Drawing Vector Project

REPORT OF THE PROJECT

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Contents

Design Of The Project :-

Vector Based Drawing Application is an application that is used to draw shapes , color, resize, delete , move , copy ,save and load and many other features as a paint project . it is generated using javaFX Scene Builder .

1)There is a **canvas** that the user draws the shapes in and all the actions occurs in.

2)There is a **menu bar** which contains File Menu and Help Menu.

File Menu contains :

"*New*" Menu Item which ask the user save the current project or doesn't save then open a new project to be free to draw in it .

"*Open…*" Menu Item which enables the user to open and load a file to be   used again and to be edited ,the user choose the location of it .

"*Save As*" Menu Item which enables the user to save the current opened project in a file where the user has the ability to choose the location of it (path), write its name and then choose the file should be saved as Xml file or Json file that we already implemented before .

"*Quit*" Menu Item that ask the user before quit if he wants to save the current project if yes it goes to a file chooser that enable him to choose the location of saved file and its type(xml or json file) if not then exit the project.

Help Menu contains :

"*About MyHelloApp* " Menu Item that help the user to be guided in our application by opening a pdf that contain the report pf the whole application.

3)There is **a ToolBar** (Vertically)that contains :

"*Line*" ToggleButton :enables the user to draw a line by the first point then drag to the wanted last point .

"*Circle* " ToggleButton :enables the user to draw a circle then drag to the wanted diameter .

"*Ellipse*" ToggleButton :enables the user to draw an ellipse .

"*Rectangle*" ToggleButton :enables the user to draw a rectangle with the wanted length and width.

"*Square*" ToggleButton :enables the user to draw a square with the wanted side length.

"*Triangle*" ToggleButton : :enables the user to draw a triangle with the wanted points and area .

"*RoundRectangle*" ToggleButton : :enables the user to draw a roundrectangle with all the properties of it and the wanted size .

3)There is **another ToolBar** (up horizontally)that contains :

"*Select*" ToggleButton :enables the user to select and choose a shape from the appeared shapes to be able to make another

action on it as copy ,delete, change color or change fillcolor .The user click in any point in a certain shape ,it will be fixed be a frame .

"*Move*" ToggleButton :the user chooses it then selects any shape from the appeared shapes so he can move it from the current area to any other place in the canvas .

"*Resize*" ToggleButton : the user chooses it then selects any shape from the appeared shapes so he can resize this shape by increasing or decreasing its size (upwards, downwards, left or right) .

"*Undo*" Button : when the user presses on it an undo action occurs that cancels the last change such as draw shape ,change color ,resize, move ,delete a shape or any action (limited to 20 times).

"*Redo* " Button : when the user presses on it a redo action occurs that redone the last undo such as draw shape ,change color ,resize, move ,delete a shape or any action(limited to 20 times).

"*Copy*" Button : before choose copy button, the user must select a shape from the current shapes ,so a frame appears around it then choose copy ,so that the shape is now copied and can be pasted in any time.

"*Paste*" Button :enables the user to paste the copied shape before ,it copy the shape in a location beside the prime shape by (20,20) points beside it.

