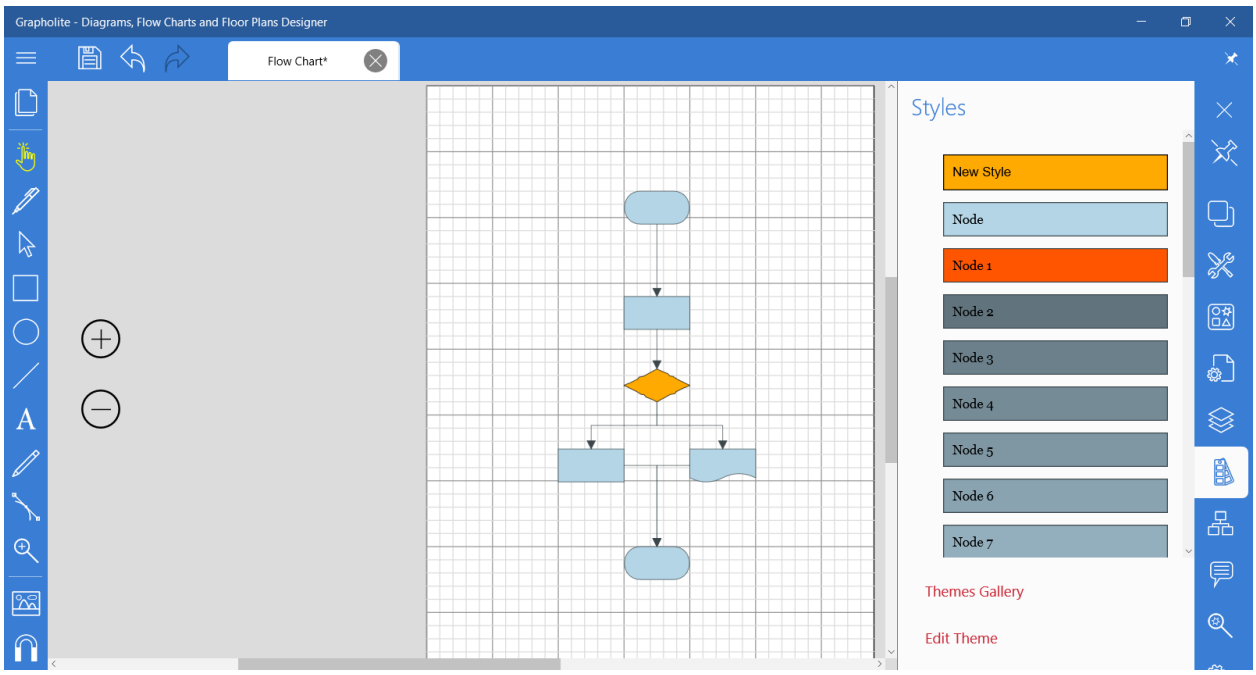
3. Click back to exit the Themes editor. The modified style is shown in the list and you can apply it to any diagram element.



To add a style:

1. Click Edit Theme at the bottom of the panel. You will get to the Theme editor. The main screen area displays all styles of this theme.
2. Click Add Style on the bottom panel. A new empty style will be added.

3. Now you can change any style properties including name, fill, opacity, stroke, text font, size, background, connection, etc. More information of how to use the fill editor to setup fills is available in the special section of this user guide: Fill editor. All changes will be immediately applied to the style.
4. Click back to exit the Themes editor. The newly added style is shown in the list and you can apply it to any diagram element.



Sometimes it's necessary to save a theme that you edited because it has unique settings, and you would like to use this style in your other drawings.

To save a theme:

1. Select the theme you want to save in the Themes gallery.
2. Click Edit Theme at the bottom of the panel. You will get to the Theme editor.
3. In the menu located at the bottom of your screen, click Save Theme ( ). Set the target folder and enter theme name, if necessary.
4. Click Save. The theme is saved to the .grltheme file and can be easily uploaded to any Grapholite edition.

To use the uploaded theme:

1. Click Edit Theme at the bottom of the panel. You will get to the Theme editor.
2. In the menu panel located at the bottom of your screen, click Load Theme ( ). Set the target folder and select the .grltheme file to upload.
3. Click Open and the selected style will be loaded to the Theme editor.
4. Click Back to exit the editor. You will see all styles of the uploaded theme in the list. You can immediately apply them to your drawing.

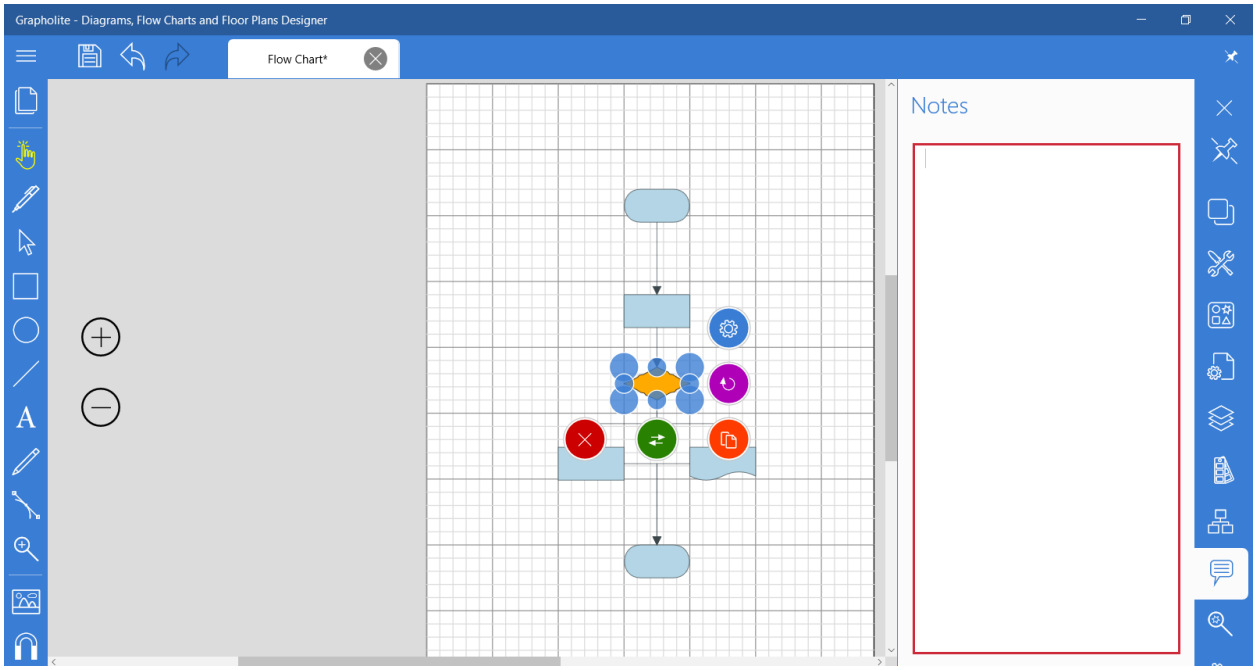
NOTE: The loaded theme is not saved in the Grapholite themes list. Selecting the other style will reset the entire diagram to match a new style.

NOTES ( )

You can add notes to any diagram object. After a note is added, it remains together with the object even if it is moved.

To add a note:

1. Select a diagram element you want to add a comment to. You will see that the text box on the Notes panel becomes active.



2. Enter your comments.

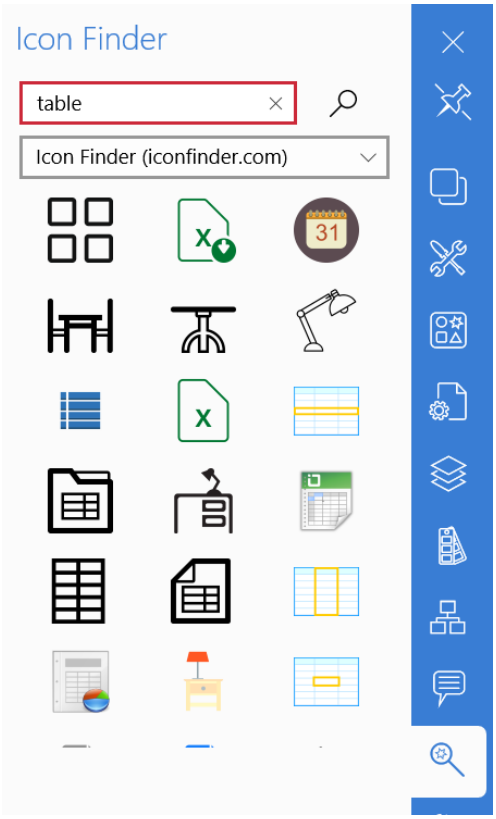
To delete a note:

1. Select a shape and go to the Notes panel.
2. Delete the note from the text box.

ICON FINDER ( )

Grapholite offers the ability to diversify your drawings with the icons that are available on the Icon Finder and Openclipart. It is a search engine that lets you find icons directly from the application. These are the sorts of digital art files — icons, logos and fonts — that you may need to create diagrams.

1. Open the Icon Finder panel.
2. Enter your search criteria. After a few moments, a list of matching icons will appear on the panel.
3. Click it or drag-and-drop to add to your diagram. They are considered common diagram shapes with all relevant settings and options.


Icon Finder
table
Icon Finder (iconfinder.com)

CREATING SPECIFIC DIAGRAMS IN GRAPHOLITE

DESIGNING FLOWCHARTS

What is a flowchart

More information the flowchart diagram type can be found in the following article:

https://grapholite.com/Diagrams/FlowCharts

How to Draw a Basic Flowchart

To create a flowchart you need to think about the steps in your process and list them one by one. If you're not sure if a particular step is necessary and when it is necessary, write it down anyway. When you listed all the steps, look at them once again and ask yourself,

What happens next?

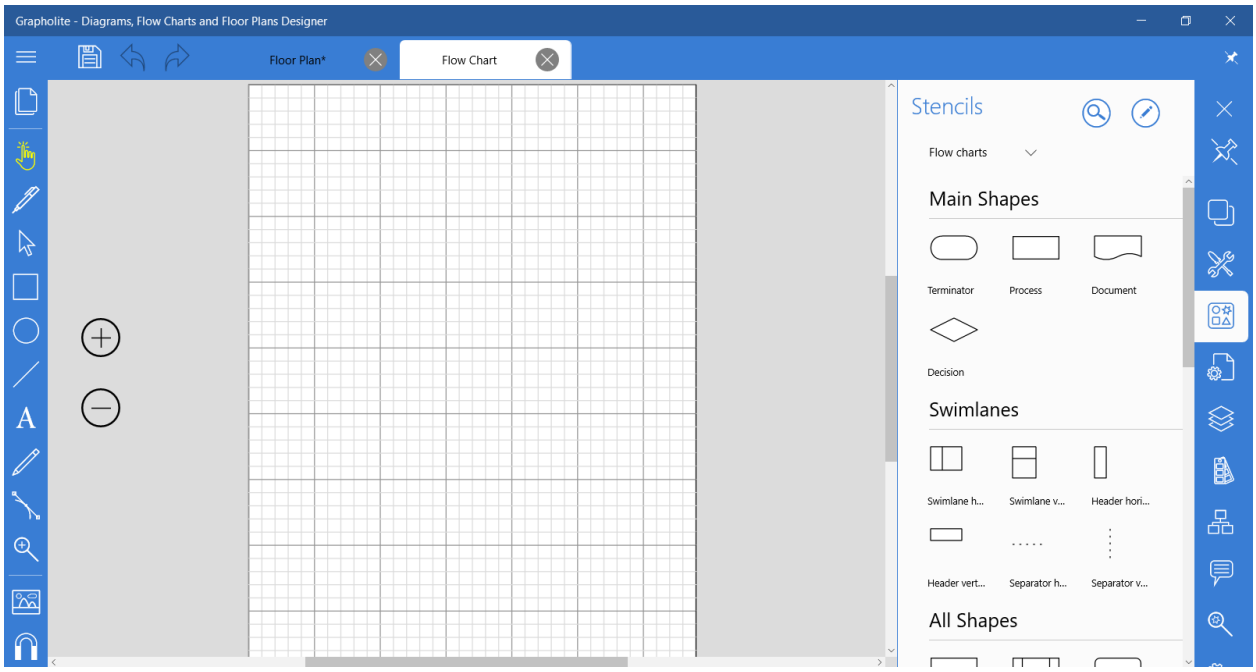
Do you need to make any decision before you proceed?

Do you need approval to move onto the next step?

If you still can't find a place for a task, it may not be essential.

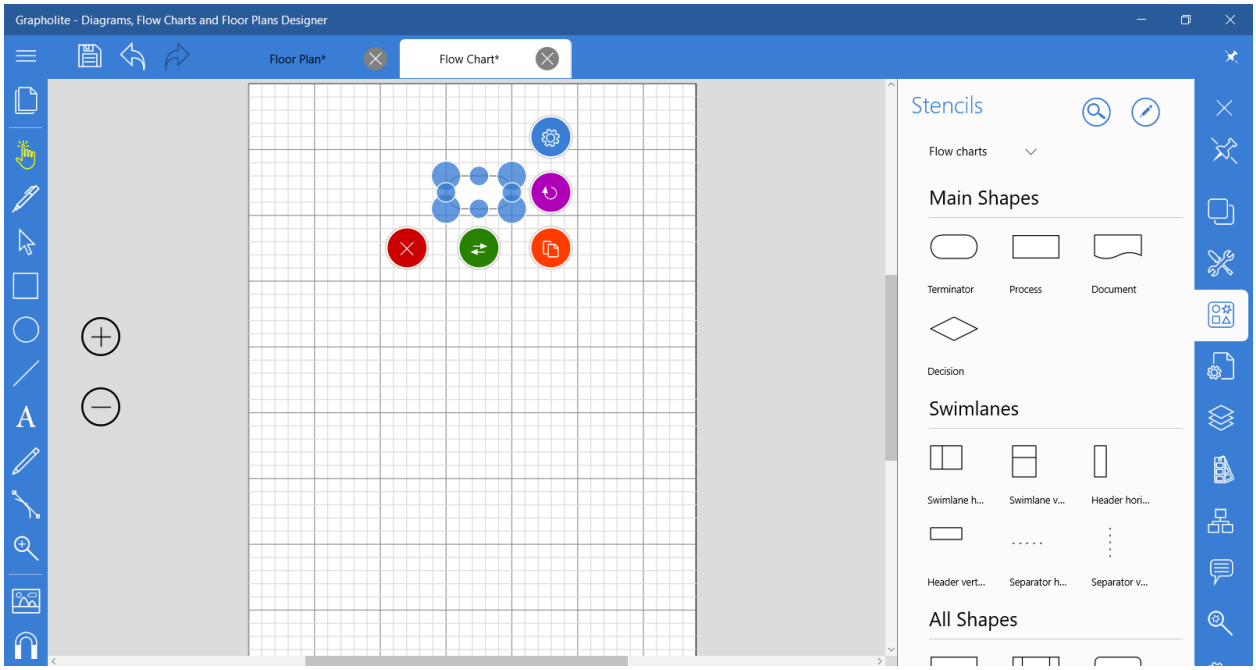
Grapholite offers a set of stencils to easily design Flow charts. To select the necessary shape set:

1. On the home screen, select a new diagram and Select a Flowchart
2. Grapholite will recognize the document type and open the necessary stencils library.

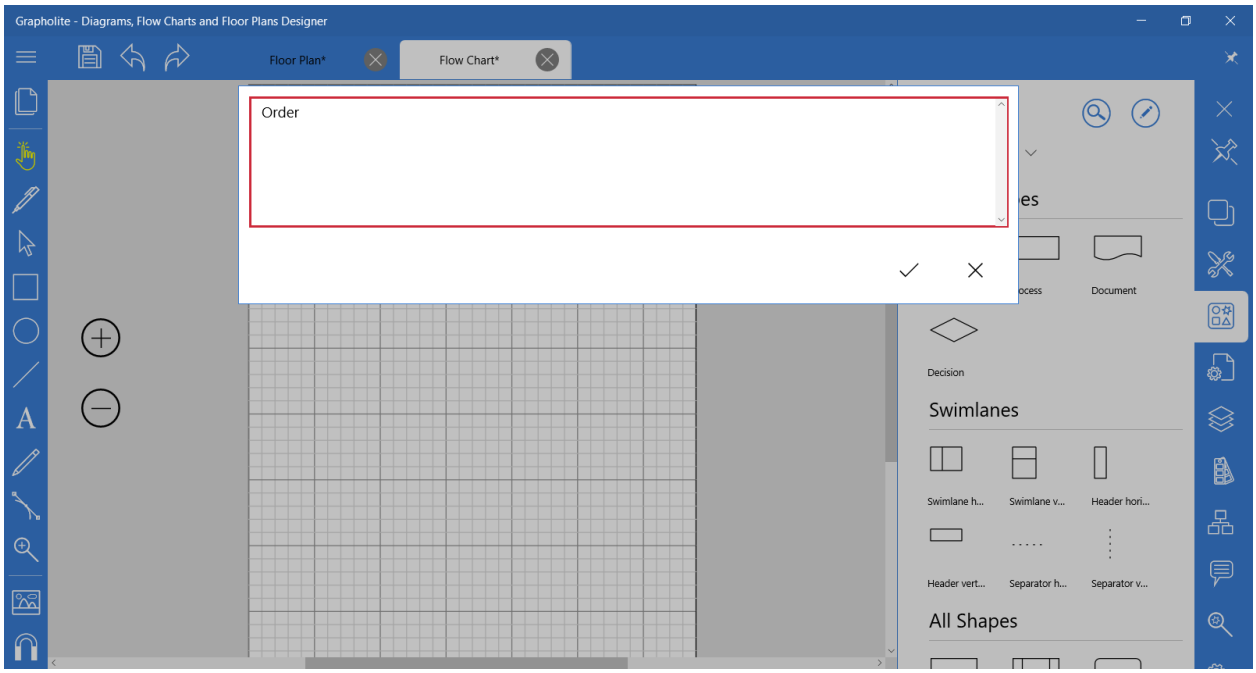


You see that all available flowchart elements.

