

Product Backlog

Num	Requirement	Priority	Requirement Category
1	Multiple shapes together	1	User interface ▾
2	Line segments	1	Functional ▾
3	Rectangles	1	Functional ▾
4	Ellipses	1	Functional ▾
5	Default window	1	User interface ▾
6	Menu of available shapes	1	User interface ▾
7	Position of new shapes	1	Business flow ▾
8	Color picker for choosing the contour color	2	User interface ▾
9	Color picker for choosing the internal color	2	User interface ▾
10	Shapes with colored contour	2	Functional ▾
11	Colored shapes	2	Functional ▾
12	Option bar on top of the window	2	User interface ▾
13	Save a drawing	2	Business flow ▾
14	Load a drawing	2	Business flow ▾
15	Focus a shape	3	Business flow ▾
16	Menu of available operations on a shape	3	User interface ▾
17	Moving an already inserted shape	4	Business flow ▾
18	Changing internal color of an inserted shape	4	Business flow ▾
19	Changing contour color of an inserted shape	4	Business flow ▾
20	Resizing an already inserted shape	4	Business flow ▾
21	Cut operation	4	Business flow ▾
22	Copy operation	4	Business flow ▾
23	Paste operation	4	Business flow ▾

24	Undo operation	4	Functional ▾
25	To the front operation	4	Business flow ▾
26	To the back operation	4	Business flow ▾
27	List of inserted shapes	3	User interface ▾
28	Zoom of the drawing window	5	User interface ▾
29	Scrollable drawing surface	5	User interface ▾
30	Show or hide grid	6	User interface ▾
31	Size of the grid	6	Functional ▾
32	Insert arbitrary polygon	7	Functional ▾
33	Insert text string	7	Functional ▾
34	Size of the characters	8	Business flow ▾
35	Rotate a shape	8	Business flow ▾
36	Mirror a shape	8	Business flow ▾
37	Stretch a shape	8	Business flow ▾
38	Group shapes	9	Functional ▾
39	Ungroup shapes	9	Functional ▾
40	Create a shape creation command	9	Business flow ▾
41	Saving a shape creation command	9	Business flow ▾
42	Execute a shape creation command	9	Functional ▾
43	Export a set of shape creation commands	10	Functional ▾
44	Import a set of shape creation commands	10	Functional ▾

We define 11 levels of priorities from 1 as the highest to 10 as the lowest.

In the following paragraph we introduce a description of the requirements with User Story (a) and Acceptance Criteria (b).

All the Stories are written **as a user**.

User Story and Acceptance Criteria

1. Multiples shapes together

- a. I want to add one or more geometrical shapes to the drawing window so that I can make composed drawings.
- b. If I've already added at least one figure to the drawing window when I try to add another figure then the new figure will be inserted together with the already inserted ones.

2. Line segments

- a. I want to be able to add line segments to the current drawing.
- b. I want the line segment shape to be shown in the menu of available shapes.

3. Rectangles

- a. I want to be able to add rectangles to the current drawing.
- b. I want the rectangle shape to be shown in the menu of available shapes.

4. Ellipses

- a. I want to be able to add ellipses to the current drawing.
- b. I want the ellipse shape to be shown in the menu of available shapes.

5. Default window

- a. At the start of the program
I want to see an empty drawing window
in which I can add geometrical shapes.

6. Menu of available shapes

- a. I want to see a menu of available shapes that I can use so that I can easily choose a shape.
- b. I want to be able to see a menu on the left side of the window containing all the shapes that can be added to the drawing window so that I can select one of them by clicking on it.

7. Position of new shapes

- a. I want to be able to select, using the mouse on the window, the position of the new shape.
- b. If I've selected a shape from the menu of the available shapes when I left click with the mouse on the drawing window then I want that the selected shape is added in that position.

8. Color picker for choosing the contour color

- a. I want to see a color picker for choosing the contour color of the next shape that will be added to the drawing window.
- b. I want to see a color picker on the left side of the window so that I can select the contour color of the next shape that will be added to the drawing window.

9. Color picker for choosing the internal color

- a. I want to see a color picker for choosing the internal color of the next shape with a closed contour that will be added to the drawing window.
- b. I want to see a color picker on the left side of the window so that I can select the internal color of the next shape with a closed contour that will be added to the drawing window.

10. Shapes with colored contour

- a. I want to be able to add to the drawing window shapes with different contour colors.
- b. Given that I've selected a shape from the menu of available shapes and I've selected a contour color from the relative color picker when I add the selected shape in the drawing window then I want that the contour of the added shape will be of the selected color.

11. Colored shapes

- a. I want to be able to add to the drawing window shapes with a closed contour characterized by different internal colors.
- b. Given that I've selected a shape with a closed contour from the menu of available shapes and I've selected an internal color from the relative color picker when I add the selected shape in the drawing window then I want that the interior of the added shape will be of the selected color.

12. Option bar on top of the window

- a. I want to be able to see the operations that can be performed on the drawing window.
- b. I want to see an option bar on top of the window containing the operations that can be performed on the window so that I can perform one of them by clicking on it.

13. Save a drawing

- a. I want to be able to save the drawing window so that I can have a file in which is saved the current state of it.
- b. When I left click on the save button in the option bar of the window then a save window is opened.

14. Load a drawing

- a. I want to be able to load a drawing from a file so that I can continue to work on an already started drawing.
- b. Given that I have a file in which is saved a drawing when I click on the load button in the option bar of the window then a load window is opened and if a drawing file is selected, then the current content of the drawing window will be overwritten by the content of the file.