"*Delete*" Button : before choose Delete button , the user must select a shape from the current shapes ,so a frame appears around it then click delete ,so that the shape is now deleted
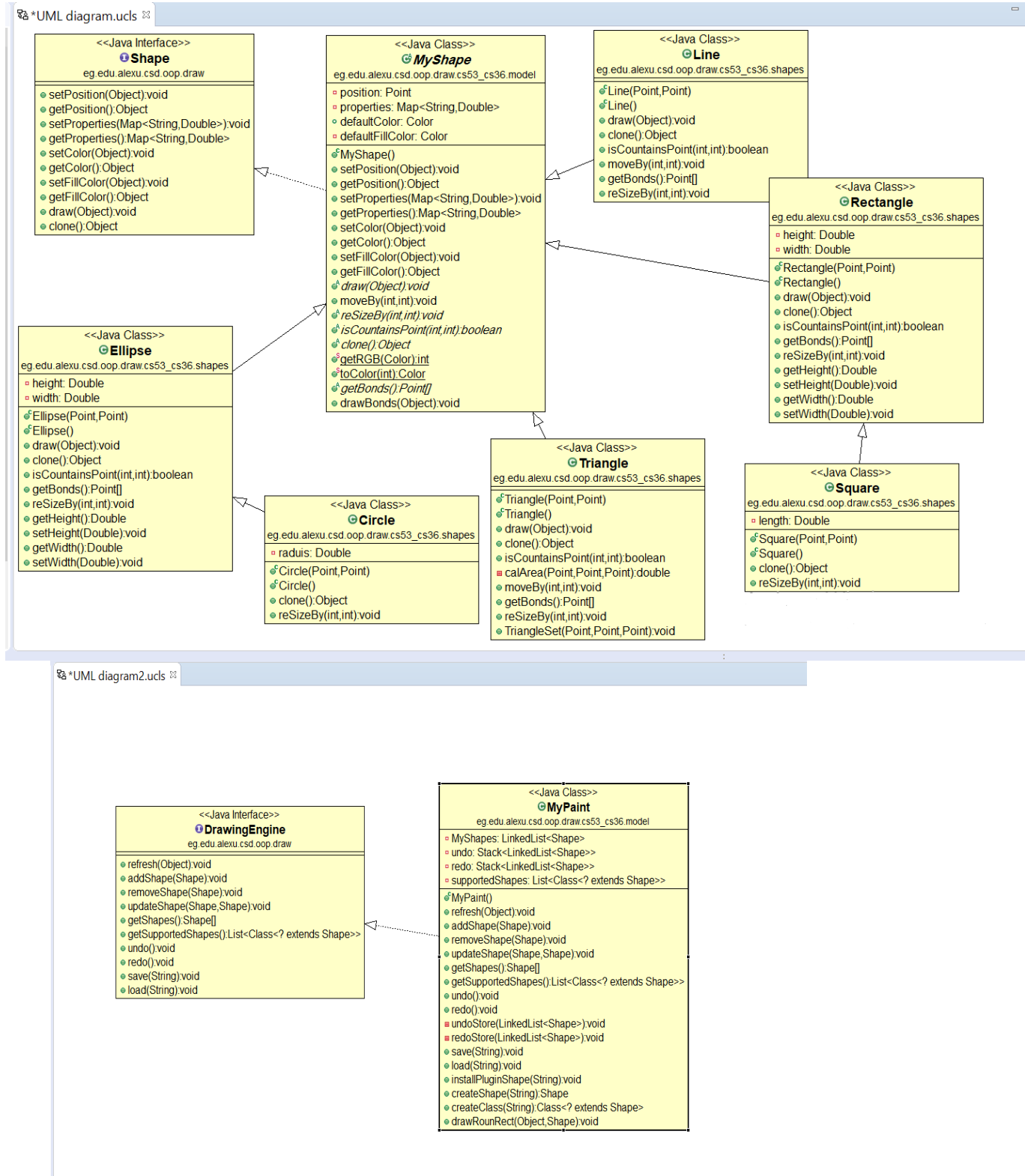
from the working canvas .

"*SnapShot*" Button : a feature that takes a screenshot from the working canvas and the user then save it as an image (PNG) and choose the location that saved in (path) with the image name .

"*Stroke*" Menu Button : before choose stroke , the user can select a shape from the current shapes ,so a frame appears around it then click stroke ,so that the user has the ability to resize the frame and the sides of each shape .

"*FillColor*" ColorPiker : the default background color of each shape is white , but the user has the ability to change and choose the fill color of any shape in the working canvas or change the default and after that any shape created will has that fill color.

"*FrameColor*" ColorPiker: the default frame color of each shape is black , but the user has the ability to change and choose the frame color of any shape in the working canvas or change the default and after that any shape created will has that frame color.

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UML Diagram :-

DESIGN DECISIONS:-

- The default fill color of any shape is white , but the user has the ability to change and choose the fill color of any shape in the working canvas or change the default and after that any shape created will has that fill color.

- The default frame color of any shape is black , but the user has the ability to change and choose the frame color of any shape in the working canvas or change the default and after that any shape created will has that frame color.

- The default frame size of any shape is the smallest value in stroke menu button , but the user has the ability to resize the frame any shape in the working canvas or change the default and after that any shape created will has that frame size.

- Some actions can be done by the keyboards as:

  -Ctrl+C → copy

  -Ctrl+V → paste

  -Ctrl+S →save

  -Ctrl+O →load

  -Ctrl+N →new

  -Ctrl+Z →undo

  -Ctrl+Y →redo

  -DELETE →delete

- Select button action then select a certain shape is necessary before (delete and copy) actions

- After choose Select button ,the user clicks in any point in the area of a certain shape , so the shape is surrounded by a frame that means that this shape is selected.

- Paste action copied the shape beside the prime shape by (20,20) points to not be coincide on it .

- Undo and Redo actions are limited to 20 times ,they regard draw ,change color ,change frame size , resize ,move ,copy and paste actions.

- SnapShots feature can be taken during using the application and saved as an image (.png) and the user has the ability to choose the path of the saved image.

- The (Line ,circle ,Ellipse ,Rectangle ,Square ,Triangle ,RoundRectangle) shapes are dragged after click on the working canvas to draw the body of the shape.

- After choose (move and resize) togglebutton , a shape must be selected to do the action on it .

- SaveAs menu item will open a file chooser to write the name of the saved file , the location of it and the type of it .xml or .json .

- New menu item ask if the current file wanted to be saved or not ,then open a new project of the application.

- Open... menu item load a saved file before to added to it or edit it .