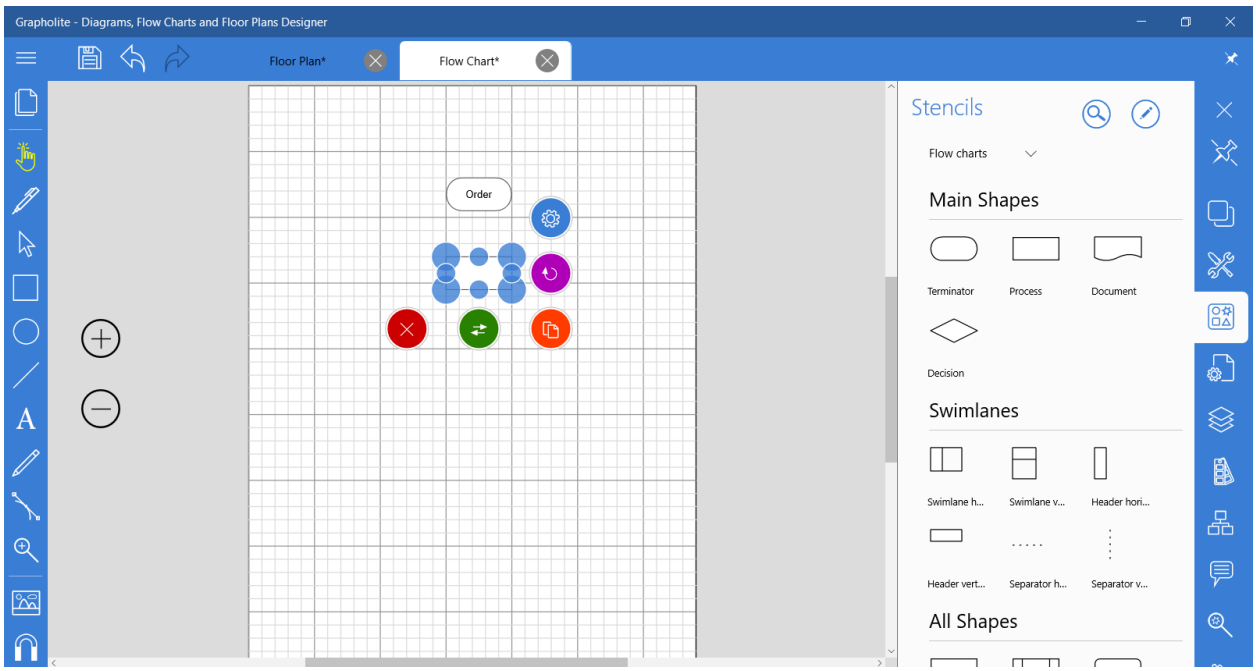
1. Let’s start a diagram with a Start shape (elongated circle shape). Just click on the corresponding stencil on the Stencils panel or drag and drop it to the diagram area.



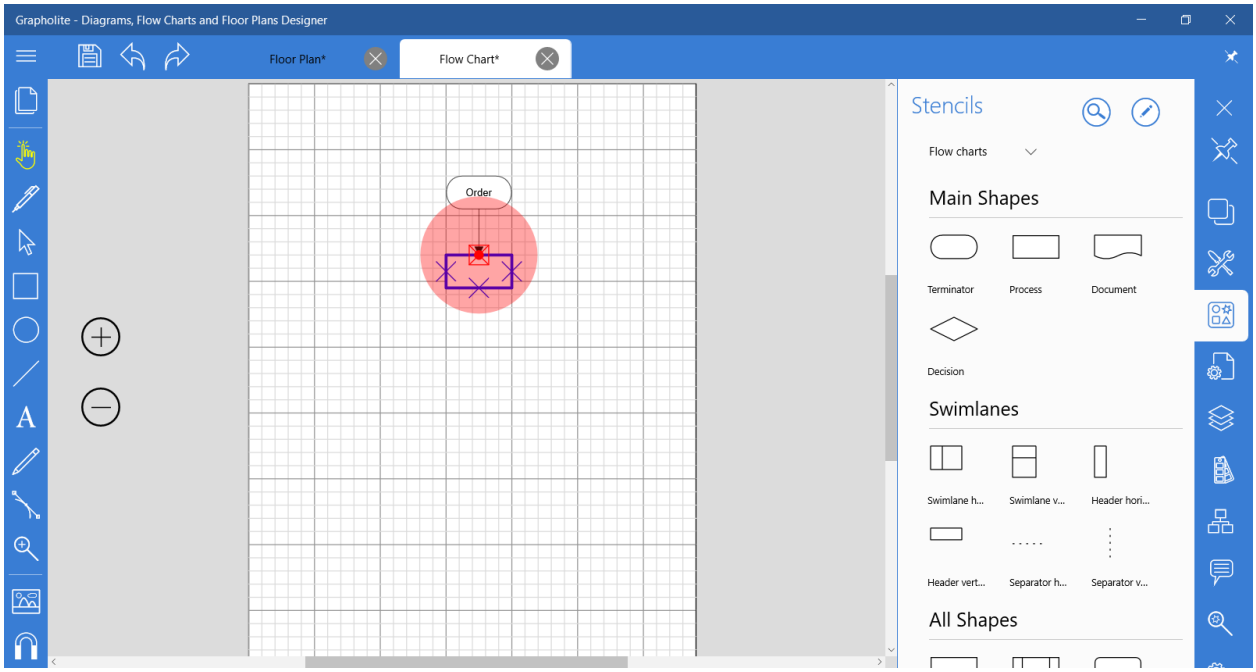
2. To add a text, just select the shape and start typing (or tap twice to open the text input window if you use a touch-oriented device).



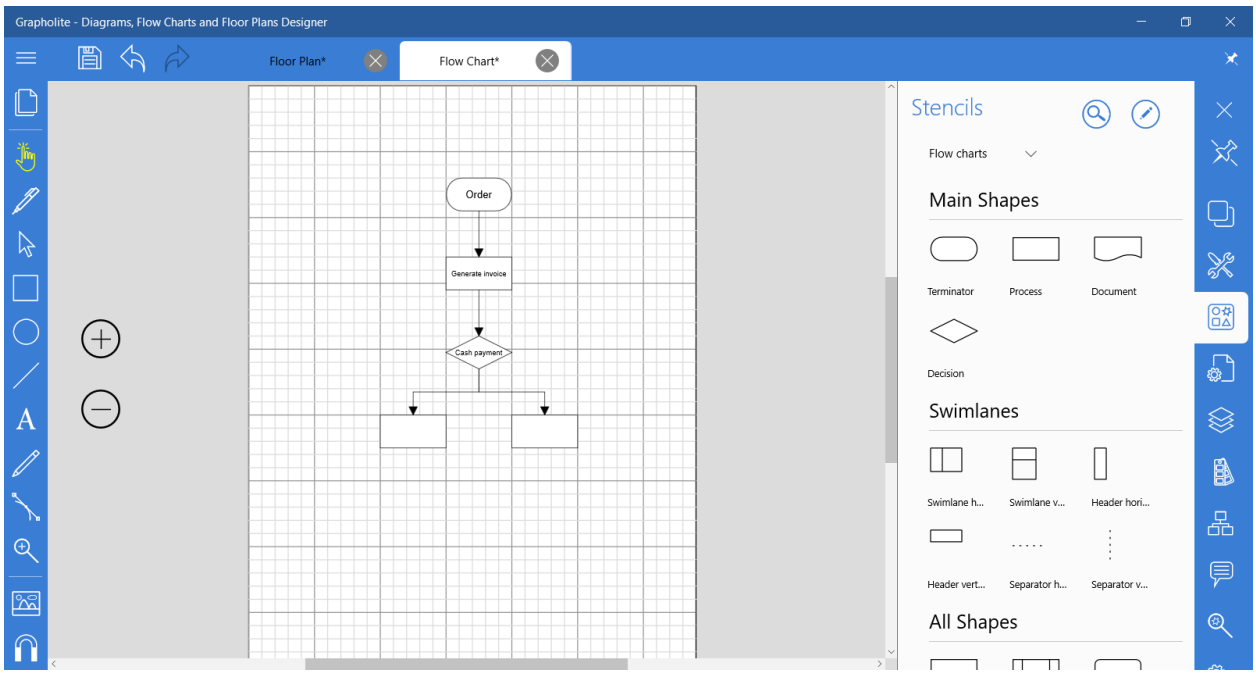
3. Move on to the first step. Add a simple process to the diagram (a rectangle).



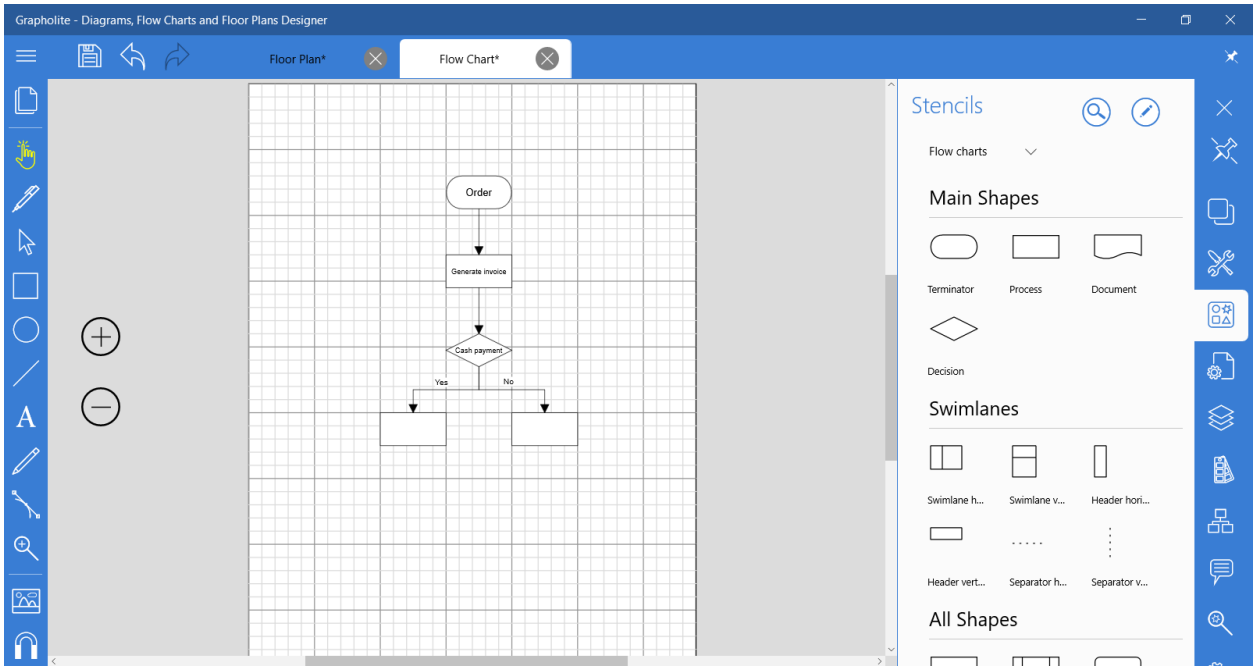
4. To connect the shapes, select the Start shape and drag and drop the connector icon to the Process shape until the connection point becomes red. It indicates the correctly established connection.



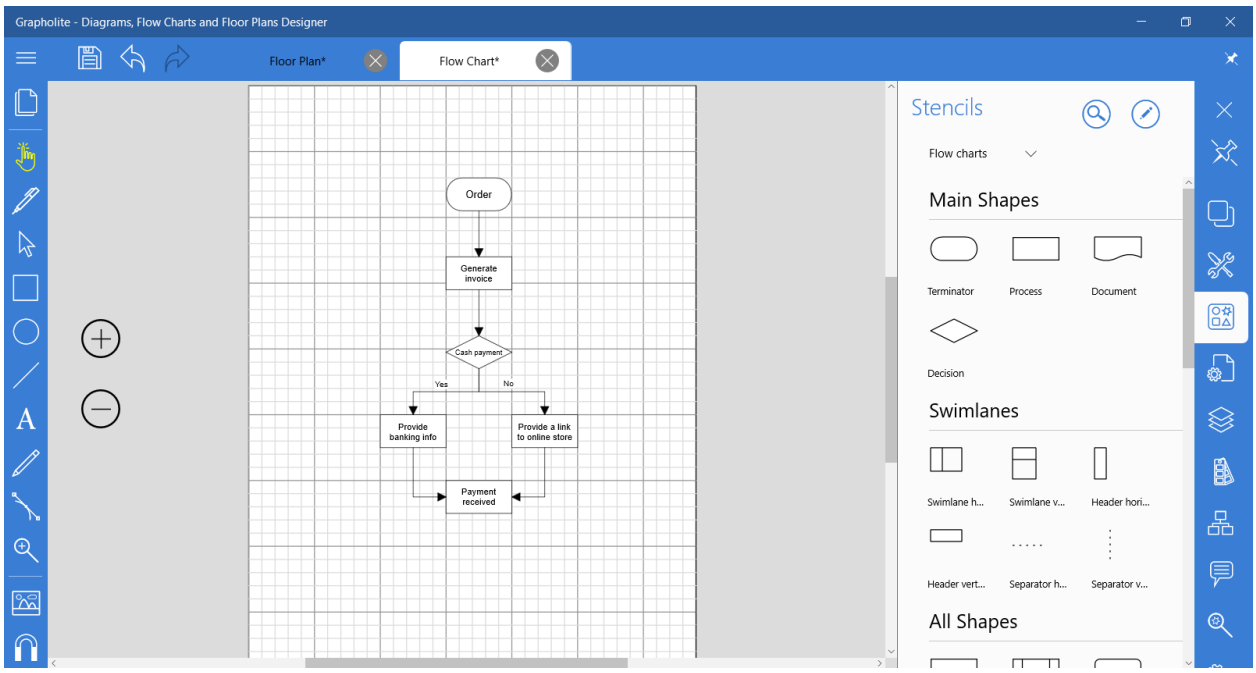
5. Add a decision (a diamond) and connect it to the out-coming process shapes.



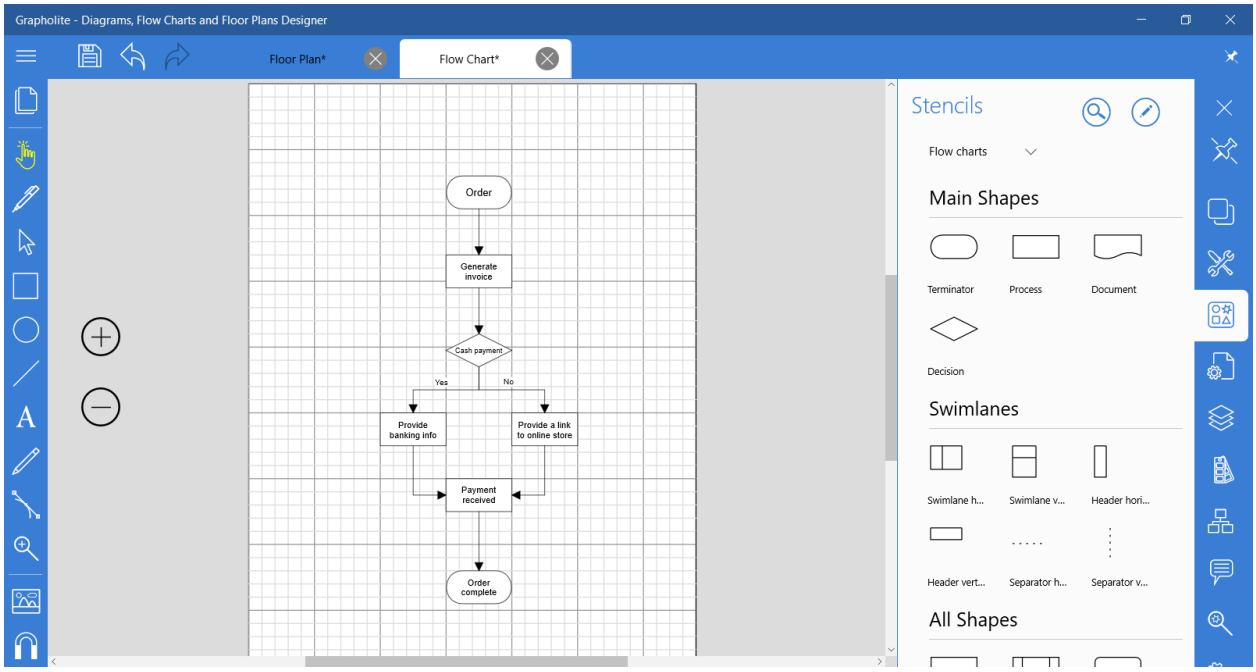
6. Add labels to the connectors coming out of the decision diamond. To do it just select the connection and start typing (or tap twice to open the text input window if you use a touch-oriented device).



