

# Painter report

**Made By :**

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# Introduction:

- Paint application is simple application used for drawing some geometrical shapes.
- It is very useful application for our daily life as it used in educational learning for children in schools.
- the application is designed in OOP manners and written in java programming language.

# General Design:

- The application was designed basically using OOP concepts as inheritance and polymorphisms and more as follows:
- First there is an abstract class called "**Shape**" which contains all methods that controls all actions occurred in the shapes such as Draw ,resize , move.
- Then there is a lot of subclasses that extends the shape Class , those subclasses represent the kind of each shape 'circle , line , square , rectangle and triangle'.
- For every shape there is another function to handle the listener as we design complicated listening methods to connect the mouse dragging with the size and move.

## Design Decisions :

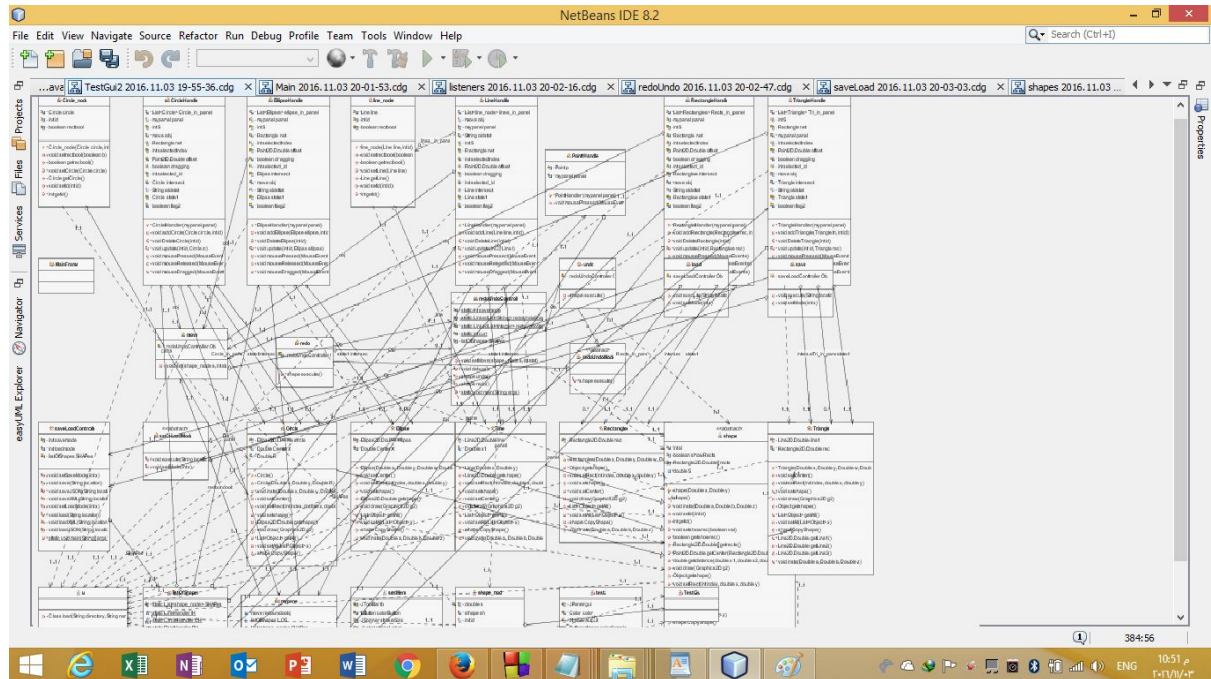
- We separate the project into multiple package to insure security and maintainability .
- We Design Class named Shape to be the superclass to other shapes to maintain the polymorphism concept .
- Every shape consist of two classes to control every aspect of it .
- We used model-view-controller method to deploy redo & undo and save & load .
- Our big priority towards GUI and it's familiarity and ease of use .

## User Guide :

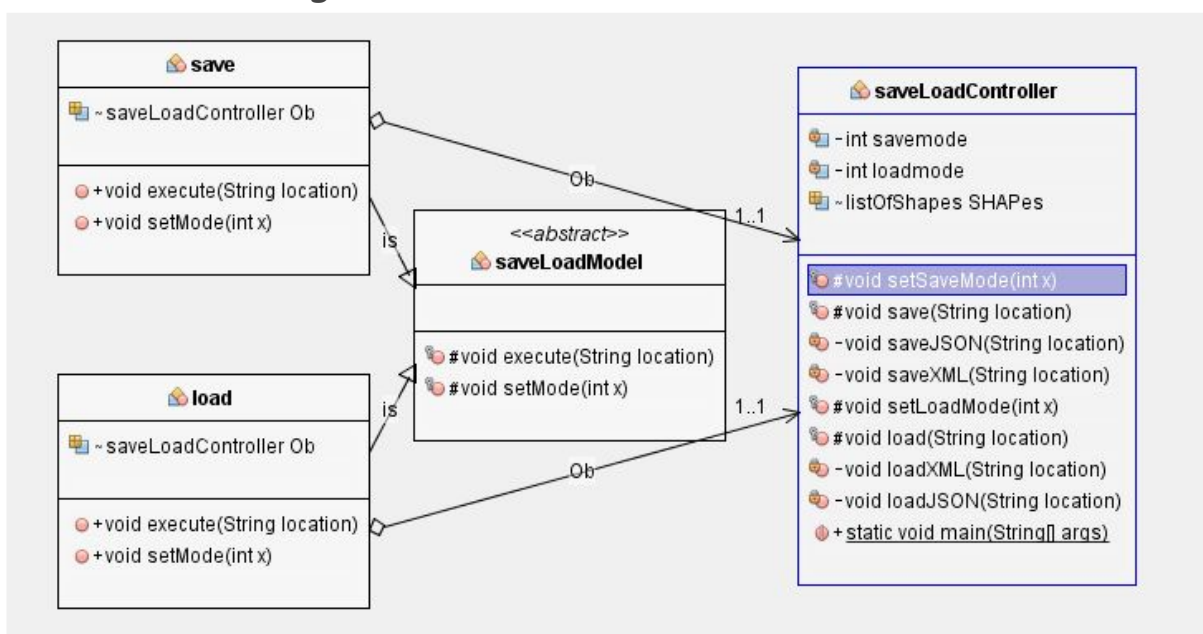
1. In our paint you can easily select the shape you want to draw in the menu .
2. After that you have to select starting point to place your shape into .
3. Then you can move it , resize it , color it , delete it and create more .
4. You can easily redo and undo by button on the other menu .
5. You can even be more productive if you use Our Keyboard shortcuts .
6. Tired ? you can save to XML or JSON format and load it any other time .
7. In short , run our program and let your imagination design the world .

