NGwKs

NGwKs Paint

The Paint Program

Version #2.2

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Table of Contents

Version History

Version 0.1 –*CanvasTest2.py*
> Very basic setup; building basic structure
> Ensuring User can switch between screens

Version 0.2 – *paint1.py*
> Started adding master tool selection

Version 1.0 – *bigIf.py*
> Redesigned the basic structure of the program
> > (Everything depends on an *if* statement)
> Save, Load, New capabilities

Version 2.0 – *paint.py*
> Began adding more tools: shape outlines,

Version 2.1 – *paint.py*
> Added colour choice

Version 2.2 – *paint.py*
> Added line width choice
> Added internal comments

I. **Game Overview**

This is a very basic paint program. The User will be able to draw a line, a square or a circle. A basic *save*, *load*, and *new* functionality is included. This program has two screens, one for drawing and one to select which tools the User would like on the top of their icon bar. The toggles for the switch between screens are the Right and Left arrow keys. The User can select their line width and the colours of their lines and shapes.

II. **Game Play Mechanics**

This program was written using python 2.7 and pygame 1.9.

The entire functionality of this program is written in the **main()** function. As this program relies on the pygame engine which runs with in the **main()**. It does entail the heavy use of the *Buttons.py* which was written by NGwKs.

There are two screens for this program, a Canvas screen and a Tool Screen. The Tool screen will have the full range of tools available for the program, and the Canvas screen has the tools selected by the User. Switching between the screens is done with the *Right* and *Left* arrow keys.

The User has a master Line and Shape tool which will appear on the Canvas screen at all times. Changing these master tools the User must enter the Tool screen and click on the desired tool. This will change the master tool. Any changing of colours must be done on the Tool screen, as well as changing the line width.

Anything dealing with the save, load or clearing of the canvas is only available on the Canvas screen.

To change the colour of either the outline or the fill the User *must* first click on the colour they wish to change. After that they can use the *R,G,B* buttons to change the colour or click on a pre-set colour button. They can also use the colour picker to take any colour from the Canvas. Once a colour is being edited the *R,G,B* buttons can be used at any stage. Pressing the *Return* key is mandatory to set the chosen colour for use.

III. **Controls**

This program relies heavily on the mouse and arrow keys. The mouse is how the User draws and chooses between tools. The arrow keys switch between screens, and while in the colour change mode or line width change mode the *up* and *down* keys are what affect the change.

IV. Interface Sketch
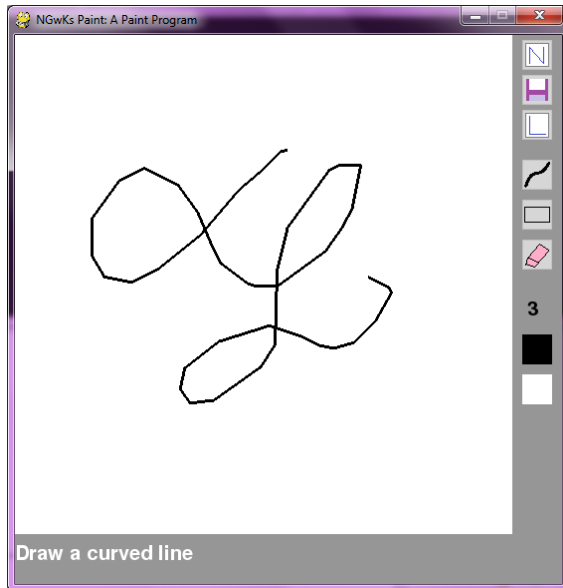
The first image is that of the Canvas screen. Though for the initial program launch there is nothing on the canvas.

V. Menu and Screen Descriptions

Canvas Screen – The master tools are along the right hand side of the screen. Clicking on one will make it the active drawing tool. For a complete explanation of each tool and its image refer to section VI of this document.

At the bottom of both screens is text that prompts the User and informs them of what is the active tool.
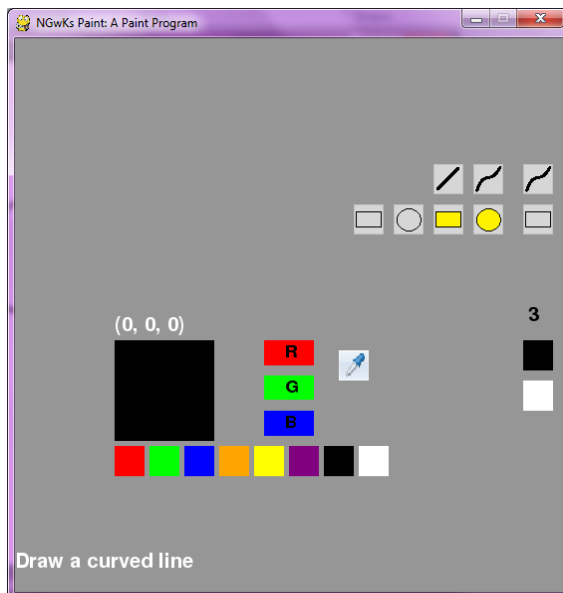
Tool Screen – This screen is where the User can change the master tools of the Canvas screen. The first line of buttons is the choice between the options for the Line tool. The second line is for the Shape tool.

The '3' shows the line current line width, and the two colours below that are the set *outline* and *fill* colours.

The block of colours to the left is the colour change area. The line of colour on the bottom are pre-set colours, while the buttons labeled *R,G,B* will enable the User to change that particular value. The text *(0,0,0)* shows the colour value of the large square.

VI. Art Index

Save.png
Saves the Canvas as an .bmp

Str8line.png
Will draw a straight line on the canvas

Clear.png
Clears the Canvas

Curvedline.png
Will draw a line where User clicks and drags

Load.png
Loads the saved image onto the Canvas

Square.png
Will draw a square with no fill on the Canvas

Eraser.png
Erases where the User clicks and drags

squareFill.png
Will draw a square with a fill on the Canvas

Dropper.png
Used to pick out the colour values of a single pixel

Circle.png
Will draw a circle with no fill on the Canvas

circleFill.png
Will draw a circle with a fill on the Canvas