7. You can add as many processes as you have in the list. Grapholite allows the creation of a connected shape with a single click. You just need to drag the connector to the empty diagram area and a connected copy of the shape will be added. Or just tap the "Duplicate" icon to add a duplicate of the selected shape. In this case you will need to add a connection manually.



8. Once you're done adding all necessary processes and decisions, add End shape (elongated circle shape) to the diagram.

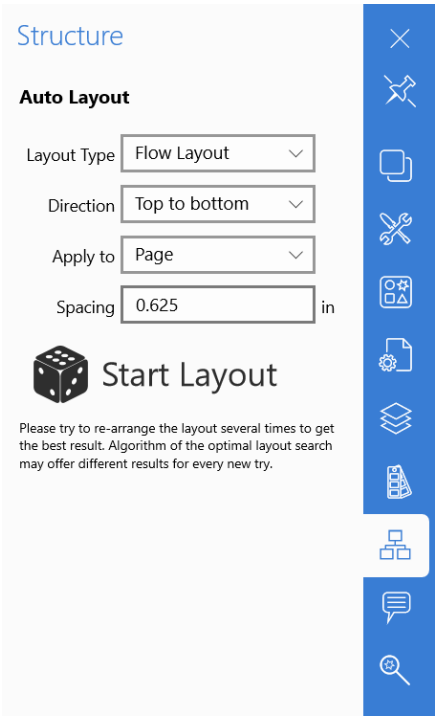


9. Layout the diagram. Go to the Structure and Layout panel and select the necessary layout type and direction to make the diagram look professionally and occupy less space.

Structure and layout

Click the Structure and layout button on the toolbar .

You will see the following layout settings:



Layout type

This option sets type of the layout that will be used to arrange diagram elements. A **Flow layout** arranges components in a directional flow from left to right and top to bottom. A **Flow layout (centered)** arranges the objects in the same manner, but all the objects are centered on the page. **Compact layout** arranges objects to occupy less free space in the document.

Direction

Use this property to set the start point from which the layout will start and the direction in which it will spread over the entire diagram. There are four options: Top to bottom, Bottom to top, Left to right and Right to left. You should set it to the preferred reading direction of your audience, for example for Hebrew or Arabic it would be preferable to select right-to-left direction.

Apply to

Here you can select what diagram elements will be automatically positioned on the page: all diagram objects on the page or just those that are selected.

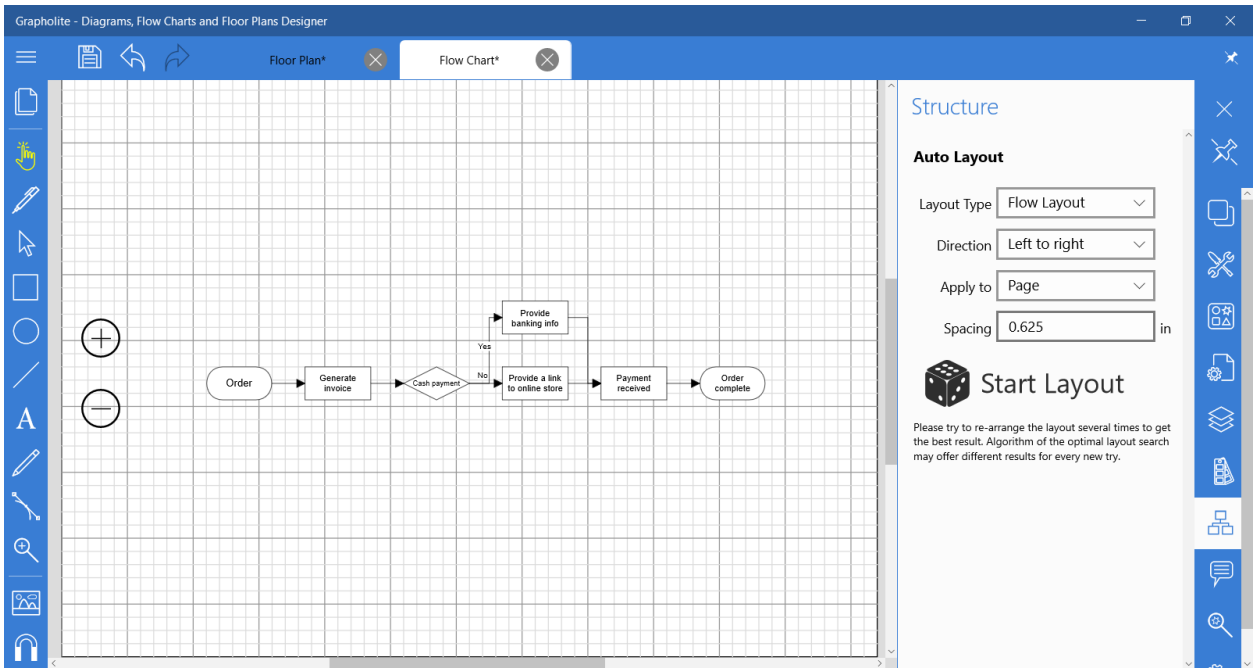
Spacing

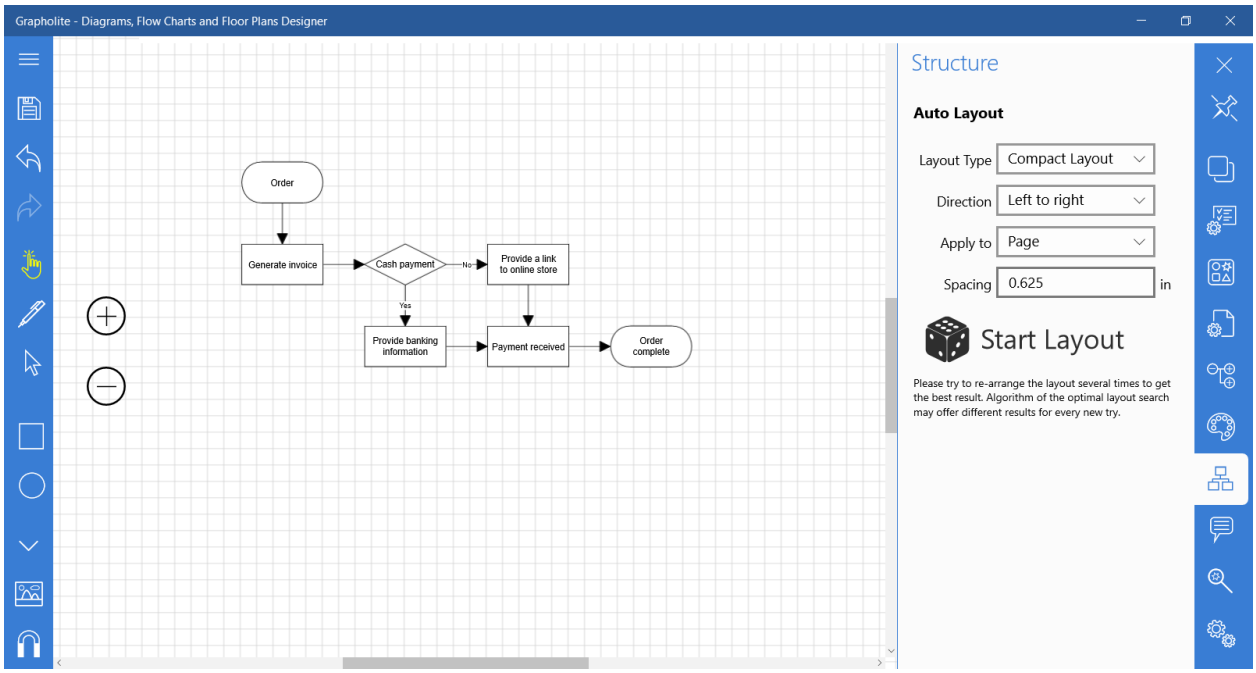
The Spacing property sets value that will be used to arrange the diagram objects to have equal specified space between them.

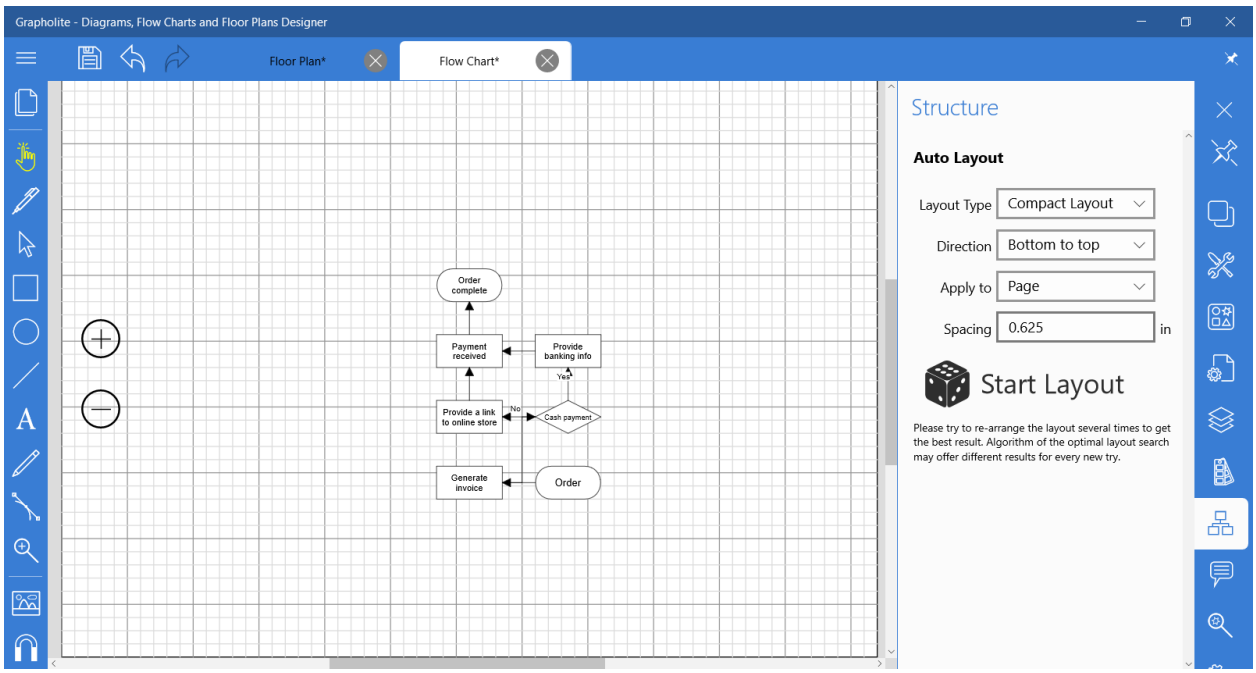
You can set all the Layout properties separately and click Start layout, or you can combine the settings (for example, set Spacing and Direction) and after that click Start layout.

NOTE: Try to re-arrange the layout several times to get the best result. Grapholite may offer different results for every new try for more optimal layout.

Here are various layouts of the flow chart we created:







CREATING FLOOR PLANS

What is a floor plan?

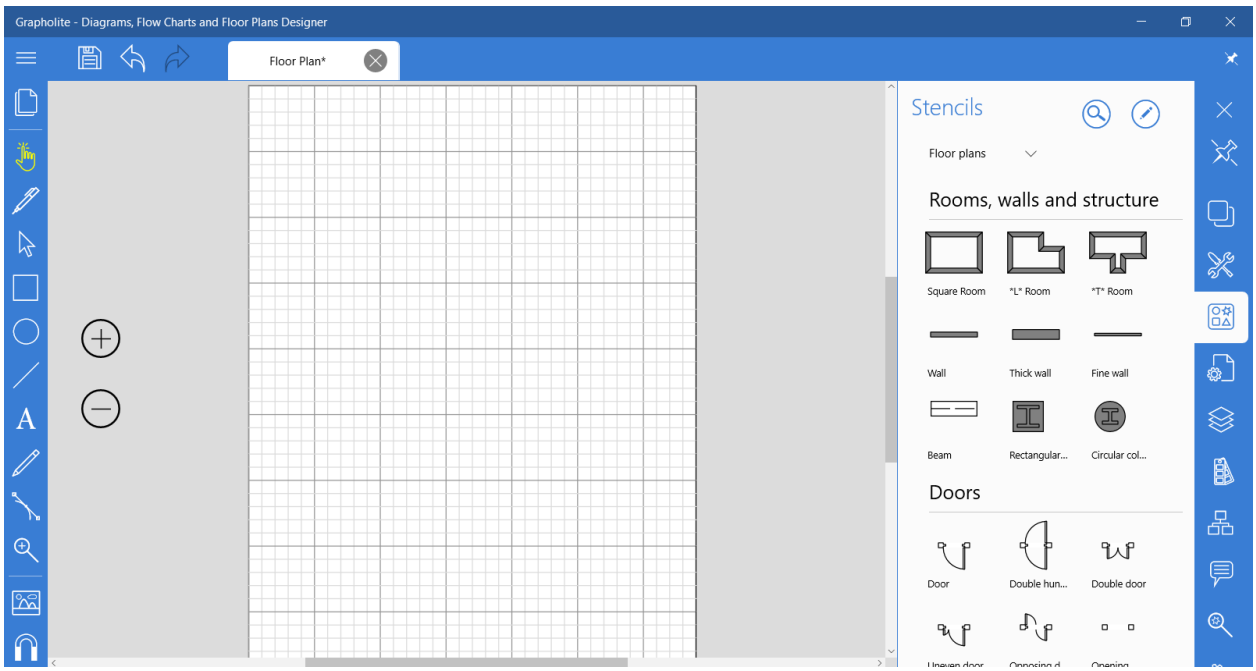
More information on the floor plan diagram type can be found in the following article:

https://grapholite.com/Diagrams/FloorPlans

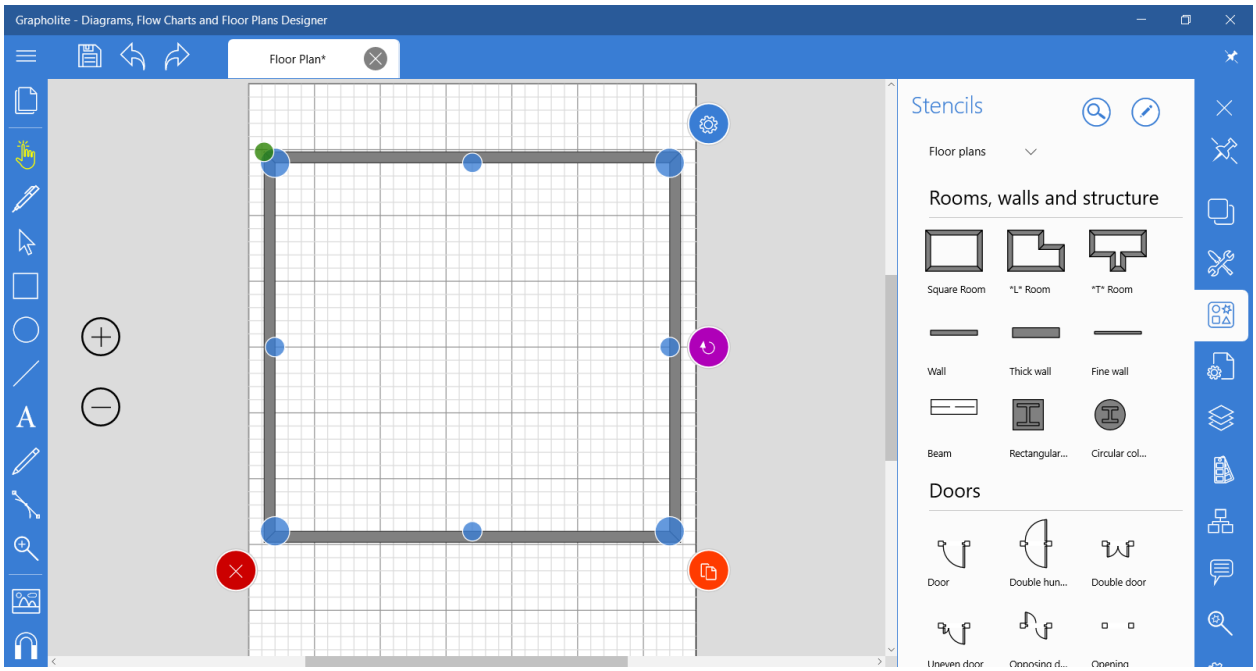
Creating a floor plan may seem a complicated task that requires specialized software specific for this need and knowledge of the area. However, creating floor plans is yet another task that you can accomplish quickly and easily with Grapholite.