- Quit menu item ask the user if he want to save the current file or not ,then exit.

USER GUIDE :-

- **File->SaveAs menu item** will open a file chooser to write the name of the wanted saved file , the location of it in user's computer and the type of it (.xml or .json) .

- **File->New menu item** ask first if the current file wanted to be saved or not if yes (open a file chooser to write the name ,location and type of the saved file) ,if No then open a new project of the application to begin draw in it.

- **File->Open... menu item** will open a file chooser to choose and load a saved file before to added it to the working canvas and edit it .

- **File->Quit menu item** ask the user if he want to save the current file or not ,then exit.

- **Help->About MyHelloApp menu item** opens a pdf that explains how to use your application that is the report.

- **Undo Button** cancels the last change such as draw shape ,change color ,resize, move ,delete a shape or any action (limited to 20 times).

- **Redo Button** redoes the last undo such as draw shape ,change color ,resize, move ,delete a shape or any action(limited to 20 times).

- **Select Button** selects a certain shape from the shapes appear in the working canvas by clicking in any point in

its area , then a fram surrounds it .

- **Select->Copy** copies the selected shape and can be paste after that.

- **Paste** draws the copied shape beside the prime shape by (20,20)points to not coincide it.

- **Select->Move** moves the selected shape wherever place in the canvas.

- **Select->Resize** minimizes or maximizes the selected shape in all the directions.

- **Select->Delete** deletes the selected shape .

- **SnapShot** takes a screenshot from the working canvas and the user then save it as an image (PNG) and choose the location that saved in (path) with the image name .

- **Select->Stroke** changes the size of the frame of the selected shape.

- **Stroke** changes the default size of the frame of any shape the user draws after that.

- Some actions can be done by the keyboards as:

-Ctrl+C → copy

-Ctrl+V → paste

-Ctrl+S →save

-Ctrl+O →load

-Ctrl+N →new

-Ctrl+Z →undo

-Ctrl+Y →redo

-DELETE →delete

- **Select->FillColor->choose color** changes the background colour of the selected shape.

- **FillColor->choose color** changes the default background colour of the selected shape from white to the chosen color .

- **Select->FrameColor->choose color** changes the frame colour of the selected shape.

- **FrameColor->choose color** changes the default frame colour of the selected shape from black to the chosen color.

- **Click any shape** can draw that shape in the working canvas be click in the canvas then dragging then realese .

