

Paint App Report

By: -

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- Description: -

The paint app is a basic design of a drawing model for geometric that provides a user with limited options, the app mainly works on implementing 2 interfaces provided by the teaching staff, it applies the OOP concepts of inheritance and polymorphism. The app's GUI is provided with various options to help the user Draw, Edit and add a Plugin and using it.

- Features: -

- Drawing

Drawing using the available buttons, either through the default shapes or if implementing own's plugin, will prove easy and efficient in taking the data from the user.

- Editing

It is divided is divided mainly into moving and editing the shape's property with differs from a shape to other because of each shape implementation

- Copying

Cloning an item will make a new item with exactly the same properties so the user might need to edit in the shape's place.

- Plugin

Only choose a file using a file chooser and the GUI provides a using button.

- Design Overview: -

The design consists of 2 interfaces Drawing engine which is responsible of making the shapes appear to user and managing them in different ways, and of Shape and interface every plugin or drawn shape has to implement so that things are manageable. Furthermore, it consists of different GUI frames that allows the use to interact with the program, and some default shapes implementation used to test the code. Finally, the program allows the user to input his own shape implementation using the plugin option as long it has the same package name of the interface.

- Description of important functions/modules: -

- Drawing

The drawing functions are implemented in each class the input depends of how the properties are setup , the program takes the properties and adds it to a combobox so the user can choose each property he wants to set.

- Plugin

The user can add several plugins and choose from them , using the plugin will depend on how it is implemented but will use the same functionality of drawing a default button shape .

- The canvas

The canvas extends “Canvas” and implements the drawing engine which is every efficient in accessing the functions without the need of referencing.

- MyStack

It is a class that extends “Stack” but forces a limitation using an INT in the constructor this INT is the limit at which the stack can store.

- NewShapepup

This is a JFrame that takes a shape in the constructor and by using get properties function it provides the user with a combo box with all properties so the user can choose easily each property to add.

- User Manual

Here we discuss what each button does in the GUI



- Drawing

After selecting the shape you want a GUI will appear i.e Newshapepup JFrame

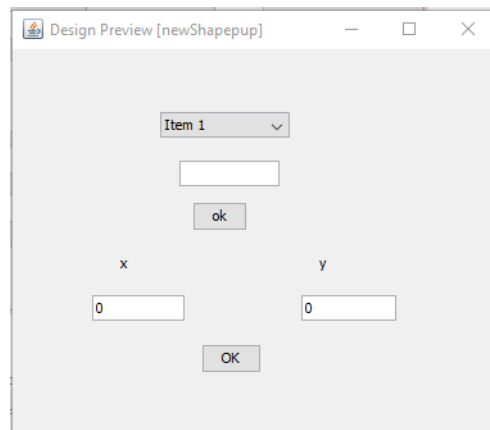
The provided GUI will give the user a combobox with all the properties so to enter the data in a property follow the following instructions

- 1- Select the property
- 2- Enter the data in text field
- 3- Press 1st ok
- 4- Repeat

After entering all data enter the position (if the shape is affected by the point. Else, no need)

Press 2nd ok

This will cause the shape to be drawn



- Editing

This section is to discuss how to Edit , copy ,delete colorize and move.

All you need to do is select the shape you want to modify and press one of the mentioned buttons.

However, in the following cases take care

- Copy

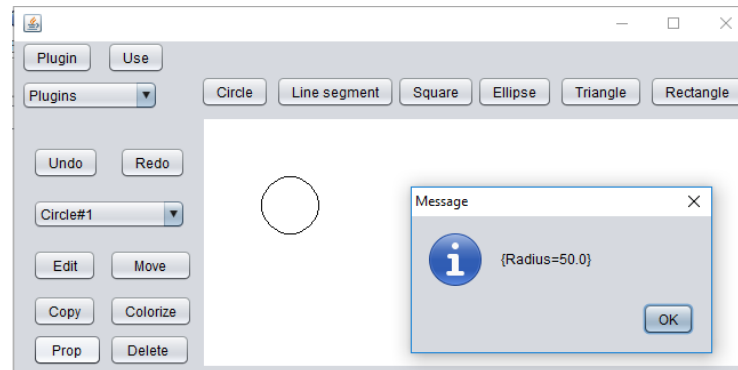
The copied shape will have the exact same properties and point so you will have to edit the position

- Move

Moving the triangle or line won't be possible as the triangle is a polygon using 3 points and the line uses 2 so you would have to move using the edit option and to edit each point and to make it easier we have provided a "prop" button to show the properties of the selected shape, or make modifications easier and the button will be discussed later.

- Properties

To make editing and moving easier we have provided a Prop button that will print a system dialogue providing the selected shape properties.



- Plugin

The user will choose the file path and enter the plugin name which will be provided in an exterior file and using the plugin will be through a combo box to choose from entered plugins.

-UML