You can easily add walls, windows and doors. Grapholite will help you align and measure all of the elements of your floor plan perfectly.

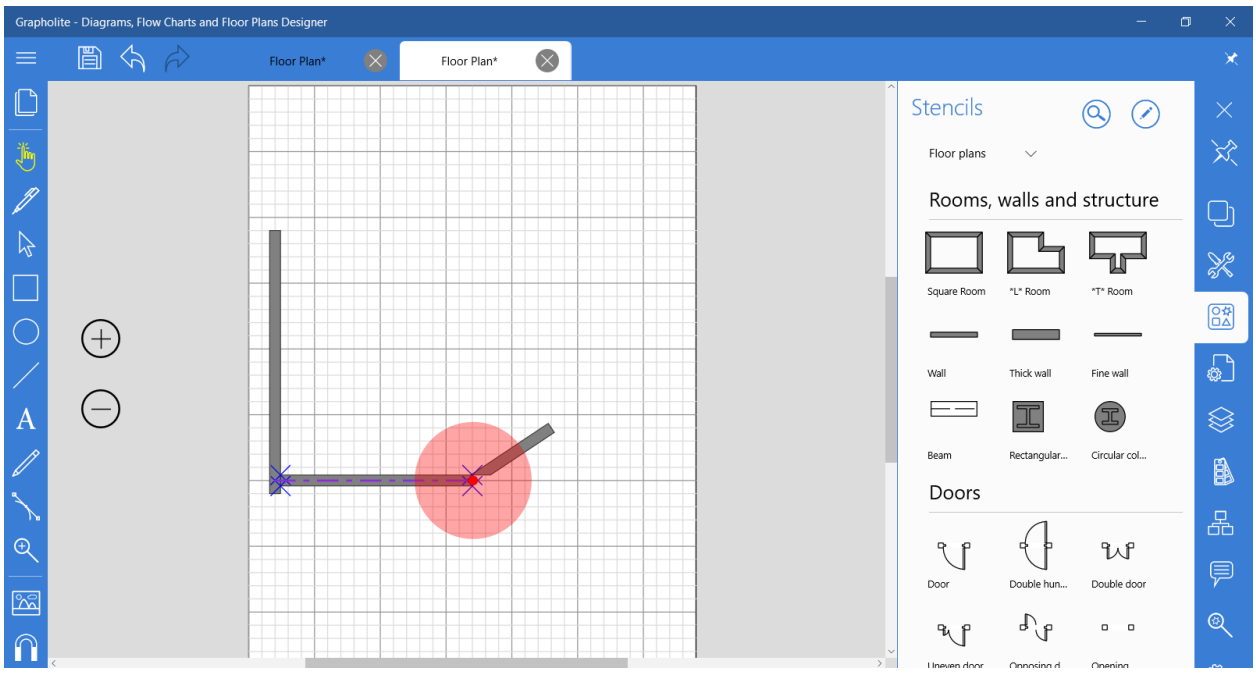
1. To get started click on the Floor Plan tale on the start screen and the corresponding stencils library will be loaded to the right panel.



2. Select the room type and tap to add it to the diagram area. Adjust it to fit your needs. Drag the blue control points to adjust room size. You can also rotate the shape by dragging the curved arrow icon. The green control point will help you set wall thickness.

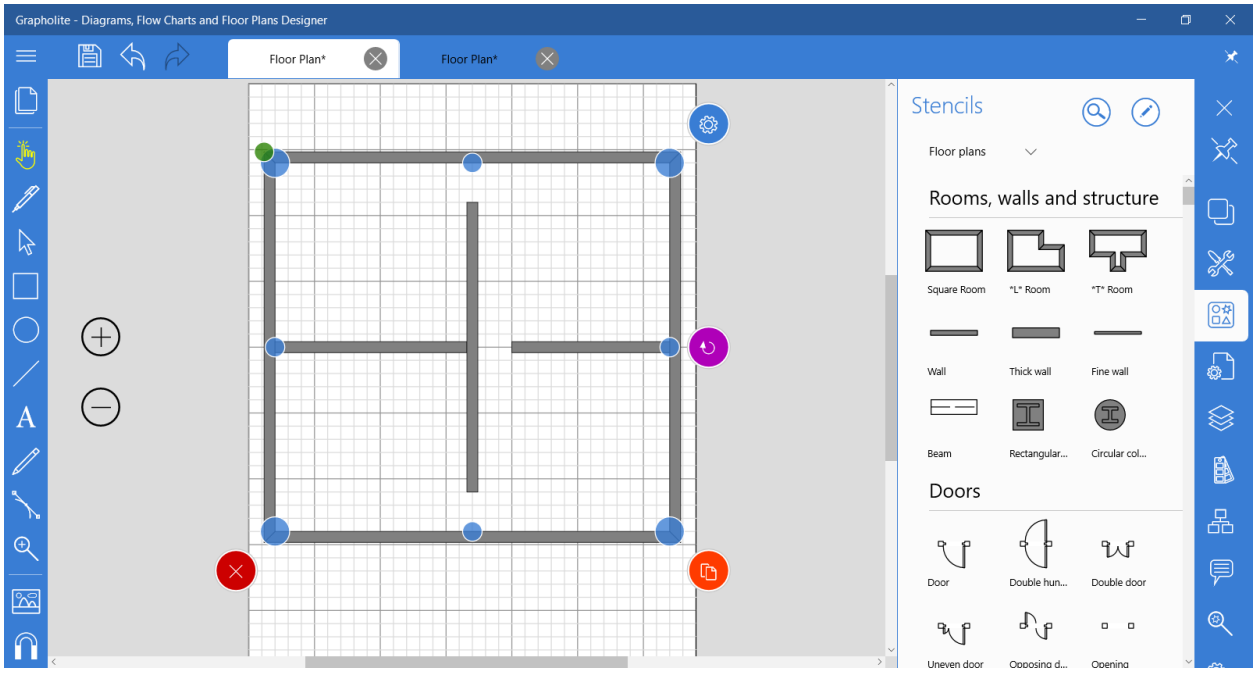


You can also compose a custom room shape using the wall shapes. Just drag and drop wall shapes onto the diagram area. Resize the wall by dragging the blue control points. Connect walls by dragging one wall to another, when the control point turns red, release the mouse and two walls will be glued. Now you can move corner and you will see that the walls length will increase or decrease depending on your manipulation.



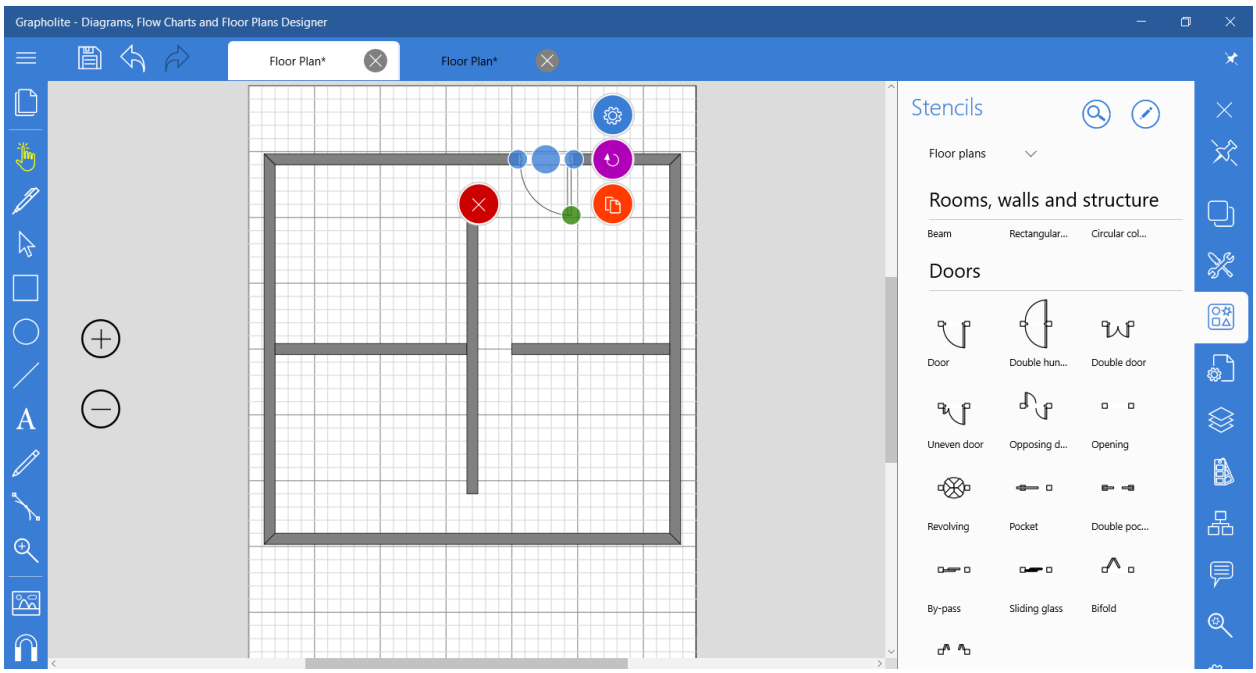
3. Create the Interior Wall Structure

Drag wall shapes and position them inside the room.
Resize the walls by dragging the blue control points.
Drag control points from one wall to another wall. The control points turn red when the walls are glued.



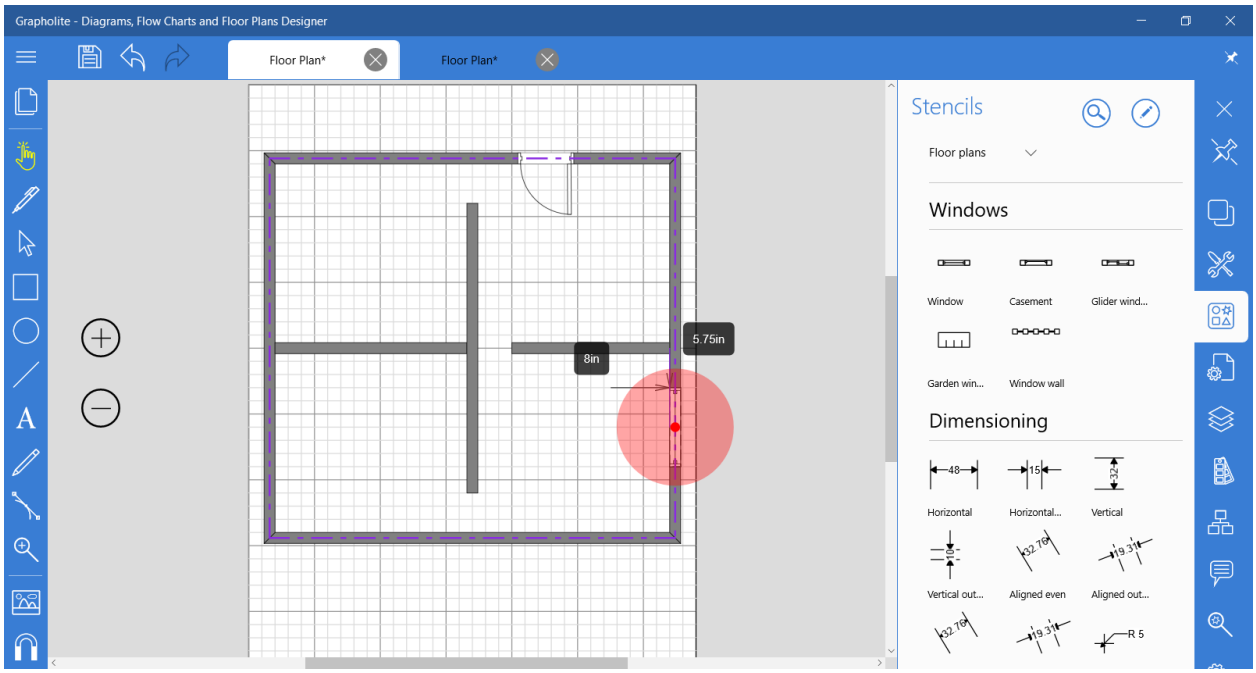
4. Add doors

Select the Doors sub-set of stencils and drag a door shape and move it towards the wall. When the wall's guide turns to red and the door's controls point becomes red, release the mouse, and the door will be automatically aligned and glued to the wall.
To set the opening direction and door opening angle, drag the green control point and move the door to the required direction.



5. Add windows

Drag a window shape and move it towards the wall. When the wall's guide turns to red and the window's control point becomes red, release the mouse, and the window will be automatically aligned and glued to the wall.



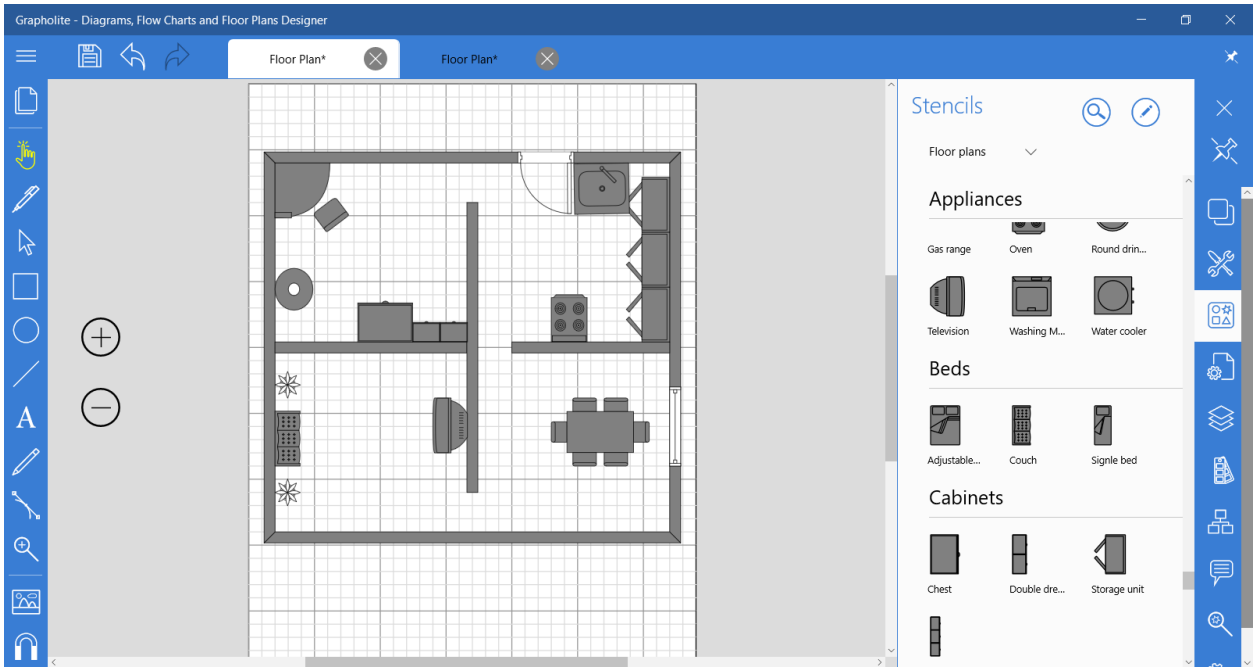
6. Add furniture

There is a large collection of common used furniture symbols divided in categories depending on the room type.

Tap on a necessary furniture to add to the diagram area or drag it from the library and drop to the position you

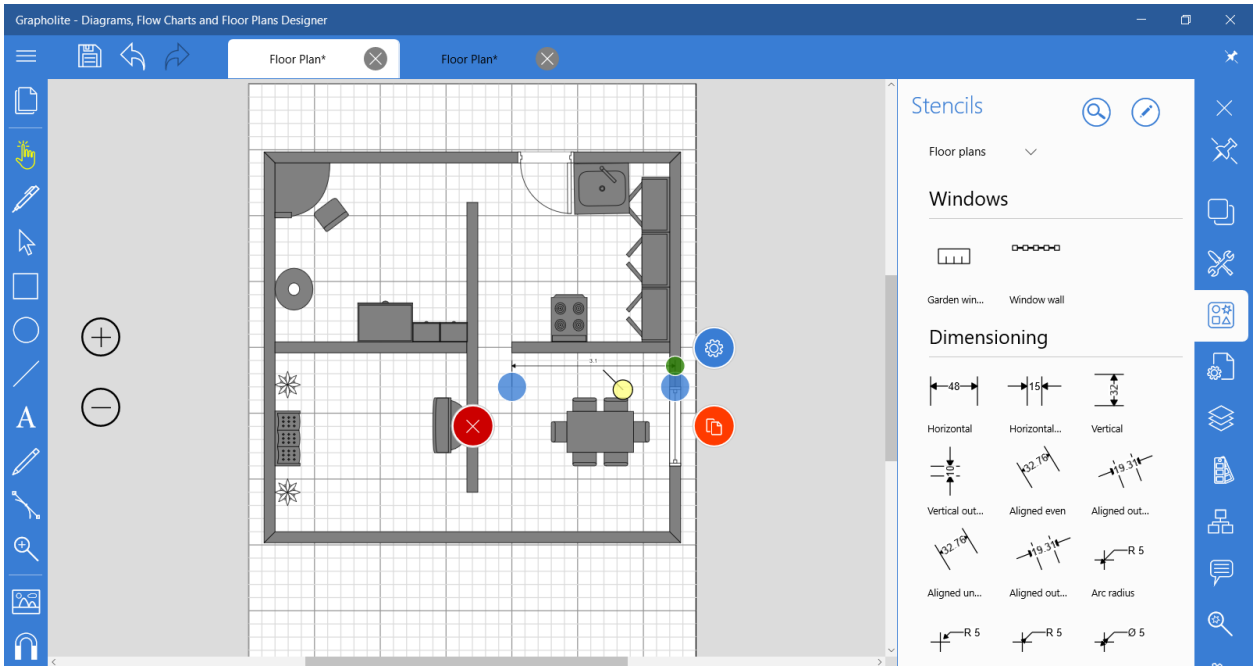
want.