SNAP SHOTS :-
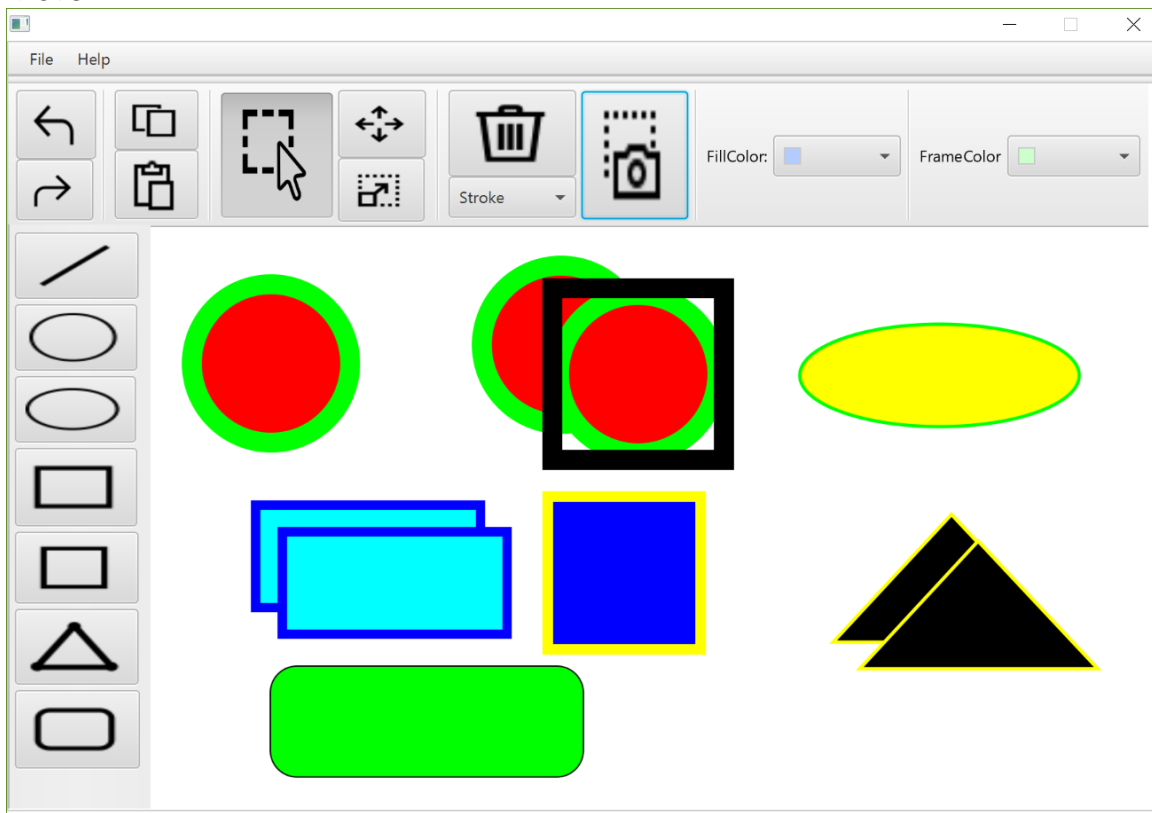
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