Faculty of Computers, Informatics and Microelectronics
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Windows Programming
Laboratory work # 3

Basics of Working with Mouse. GDI Primitives. Bezier Curve.

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March 31, 2018

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1 Laboratory Work Requirements

Mandatory Objectives

- Draw few lines of different colors and weights
- Draw a Bezier curve
- Draw few plane objects (ex. circle, square, pie, polygon...) of different colors, weights, filled and not
- Draw 2 different objects using mouse

Objectives With Points

- Draw a custom bitmap image (1 pt)
- Add a switch (button, select list...) that will change mouse ability to draw objects (2 pt)
- Draw a Bezier curve using mouse (1 pt)
- Fill an object with a gradient (1 pt)
- Delete objects using mouse clicking (2 pt)
- Use mouse as an eraser of:
    - a fixed width (1 pt)
    - a adjustable width (2 pt)
- Zoom in and out application working area using keyboard (2 pt)

2 Laboratory work implementation

2.1 Tasks and Points

Mandatory Objectives

- Draw few lines of different colors and weights
  - User can draw lines of different width and can also just paint ;
- Draw a Bezier curve ;
  - User can draw Bezier Curve with mouse .
- Draw few plane objects (ex. circle, square, pie, polygon...) of different colors, weights, filled and not
  - User can draw ellipses , rectangles and triangles (Filled and Not) ;
- Draw 2 different objects using mouse
  - All objects a drawn using mouse .

All mandatory objects are implemented !

Objectives With Points

- Draw a custom bitmap image (1 pt)
  - User can draw bitmap images and save them ;
- Add a switch (button, select list...) that will change mouse ability to draw objects (2 pt)
  - User can select what kind of shape he want to draw and with which color ;
- Draw a Bezier curve using mouse (1 pt)
  - User can draw Bezier curve using mouse ;
- Fill an object with a gradient (1 pt)
  - User can select to draw rectangle with gradient color from Menu pressing on “Shapes” ;
- Delete objects using mouse clicking (2 pt)
  - User can delete all objects by clicking on Clear button from Menu ;
- Use mouse as an eraser of:
  - a fixed width (1 pt)
  - a adjustable width (2 pt)

  - User can choose “Eraser” from the Menu and erase objects using mouse.

- Zoom in and out application working area using keyboard (2 pt)
  - User can Zoom in pressing “Z” button and zoom out pressing “M” button application working area .

12p / 12p

2.2 Laboratory work analysis

Link to my repository - https://github.com/Vladdd97/PPE.git

All Features of this application are self explanatory . You can use this application like a simple Paint App , and of course after drawing a cool image you can save it .