All the furniture shapes can be easily resized, you can set the size by dragging the blue control points.



Add dimensions

Drag a dimension line from **Dimensioning** library to a wall. To perfectly align with the edge of the wall, you can drag a you can just move the blue control points until it becomes red to show that the dimension is set. You can also move the dimension label with the light pink control point to position the label so that it is easy to read.



Now you know how it’s easy to design a professional floor plan in Grapholite.

DESIGNING ORG CHARTS

What is an organizational chart

More information on organizational chart diagram type can be found in the following article:

https://grapholite.com/Diagrams/OrganizationCharts

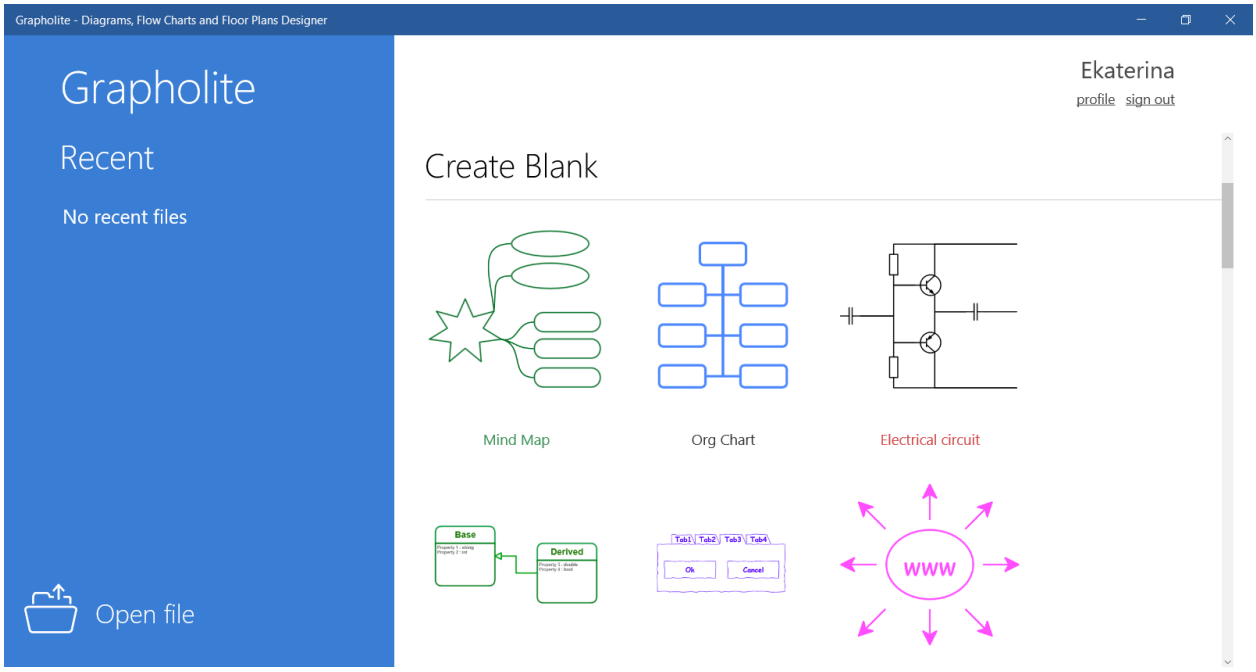
Drawing an organizations chart

Typically the title of the position (the job title) and the name of the person who occupies that position are shown in each box in the chart. The best practice is to show the title above the name, because it's the positions that define the organization, not the people who currently occupy them. You can change people within positions without changing the special arrangement of the chart.

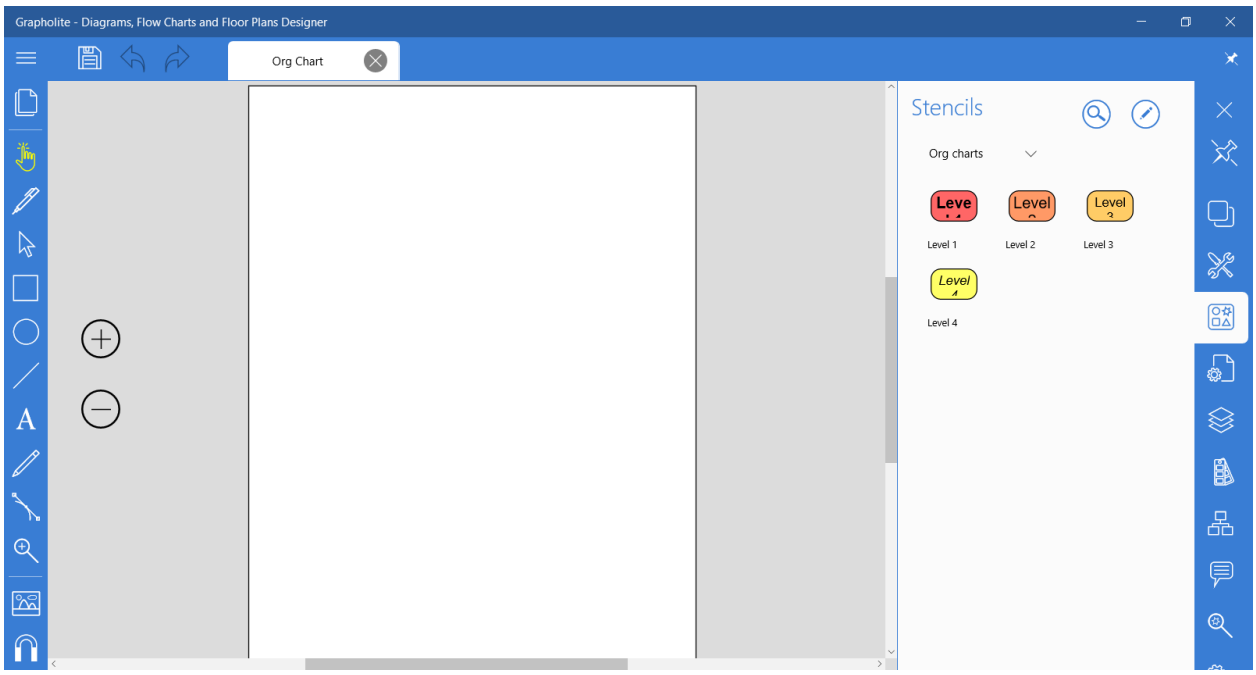
You can add other fields to a box too. Adding a phone number is one common addition.

Grapholite offers the ability to easily create org charts with a set of stencils and predefined shape layouts and behavior. All you need is to create the Org chart document and the app will offer you a corresponding shapes library and layout types:

1. Click the menu icon and select the New drawing item.

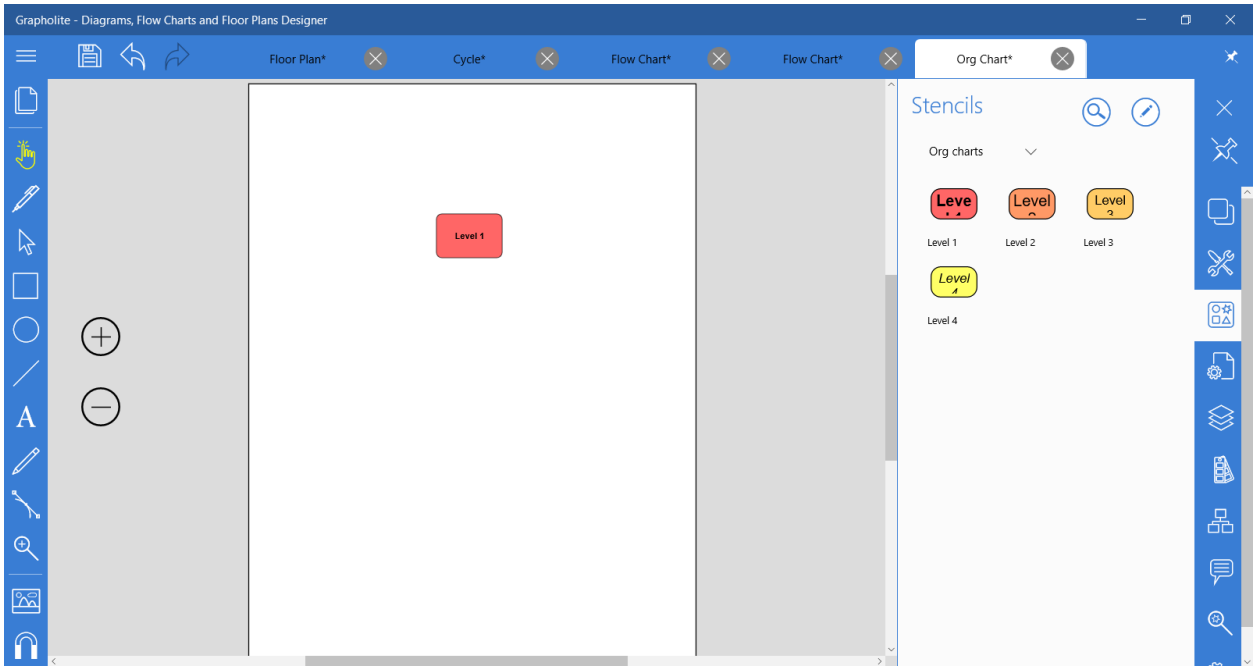


2. Select **Org chart** and the corresponding document type will be created. It will immediately open the necessary shape set.

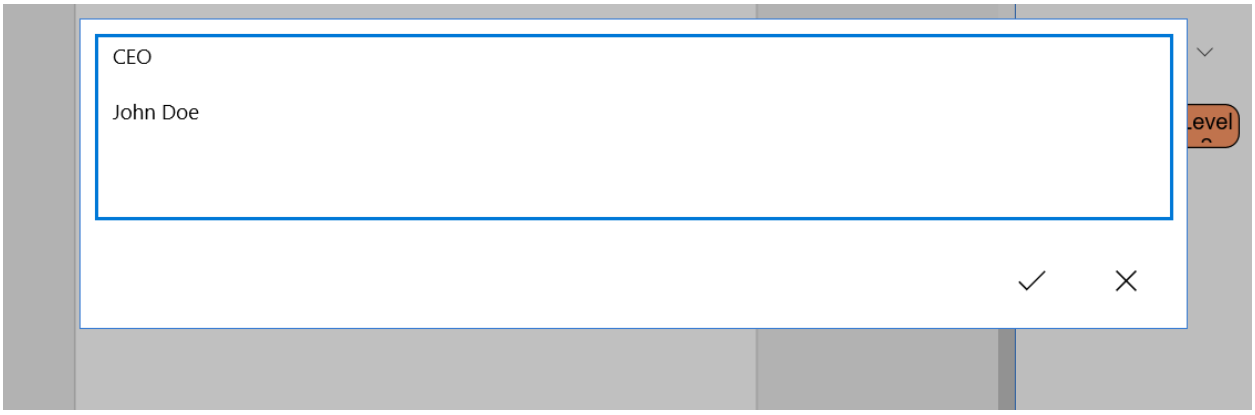


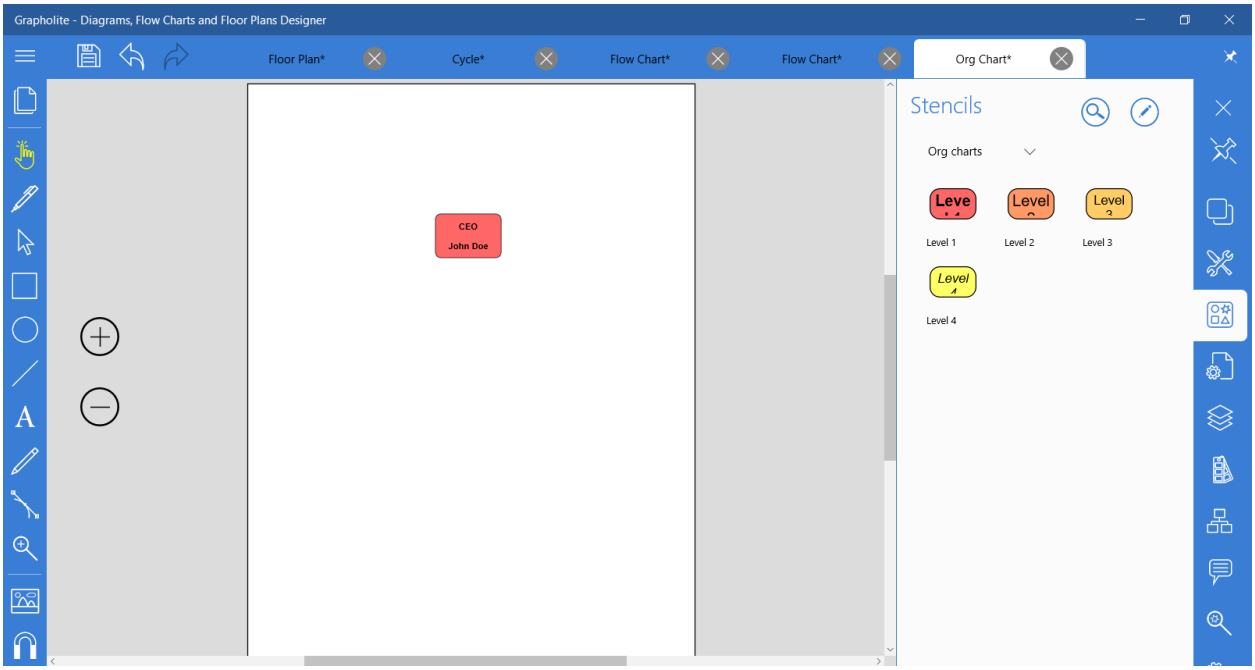
You see that all the elements are of different levels, which will help you create a structured hierarchical diagram.

1. Add *Level 1* shape to the diagram by clicking a stencil on the panel.

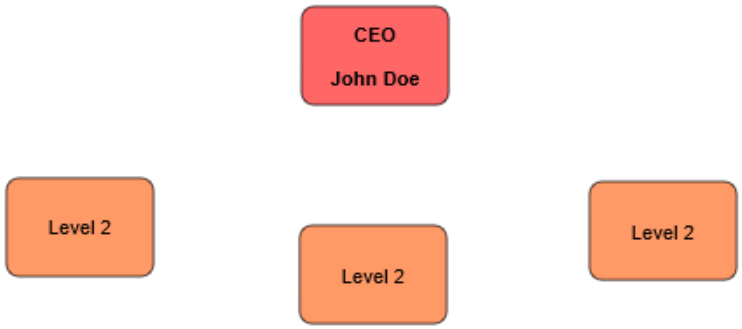


2. Add position and name. Click the shape once again and enter the necessary information to in the appeared textbox. Click the checkmark to save changes.

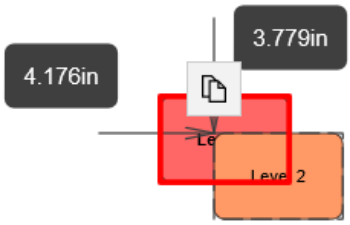


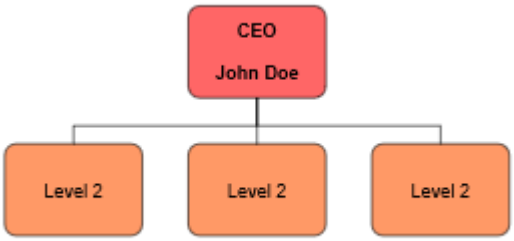


3. Add peers and direct reports. Direct reports should be of a different level. So, click *Level2* stencil to add the next hierarchy level.