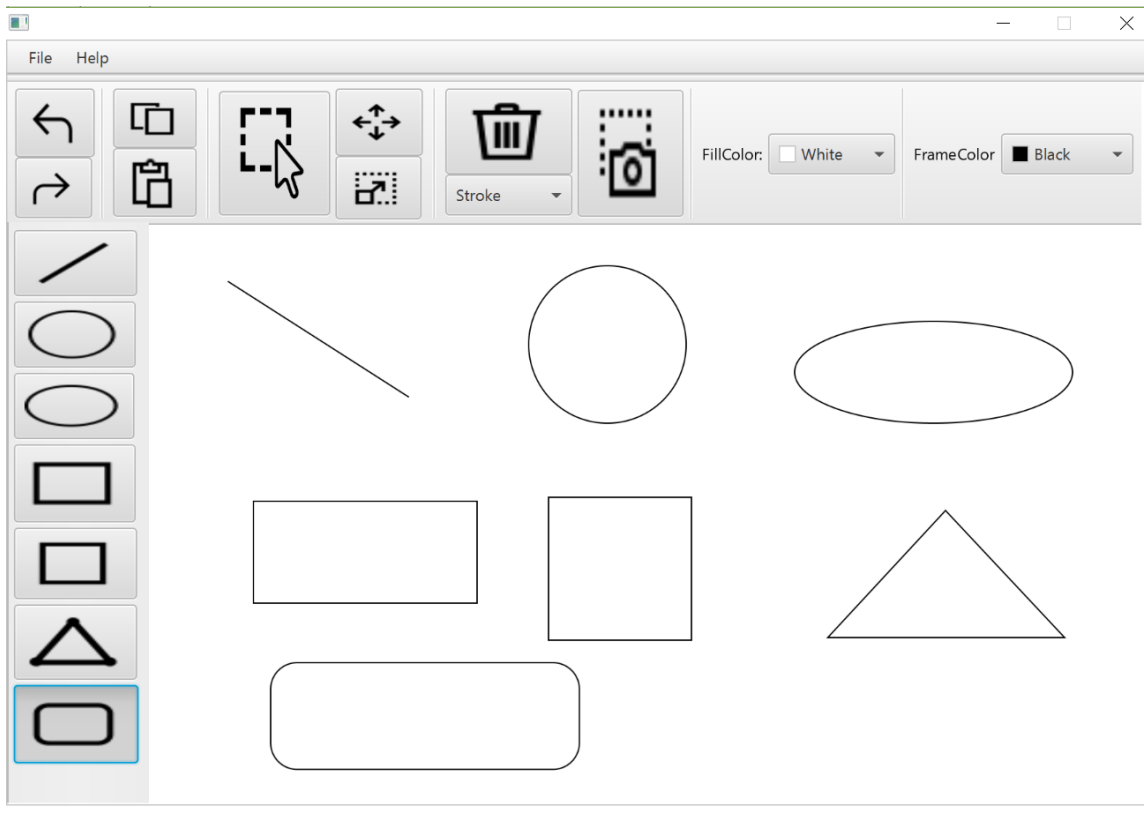
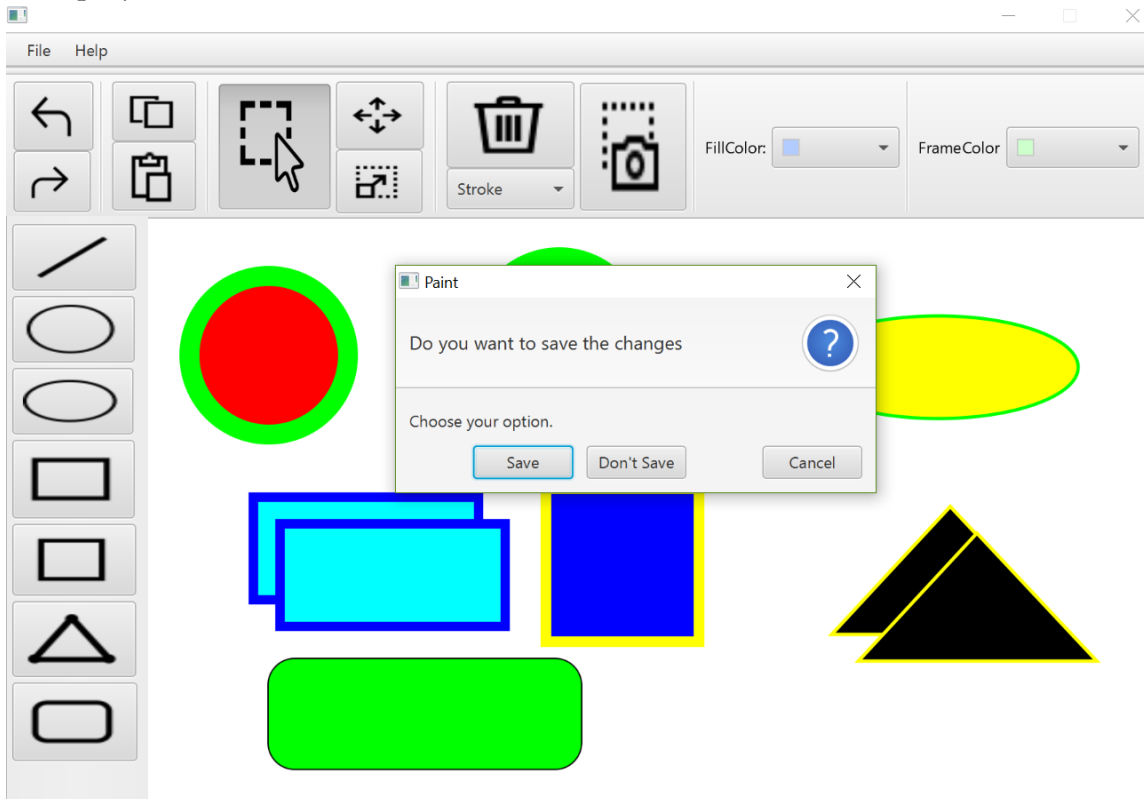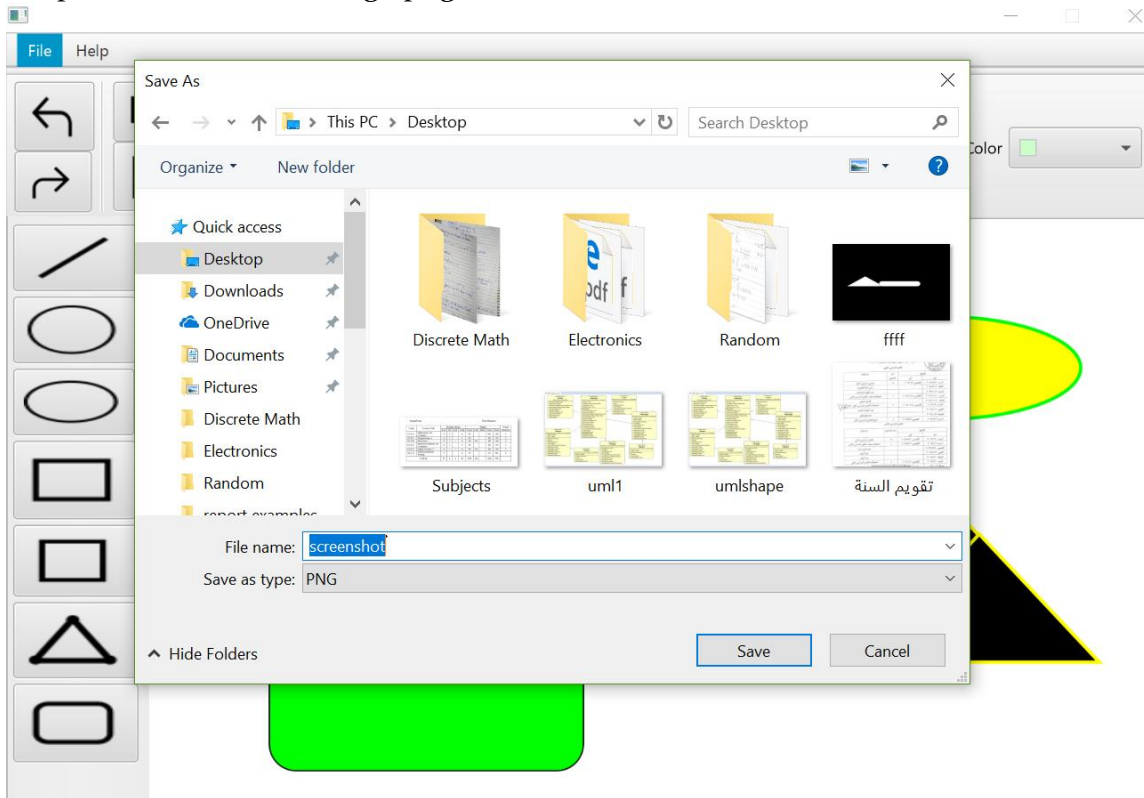