15. Focus a shape

- a. If there is at least one shape in the window, I want to be able to give focus to one of them.
- b. When I left click on a shape in the list of inserted shapes

then that shape appears with a blue halo in the drawing window.

16. Menu of available operations on a shape

- a. If there is at least one shape in the window,
I want to be able to see all the operations that can be performed on it.
- b. Given that I'm a user
when I right click on an item in the list of inserted shapes
then I want to see a menu containing the operations that can be performed on it.

17. Moving an already inserted shape

- a. I want to be able to move a shape to a different position from the current one.
- b. When I open the menu of the available operations on a shape and I click on the move button
then I want to be able to change the position of it through a left click on the drawing window.

18. Changing internal color of an inserted shape

- a. I want to be able to change the internal color of an already inserted closed contour shape.
- b. When I open the menu of the available operations on a shape with a closed contour and I click on the change color button
then I want that the internal color of that shape is setted to the selected color of the relative color picker.

19. Changing contour color of an inserted shape

- a. I want to be able to change the contour color of an already inserted shape.
- b. When I open the menu of the available operations on a shape and I click on the change contour color button
then I want that the contour color of that shape is setted to the selected color of the relative color picker.

20. Resizing an already inserted shape

- a. I want to be able to resize a shape already inserted in the drawing window.
- b. When I open the menu of the available operations on a shape and I click on the resize button
then I want to be able to resize it through left clicks.

21. Cut Operation

- a. I want to be able to perform a cut operation on an already inserted shape so that i can remove the shape from the window and save it on the clipboard.
- b. When I select the list of the available operations on a shape and I click on the cut button
then I want to be able to perform a cut operation on it, removing the shape from the drawing window and copying it to the clipboard.

22. Copy Operation

- a. I want to be able to perform a copy operation on an already inserted shape so that I can copy the shape from the window and save it on the clipboard.

- b. When I select the list of the available operations on a shape and I click on the copy button
then I want to be able to perform a copy operation on it, saving the shape on the clipboard.

23. Paste Operation

- a. I want to be able to perform a paste operation of a shape previously saved on the clipboard
so that I can add the shape into the drawing window.
- b. Given that I've previously performed a cut or copy operation on a shape when I left click on the drawing window
then I want that the shape previously saved on the clipboard is added to it.

24. Undo Operation

- a. I want to be able to perform the undo of every operations that change the state of the drawing, without limits on the number of undo levels
so that i can move back to a previous drawing state.
- b. When I left click on the undo button in the option bar of the window
then I want the drawing to be taken back to its previous state.

25. To the front operation

- a. I want to be able to take an inserted shape in front of the others.
- b. When I select the list of the available operations on a shape and I click on the to the front button
then I want the selected shape to be put in front of the others present in the drawing window.

26. To the back operation

- a. I want to be able to take an inserted shape in the back of the others.
- b. When I select the list of the available operations on a shape and I click on the to the back button
then I want the selected shape to be put in back of the others present in the drawing window.

27. List of inserted shapes

- a. I want to see a list of the shapes that has been inserted in the drawing window
so that I can easily have an overview and I can perform operations on them.
- b. I want to be able to see a list on the right side of the window containing all the shapes that have been added to the drawing window
so that I can perform operations on one of them by clicking on it.

28. Zoom of the drawing window

- a. I want to be able to zoom the drawing window with at least 8 different levels
so that I can view the drawn shapes bigger or smaller
- b. When I click on the zoom button
then I want the drawing is enlarged or dwindled

29. Scrollable drawing surface

- a. I want a drawing surface that is larger than the size of the window
so that I have a bigger surface where I can draw

- b. When I scroll on the drawing
then I want to see the portion of the drawing of interest

30. Show or hide grid

- a. I want an option for show/hide a grid on the drawing
so that I can place the shapes more precisely.
- b. When I check the grid option
So I want to see a grid over the drawing or if it is already visible it gets hidden.

31. Size of the grid

- a. I want to choose the size of the grid
so that I can adapt my drawing to real problems more easily.

32. Insert arbitrary polygon

- a. I want to be able to enter an arbitrary polygon, not just a regular one, as a shape.

33. Insert text string

- a. I want to be able to enter a text string as a shape.

34. Size of the characters

- a. I want to be able to choose the size of the characters

35. Rotate a shape

- a. I want to be able to rotate a shape by an arbitrary angle, not necessarily a multiple of 90° .

36. Mirror a shape

- a. I want to be able to mirror a shape horizontally or vertically.

37. Stretch a shape

- a. I want to be able to stretch a shape horizontally or vertically.

38. Group shapes

- a. I want to be able to select more than one shape and group them
so that they behave as a single shape in successive operations.

39. Ungroup shapes

- a. I want to be able to ungroup a previously grouped shapes
so that they break down into basic shapes.

40. Create a shape creation command

- a. I need to be able to create "shape creation commands" by selecting a figure I
can assign it a new command with a unique name.
- b. When I create a new shape creation command a copy of the shape's
properties at that time is associated with it.

41. Saving a shape creation command

- a. I want that when I save the drawing the "shape creation commands" defined
within it must be saved within the drawing file.

42. Execute a shape creation command

- a. I want to be able to execute a previously created shape creation command.
- b. When I execute a shape creation command a copy of the shape associated with it must be added to the drawing.

43. Export a set of shape creation commands

- a. I want to be able to export a set of previously created set of shape creation commands to a “shapes library file”.
- b. When I export a set of shape creation commands a new “shapes library file” will be created.

44. Import a set of shape creation commands

- a. I want to be able to import a set of shape creation commands from a “shapes library file”.
- b. When I import a set of shape creation commands these become executable in the drawing where I imported them.