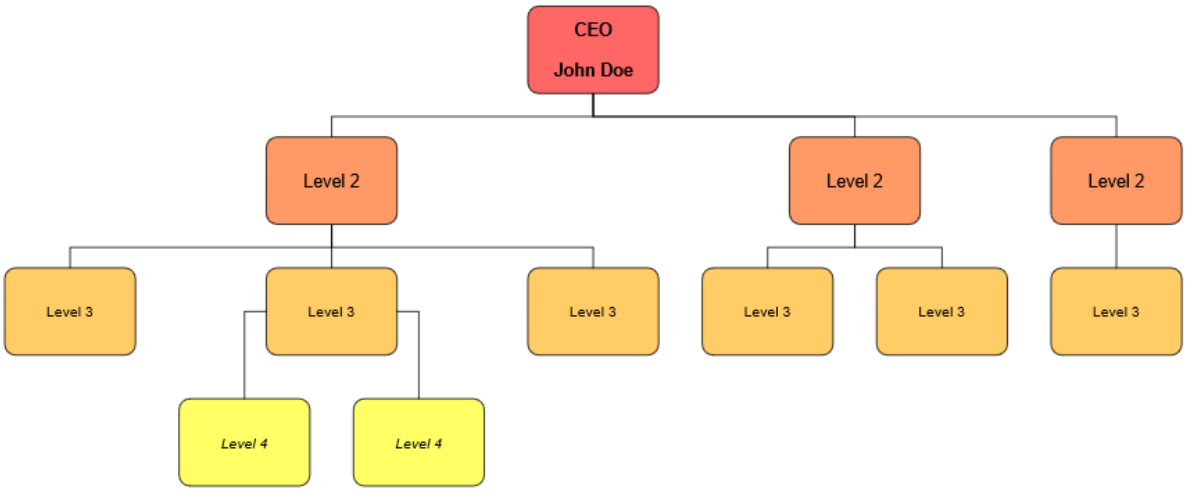


4. Now you can add connections. You can do it manually like this: select the CEO shape and drag and drop the connector icon to the Level2 shapes until the connection point becomes red. It indicates the correctly established connection. Or you can just drag-and-drop the lower level node to the parent node (drop it over the parent element) and the connection will be automatically established. And the easiest way to setup a connection is to drag-and-drop an org chart object to the parent node directly from the toolbox.





5. In the same way, add more levels to the diagram and set connections between them.



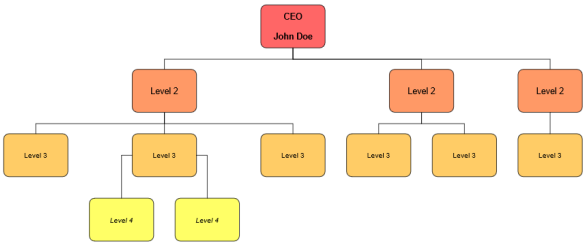
Rearranging the chart

If you want to make changes to any of the positions within the chart, it's as easy as dragging the box to where you want it to go: up a level, down a level or side to side. Simply select the box you want to move and drag it around on the page. As you move it, you can see that Grapholite automatically re-layouts the other shapes and connections. If you drag the shape over the other shape, you will see that the object under the one you are dragging is marked with a red rectangle. Drop the shape there and it will become the subordinate org chart element of that red object and will automatically position to have equal connections and even spaces.

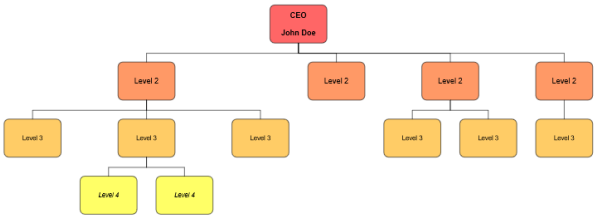
Grapholite will keep your chart neat and orderly. In this way, you can easily rearrange your chart without extra effort.

When you add a new position or remove the existing one, Grapholite reformats the diagram to accommodate the changes.

Inserting a position: Add a new position by clicking the corresponding stencil. Add connection from the supervising position and the chart will automatically re-layout.

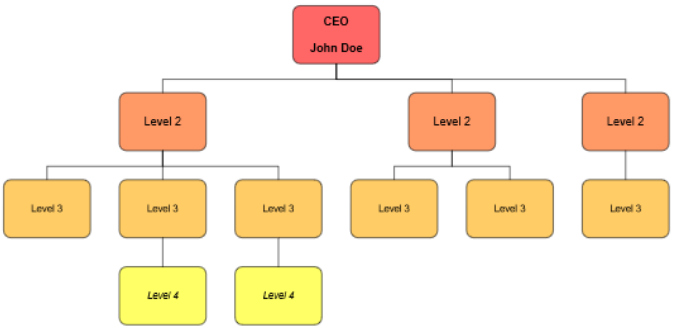


Before adding a position

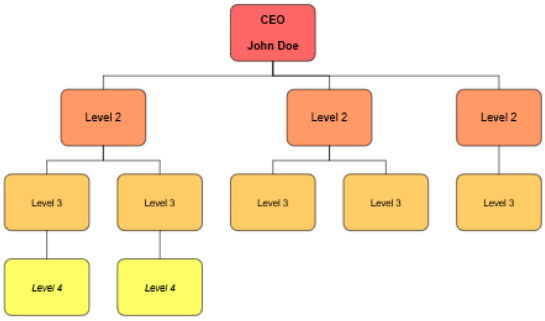


After adding a position

Deleting a position: To delete a position, just select it and click the red cross icon that will appear among the short key commands. The chart will automatically re-layout as shown below.



Before deleting a position



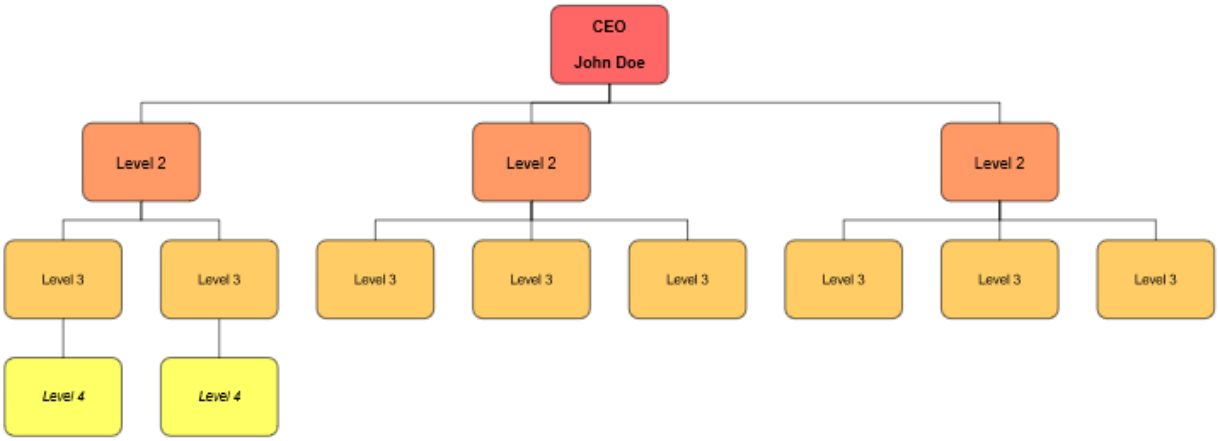
After deleting a position

Layout and orientation

Grapholite offers the ability to change type of layout and orientation of the entire diagram or its separate nodes to use screen space more efficiently and make the chart more readable and professional.

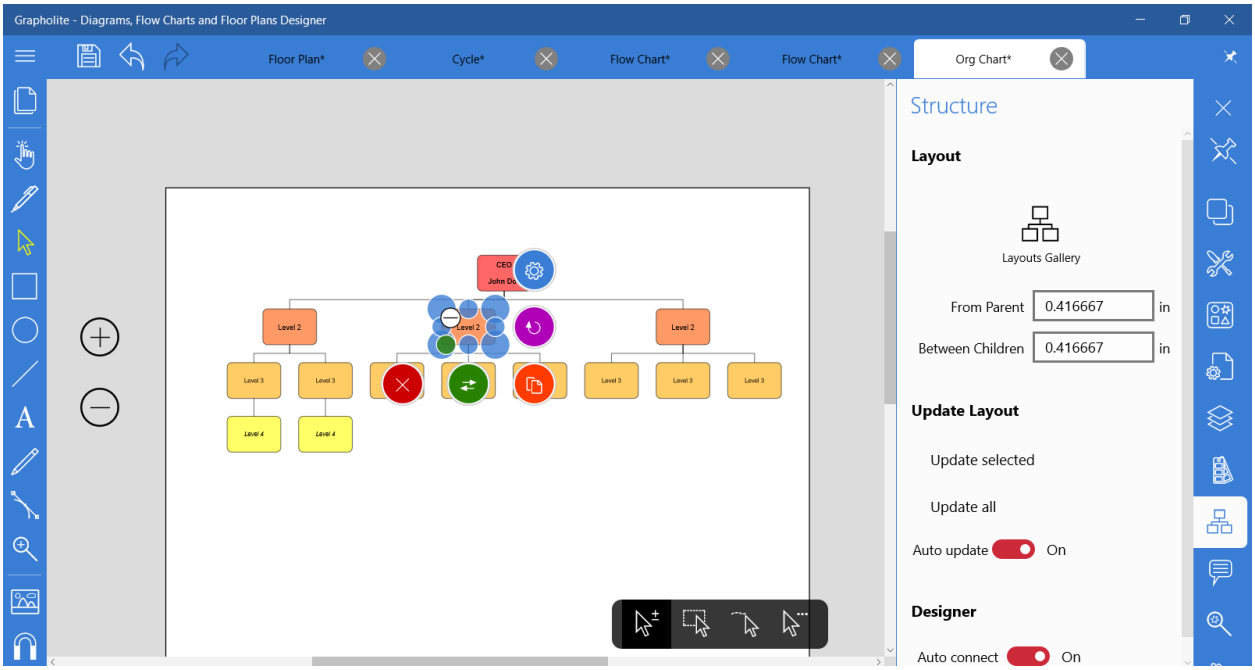
The most common arrangement for the boxes in an organization chart design is a horizontal layout of the first level below the top position, and a vertical layout below this.

The default layout is horizontal and your diagram will look like this.

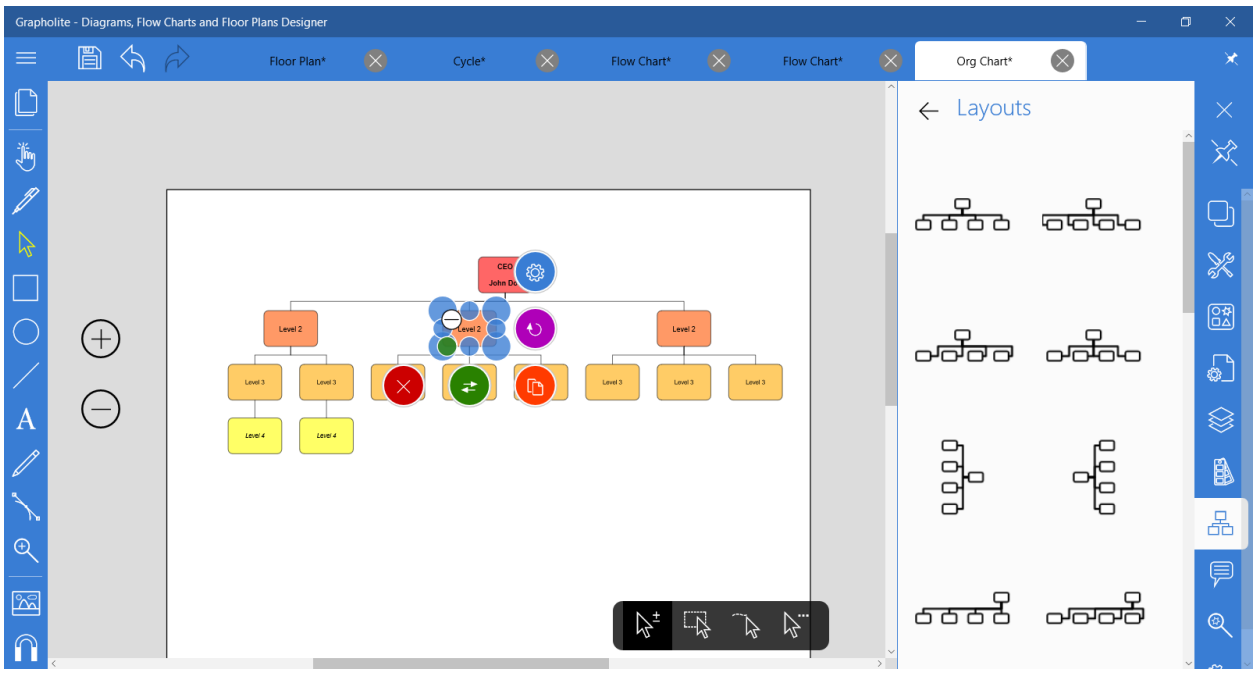


We can optimize it by changing layout type of the selected nodes and their subordinates.

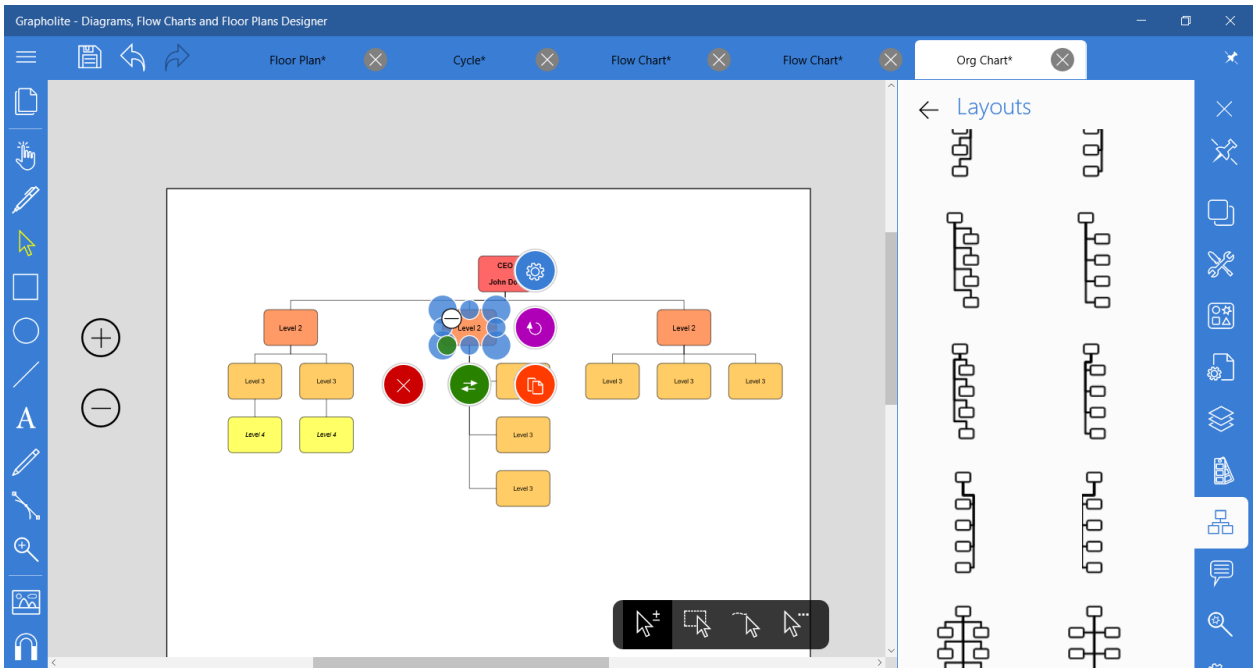
1. Select the Level 2 node and proceed to the Layout panel.



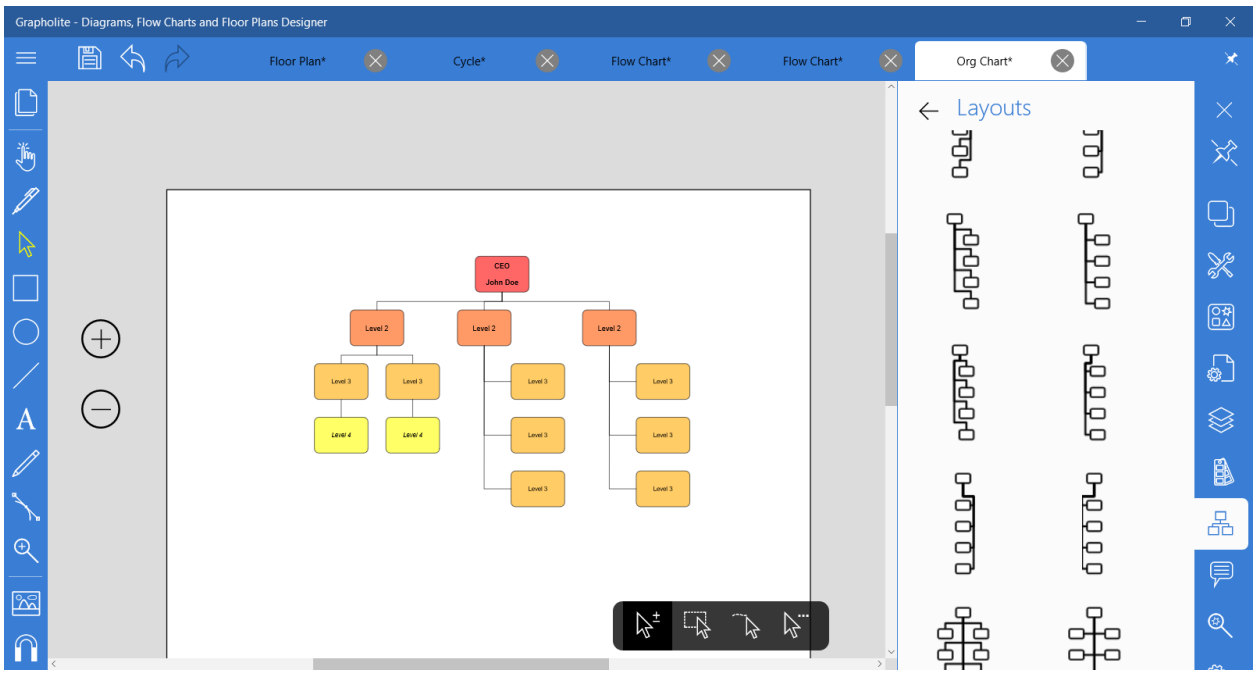
2. Click Layouts Gallery to see the list of available layouts.