Color fill and color frame
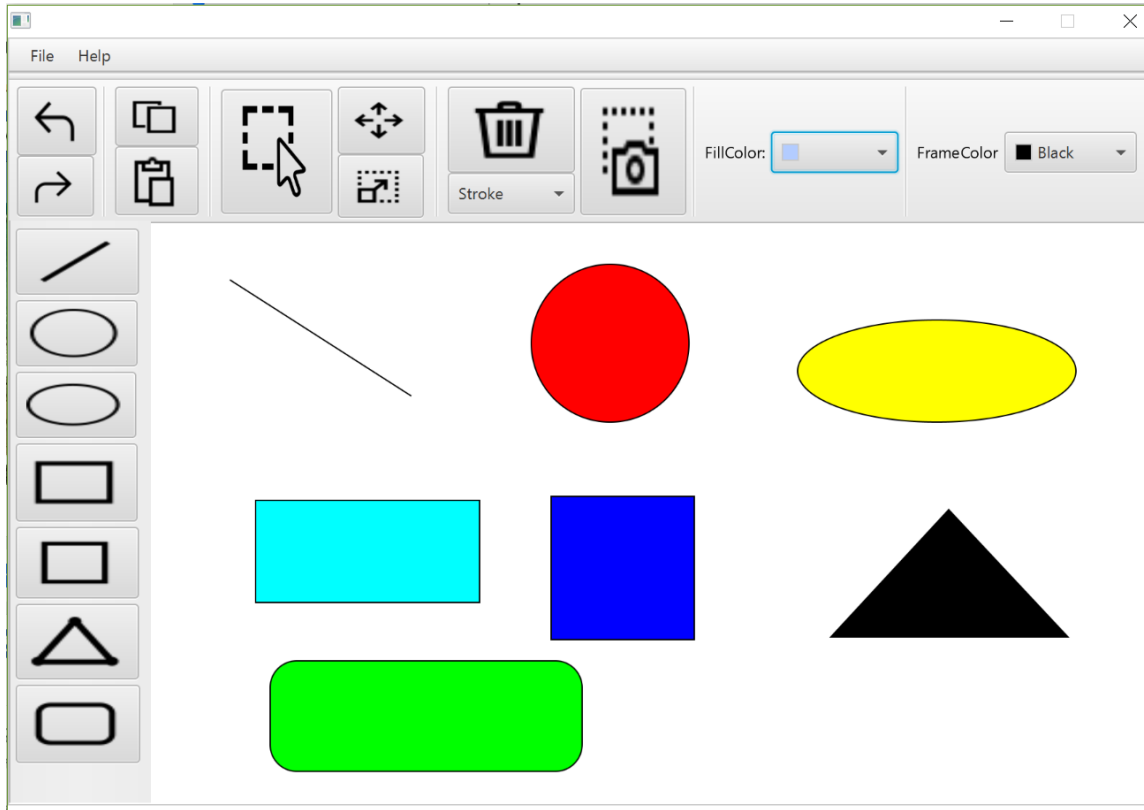
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