3.3 Screens

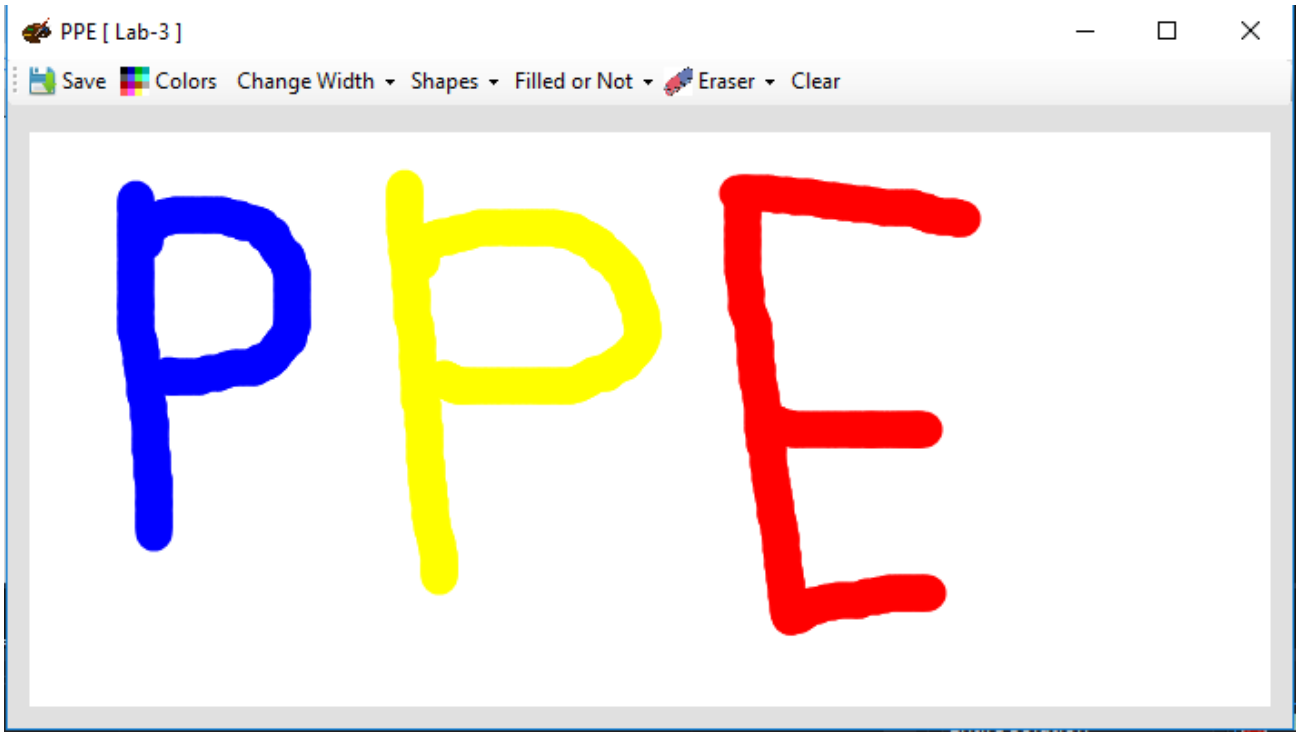

Figure 1. Paint Application

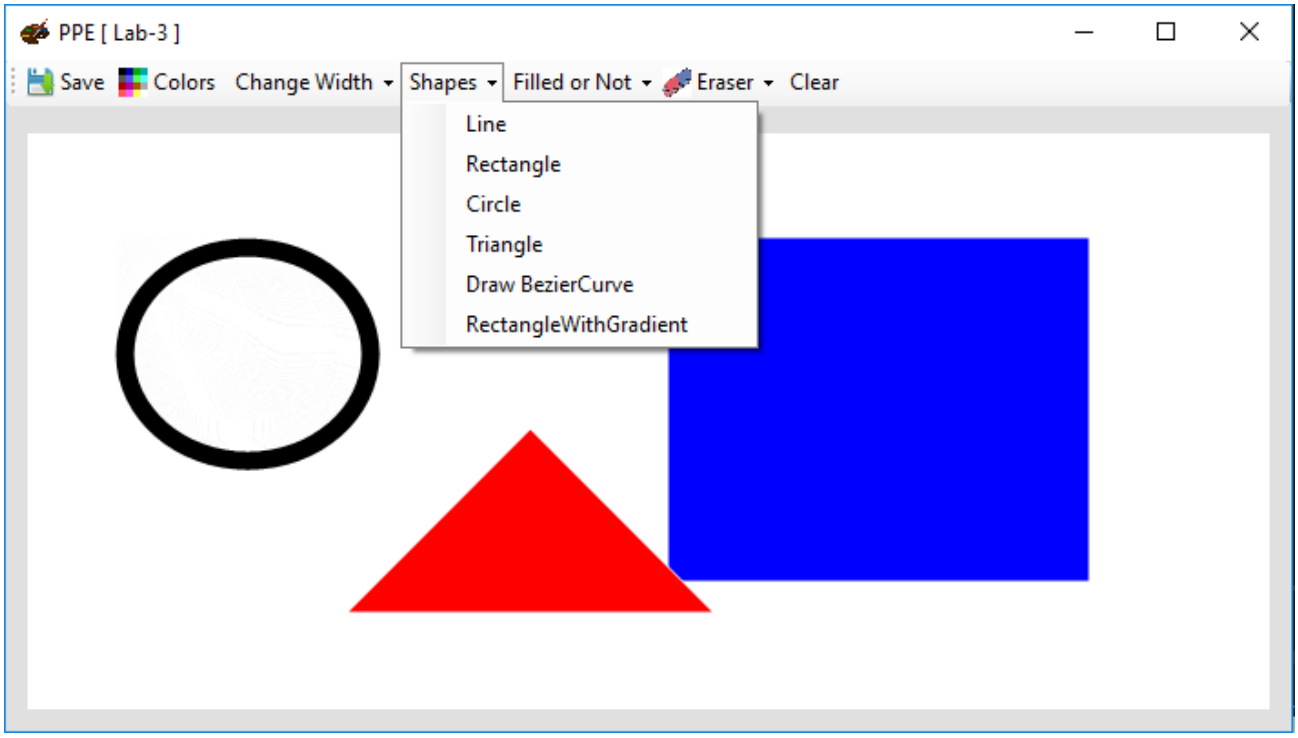

Figure 2. Available Shapes

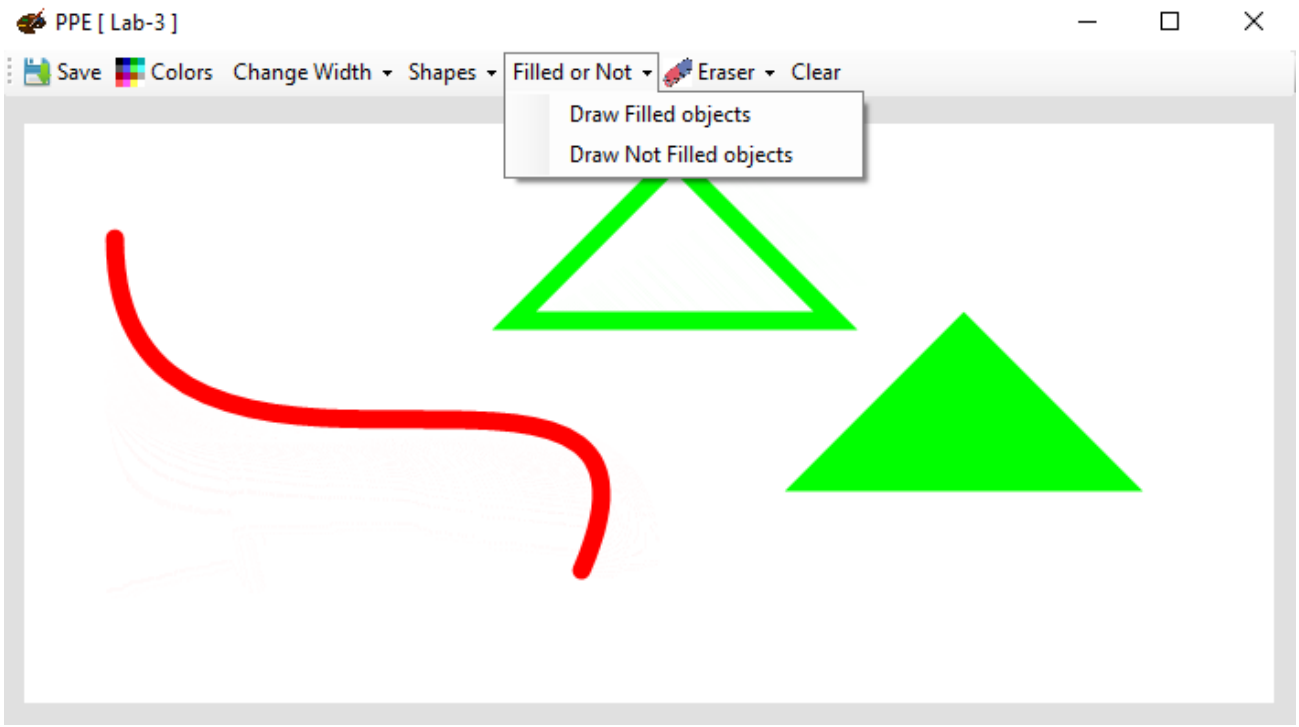