3. In the list, select the necessary layout type and click it to apply to the selected node.



4. Let’s rearrange the other Level 2 node in the same way.



As you see, now the chart occupies less screen space and it became more readable.

DESIGNING UML DIAGRAMS

What is UML (Unified Modeling Language)?

More information on UML diagram type can be found in the following article:

https://grapholite.com/Diagrams/Uml

Drawing UML Class Diagram

Class diagrams are the most popular UML diagrams used for construction of software applications.

Class diagram is basically a graphical representation of the static view of the system and represents different aspects of the application. So, a collection of class diagrams represent the whole system.

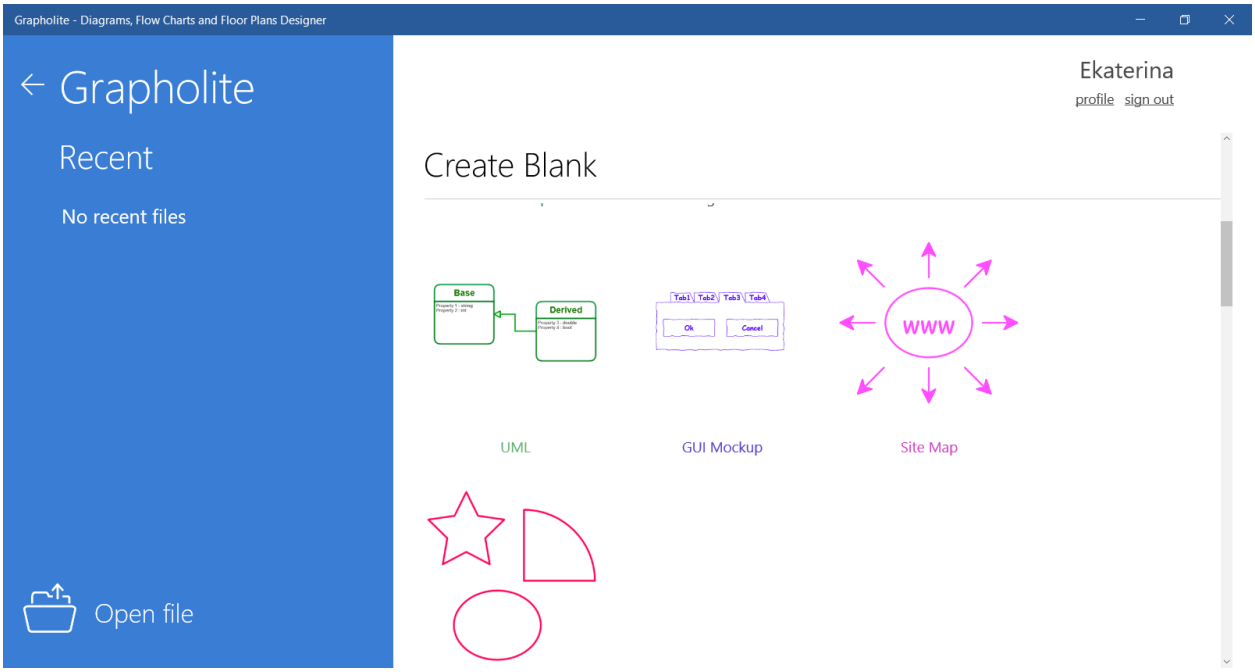
You should remember the following points while drawing a class diagram:

- The name of the class diagram should be descriptive.
- Each element and their relationships should be identified in advance.
- Responsibility (attributes and methods) of each class should be clearly identified.
- For each class minimum number of properties should be specified. Avoid unnecessary complexity.

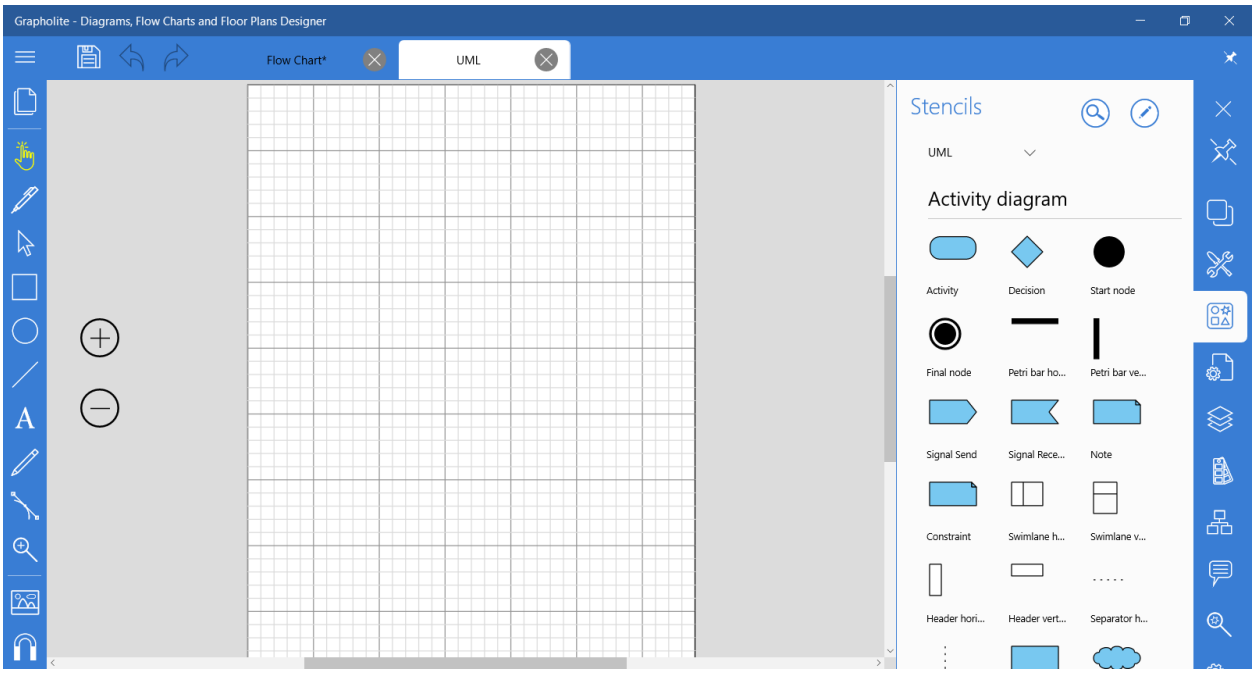
Grapholite offers a set of stencils to easily design UML class diagrams. To select the necessary shape set:

1. Click the menu button on the top left corner of the screen.

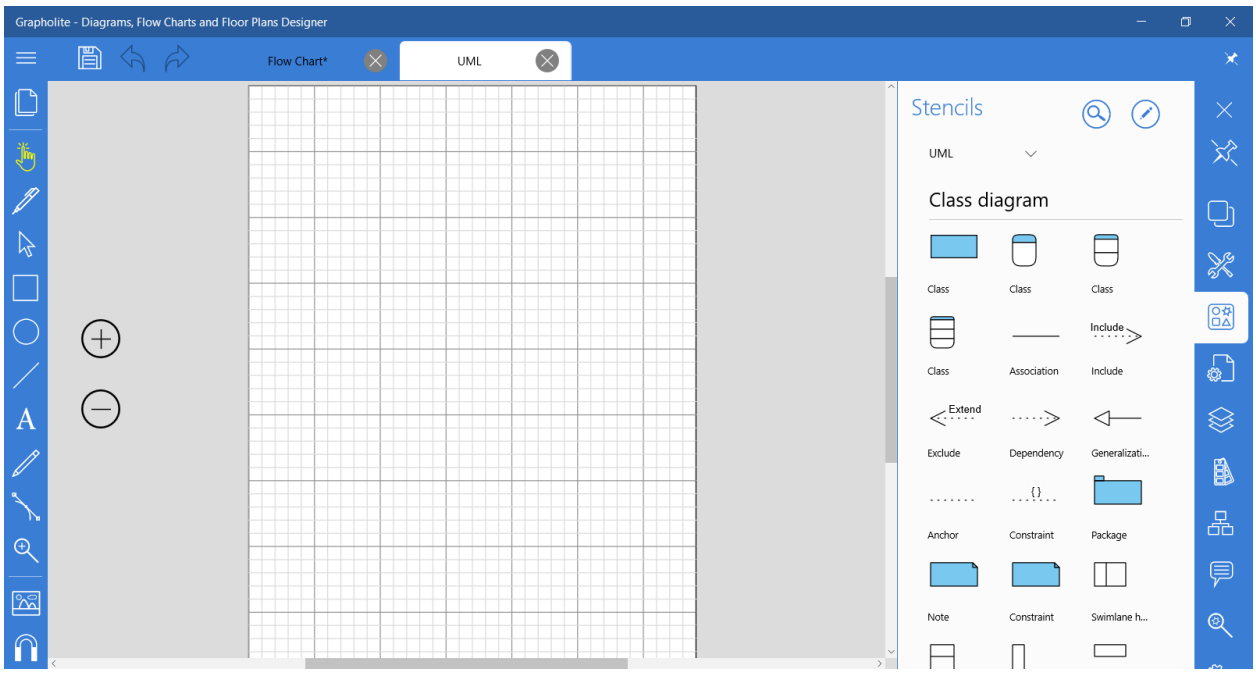
2. Click New and you will see a list of pre-set diagram documents with the corresponding pre-designed settings for a particular diagram type. Select a UML diagram



3. The corresponding UML-type document with the selected shapes will open.



4. Scroll to **Class diagram** shapes**.**

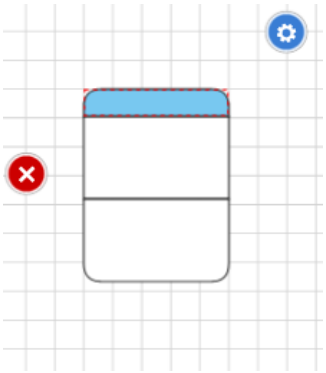


1. Now let's create a simple *Order System* of an application. It describes a particular aspect of the entire application.

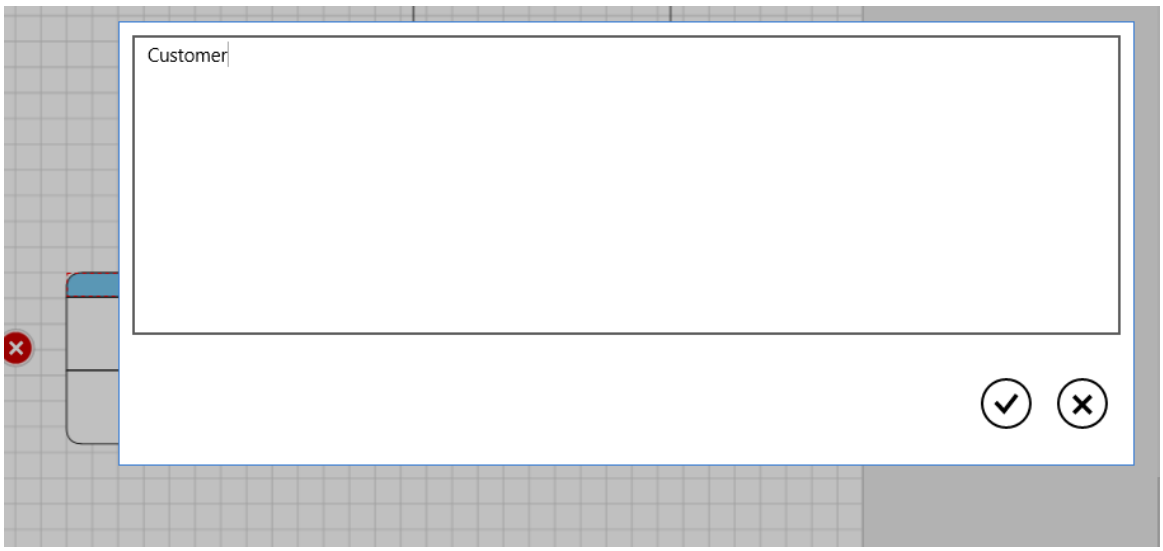
We have *Customer* and *Order* elements. They are identified as the two elements of the system and they have a *one to many* relationship, because a customer can have multiple orders. Let's add this block to the diagram.

1.1. Click on the *Class* stencil to add it to the diagram.

1.2. To add class name you need to select the shape, and then click the shape title. It will be denoted by a red dashed square.

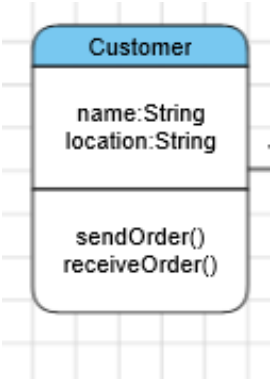


Click it once again or just start entering Class name using your keyboard. You will see a textbox for adding labels to the selected shape element.



Click the checkmark to save Class name.

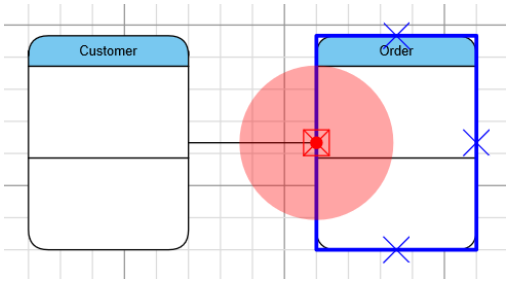
1.3. In this way, you will be able to add main class properties and functions to the Customer class shape.



Order class shape is designed in the same way.

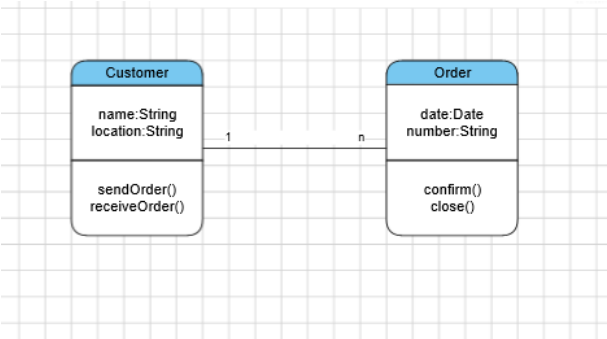
1.4. Now we need to denote a connection. Add Association to the diagram.

1.5. Drag start control point to the Customer class shape until it reaches the connection port. Connecting to a port will be indicated by a control point turning red. Release the connection control point. The connection is added properly. In the same way you will be able to connect the Order class shape.



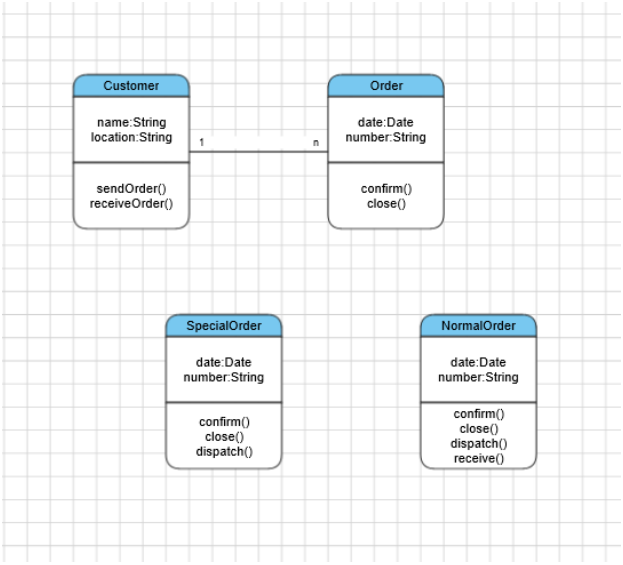
1.6. Now you need to denote the “One to many“ relation. Click the connector once again to open a textbox and add a label to the connector. Click the checkmark to save changes.