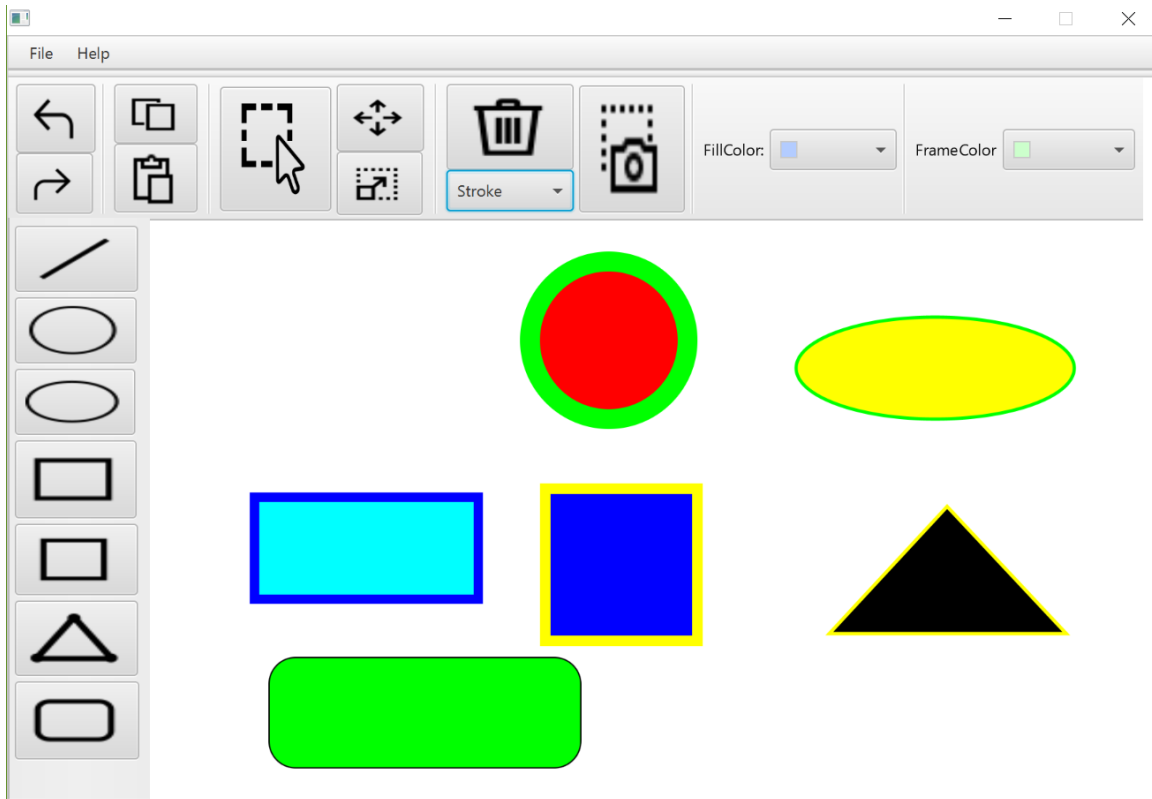
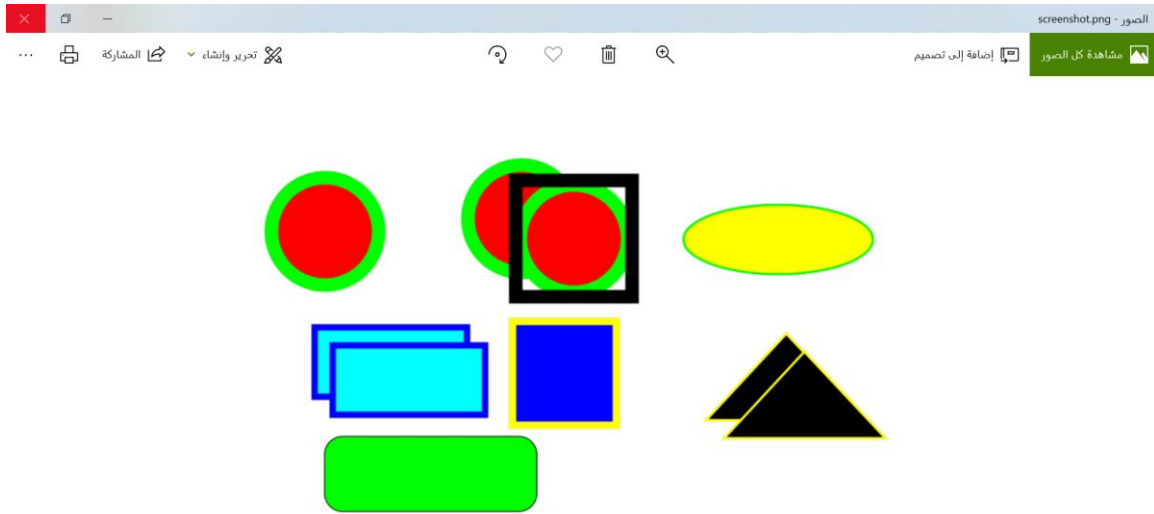