# UML Diagram:

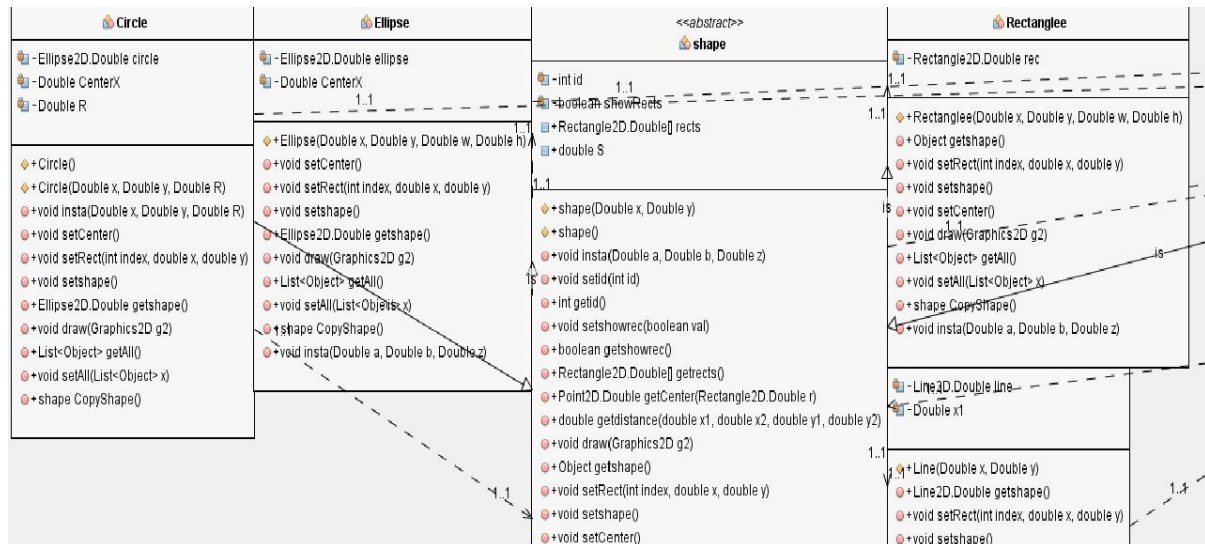
All the project :



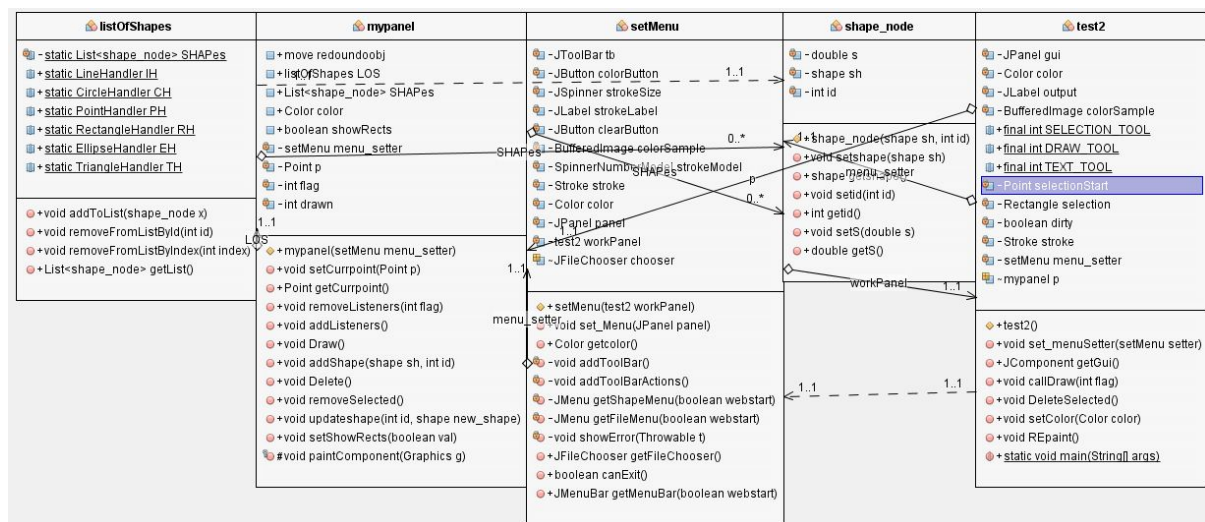
Save Load Package :



## Shapes Package :



## GUI Package :



## Undo Redo Package :