Here is how our basic block of the UML Class diagram looks like:

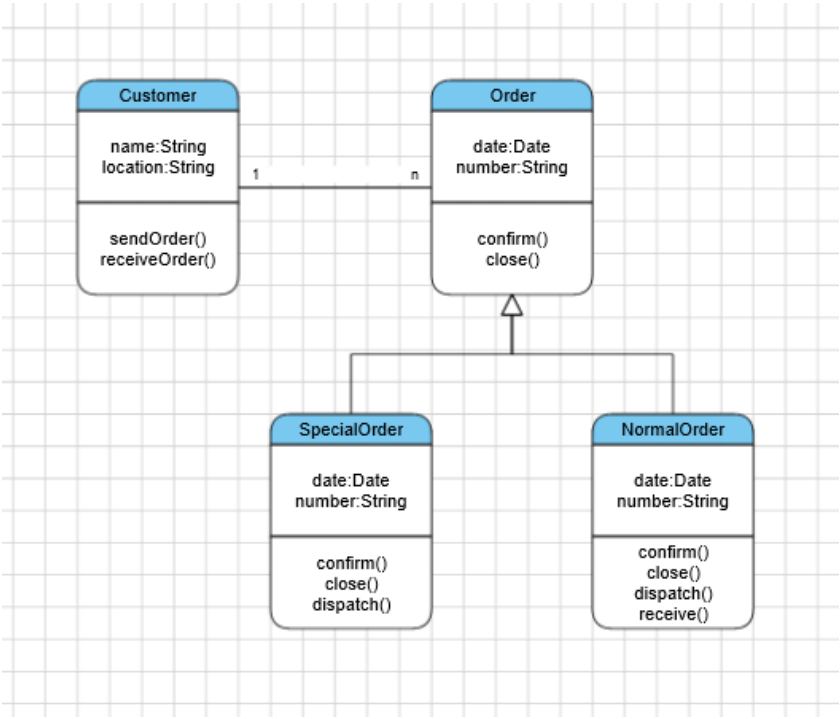


2. We would keep *Order* class as an abstract class and it has two concrete classes (inheritance relationship) *SpecialOrder* and *NormalOrder*. The two inherited classes have all the properties as the *Order* class. In addition they have additional functions like *dispatch ()* and *receive ()*.

2.1. Bearing in mind that these concrete classes have the same properties, it would be quicker just to duplicate the Order Class shape by clicking the *Duplicate* icon. Edit Class name and add the missing functions. In just few moments we've got two new classes that look like this:



2.2. Now you need to add relations. This time it will be Generalization. Click the corresponding stencil to add it to the diagram. Drag the end control point to the *SpecialOrder* class shape until it reaches one of connection ports. Once the connection point becomes red, release it. The connection is established. Drag the start control point of the connector to the Order class shape, until it reaches one of the connection ports. Release it once the connection is established. You need to show the relation of the *NornalOrder* class in the same way. Here is what we get:



So, we designed a UML Class diagram considering all the points mentioned above in just a couple of minutes.

EDITING COMPLEX ELEMENTS SUCH AS CYCLES

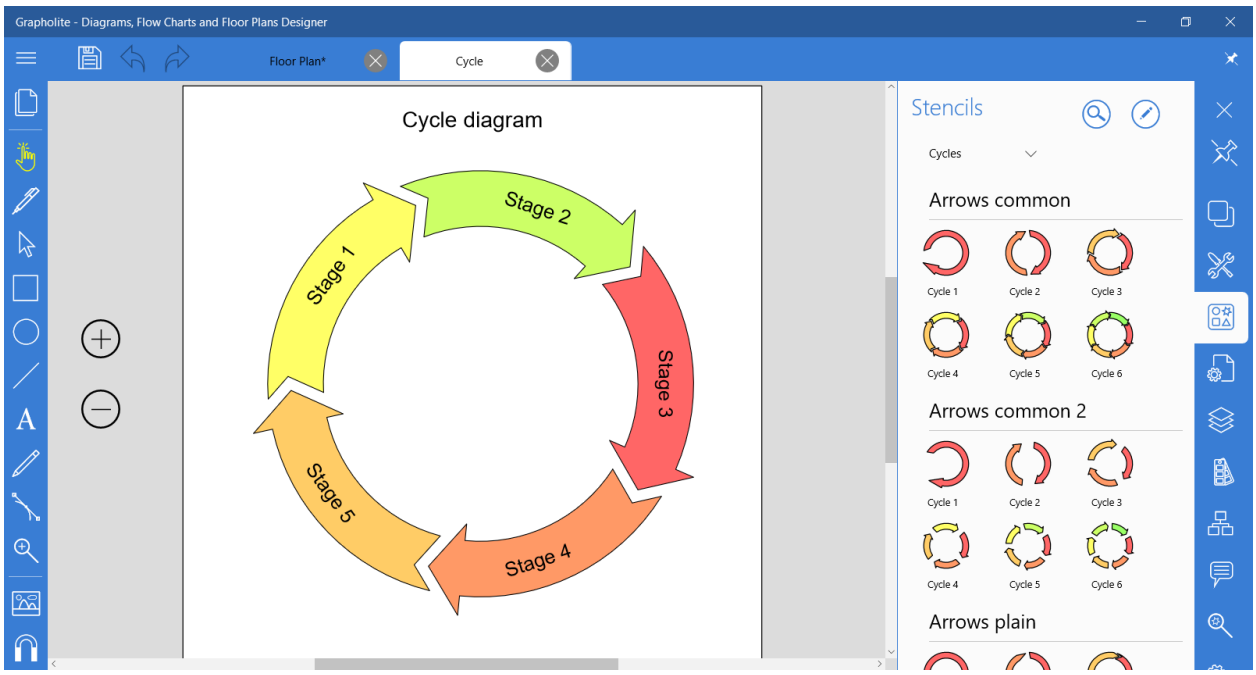
What is cycle diagrams?

More information on cycle and chevron diagrams can be found here:

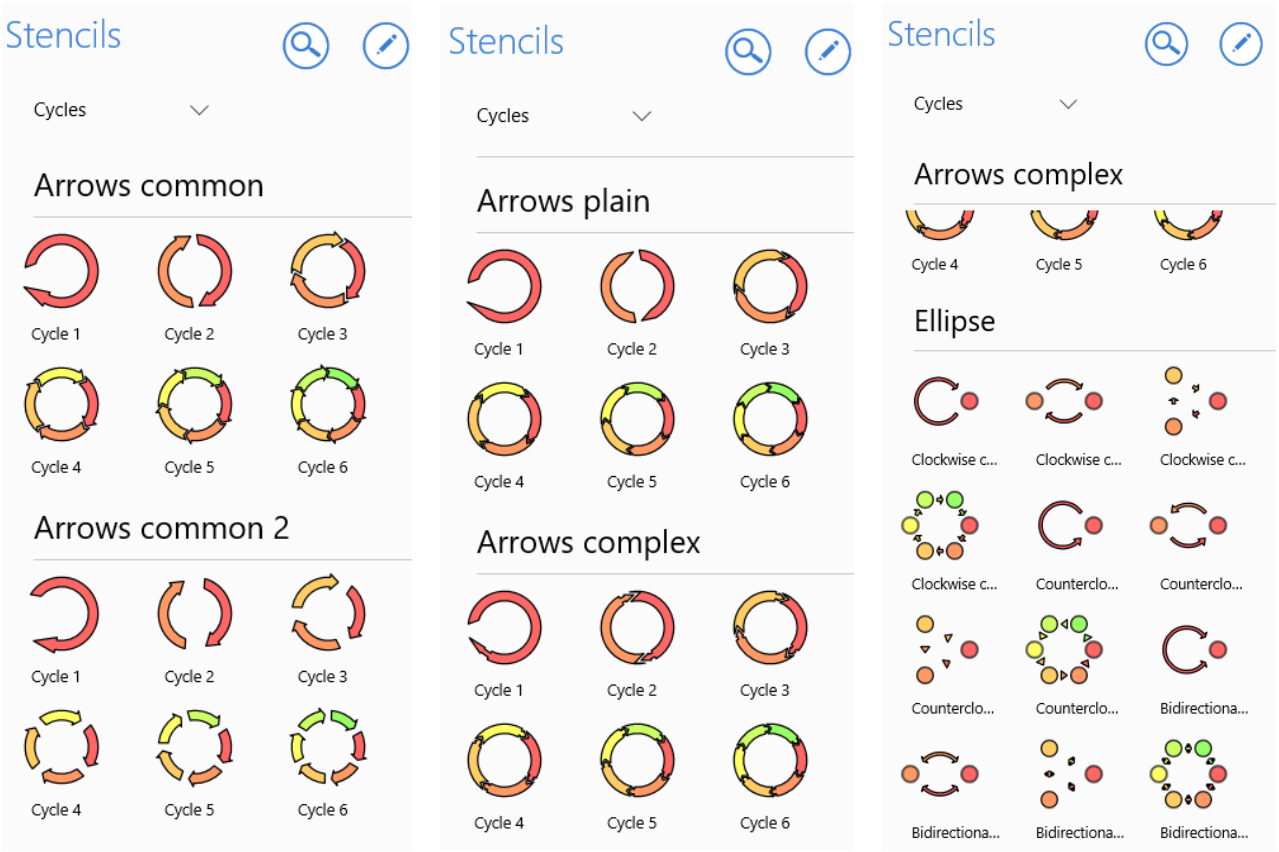
https://grapholite.com/Diagrams/Chevron

Creating cycle diagrams in Grapholite

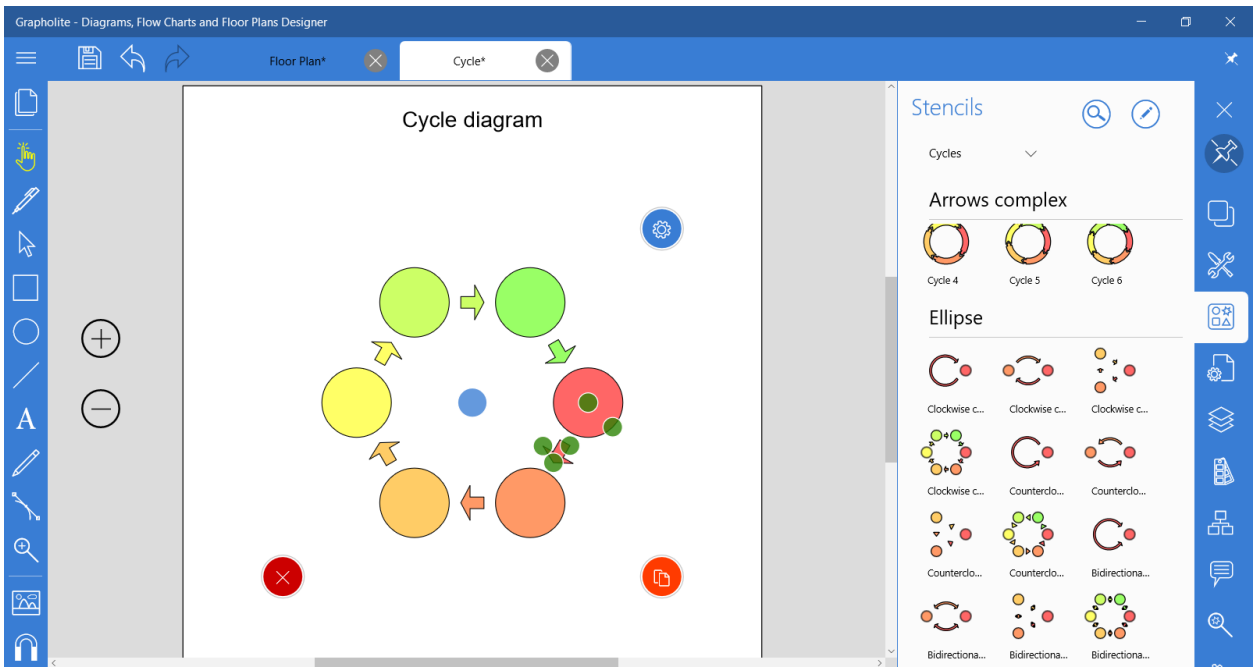
Grapholite offers a set of cycle templates to help you easily create diagrams depicting cyclic processes. You can find them on the Stencils panel under Cycles library:



There are several shape sets for different purposes.

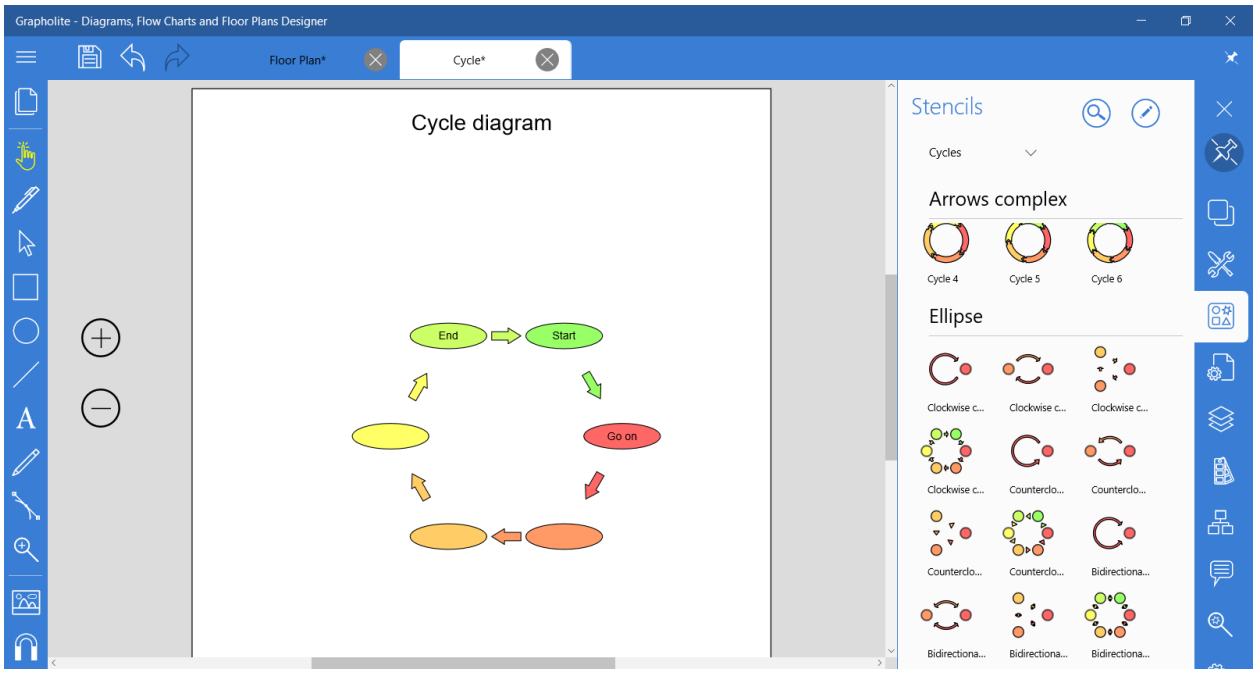


Just click on one of them and the selected diagram will be added to the work area.



The following control point are available:

- Blue control point in the center of a cycle – it helps moving the complete diagram around the work area;
- Green control points on the arrow – responsible for size of the arrow. Drag and drop to adjust size of the object. Note that all the arrows in the cycle will change as well.
- Green control points on the circles – responsible for size and shape of the object. Drag and drop them to adjust the circle. Note that all nodes in the cycle will change as well.
- You can add text labels to the circles: just select the one you need and start typing, or select and tap on the necessary object once again to open text input dialog.



APPENDIX A. MODIFIERS KEYS FOR MANIPULATE AND SELECT TOOLS

Panning:

Hold the Space keyboard button pressed and pan the diagram with a mouse pointer.

Scrolling:

Shift + mouse wheel will scroll the document horizontally.

Zoom:

Ctrl + mouse wheel will scale the document.

Select and move:

Shift - select multiple elements

Ctrl – duplicate and move

Alt – force select with lasso (ignores element under cursor)

Resize Handler:

Shift - Resize relative to center

Ctrl - Keep aspect ratio

Rotate Handler:

Shift - Snap to 5° (ignores page's snap settings)

Ctrl - Snap to 45° (ignores page's snap settings)

APPENDIX B. HOT KEYS

File	
Ctrl-N	New document
Ctrl-O	Open document
Ctrl-S	Save document
Ctrl-P	Print document
Edit	
Ctrl-C	Copy
Ctrl-V	Paste
Ctrl-X	Cut
Ctrl-D	Duplicate
Ctrl-Z	Undo
Ctrl-R	Redo
Ctrl-G	Group
Ctrl-U	Ungroup
Ctrl-B	Bold
Ctrl-I	Italic
Ctrl-A	Select all
Ctrl- +	Zoom in
Ctrl- -	Zoom out
Ctrl-[	Move backwards
Ctrl-Shift-[	Put to back
Ctrl-]	Move forwards
Ctrl-Shift-]	Move to front
F2	Edit shape text
Tool	
Ctrl-Shift-M	Manipulate tool
Ctrl-Shift-S	Select tool
Ctrl-Shift-T	Text tool
Ctrl-Shift-C	Connection tool
Ctrl-Shift-F	Free Hand tool
Ctrl-Shift-H	Shape tool
Ctrl-Shift-L	Line tool
Ctrl-Shift-D	Draw and recognize tool
Ctrl-Shift-R	Rectangle tool
Ctrl-Shift-E	Ellipse tool
Ctrl-Shift-Z	Zoom tool
Ctrl-Shift-Y	Eyedropper tool
Ctrl-Shift-P	Pan tool
Panel	
F3	Show\hide panes
F4	Show arrange pane
F5	Show properties pane
F6	Show stencils pane
F7	Show page properties
F8	Show layers pane
F9	Show styles pane
Ctrl-F5	Show notes pane