Figure 3. Possibility to draw Filled and Not Filled Shapes

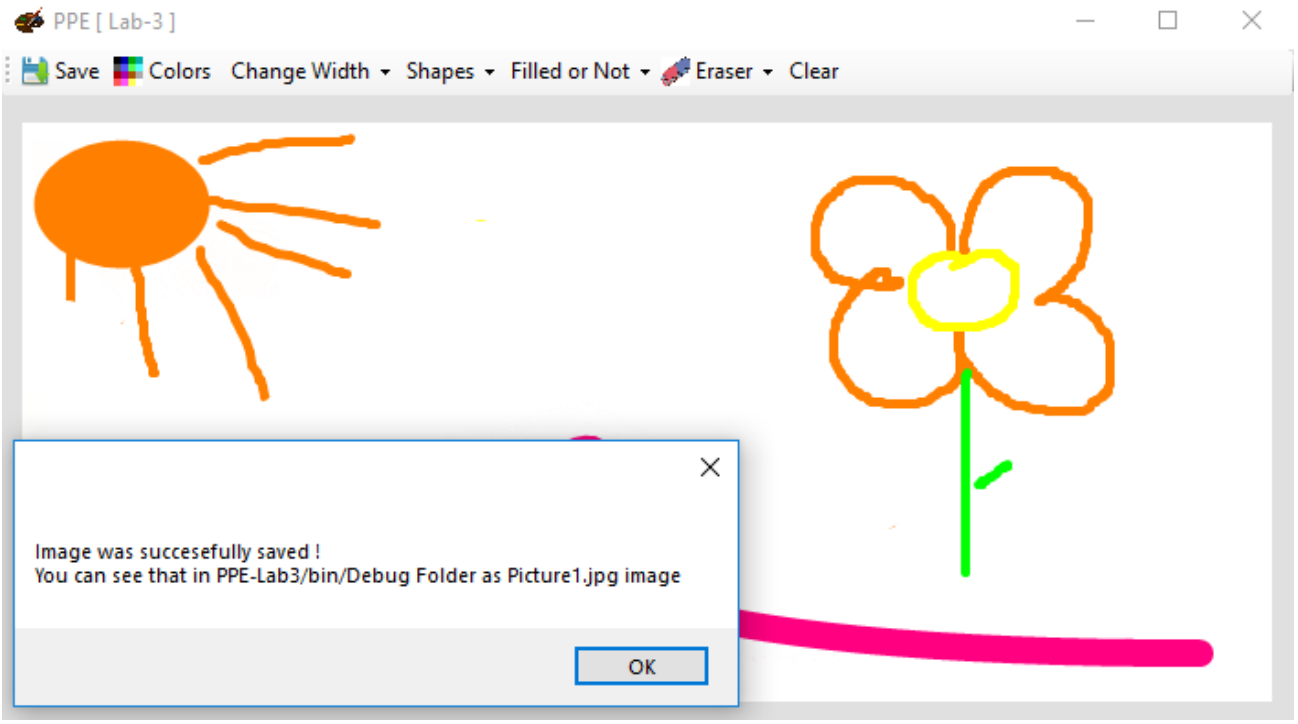

Figure 4. Possibility to save image

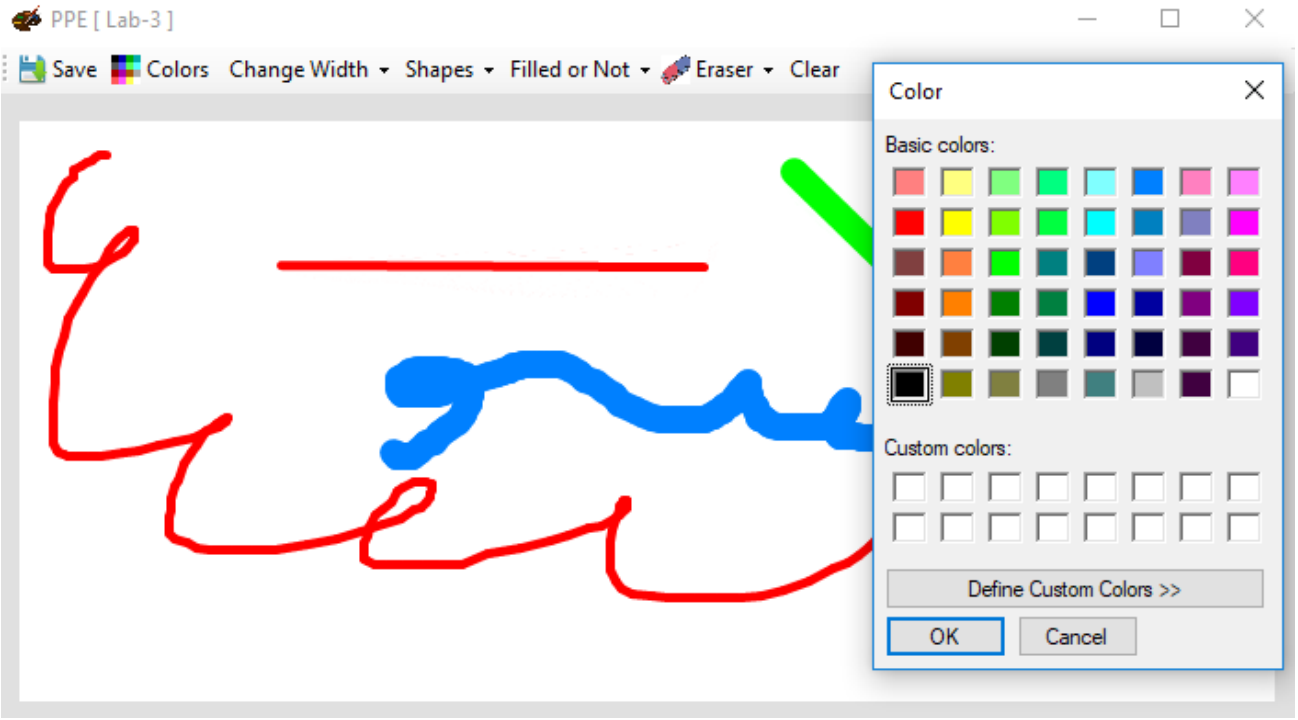

Figure 5. Color Palette

Conclusion

For this laboratory work I made a simple Paint Application with a lot of possibilities to paint custom objects .

References

microsoft - https://msdn.microsoft.com/en-us/library