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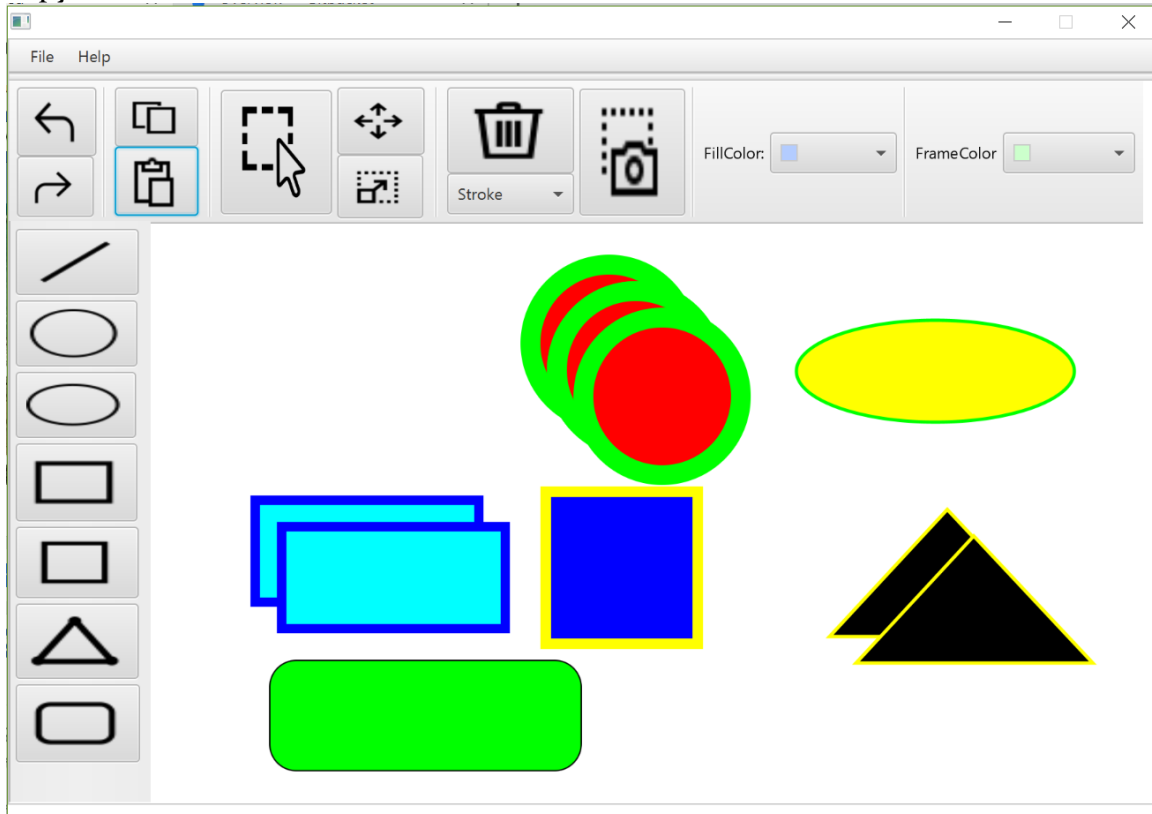
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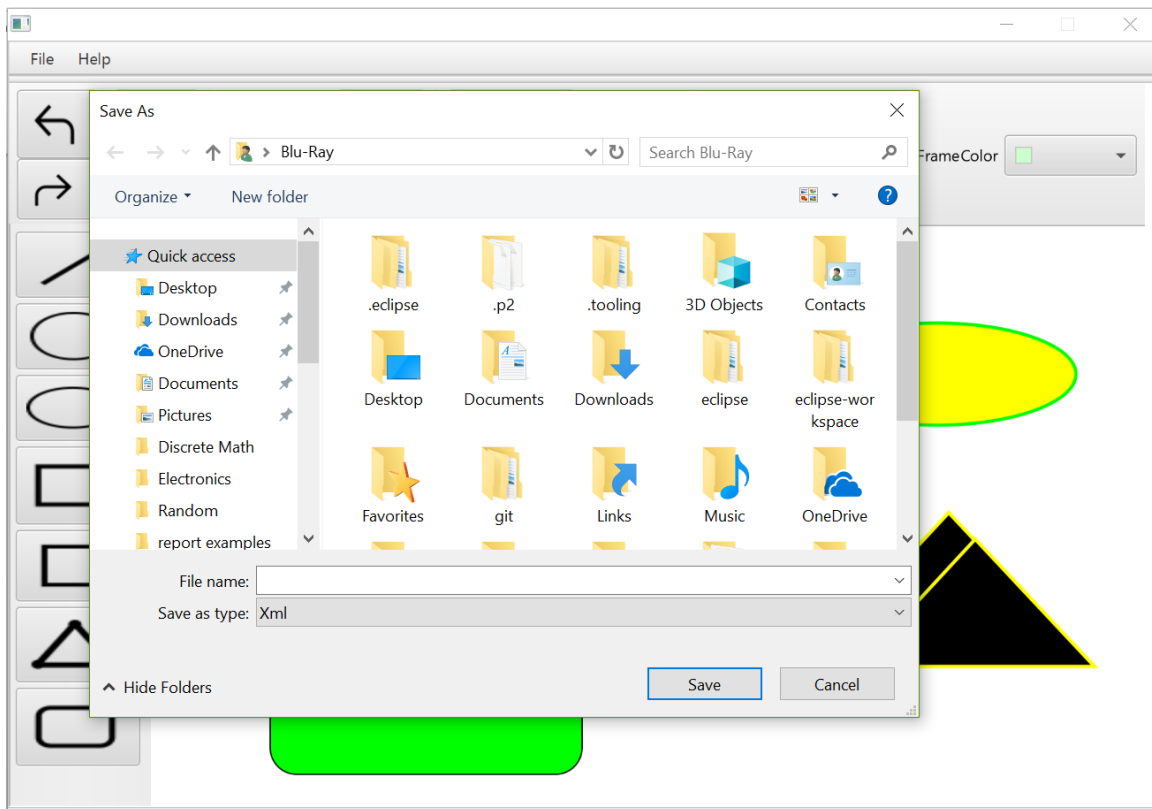
Move

New project from file menu

Snapshot to save it as image.png

Here is the image saved in the desktop .