



TECHNICAL UNIVERSITY OF MOLDOVA

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PPE Laboratory 3

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Title:

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

Contents:

- Mouse;
- Device context;
- GDI Primitives;
 - Line;
 - Curve;
 - Plane;
 - Bitmap image;
- Bezier curve.

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;
- Add a switch (button, select list...) that will change mouse ability to draw objects ;
- Draw a Bezier curve using mouse ;
- Fill an object with a gradient;
- Use mouse as an eraser of:

- a fixed width;
- a adjustable width;
- Zoom in and out application working area using keyboard ;
- Delete objects using mouse clicking .

Tasks:

During This Laboratory Work i Did a windows Application which is pretty similar to Classic Windows Paint. User Can Draw lines on different Shape and weights, Adjusting the line weight by introducing the the Brush size number between 1 and 200



Figure 1: Lines

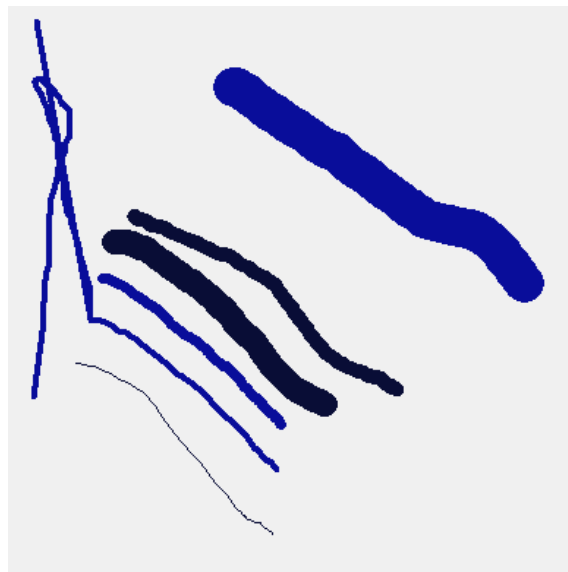


Figure 2: Lines

User can Set Bezier curve Mode and draw it placing three points with the mouse on

drawing area.

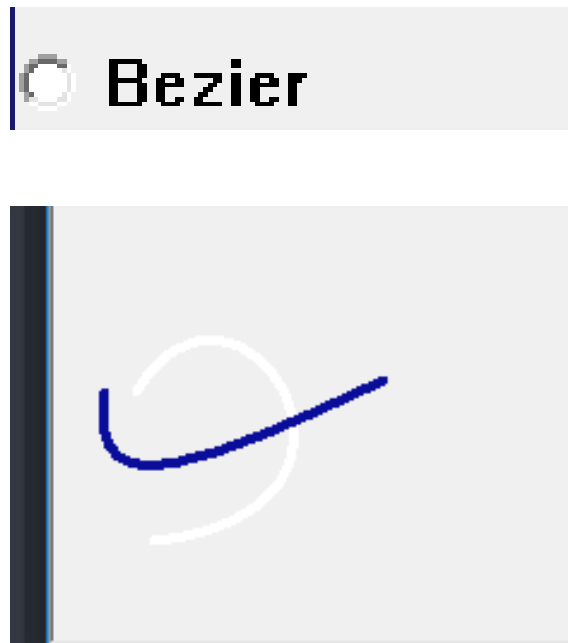


Figure 3: Bezier curve

Also user can draw objects like Polygons or Ellipses





User can erase everything on drawing area using his mouse, Eraser width can be adjusted.

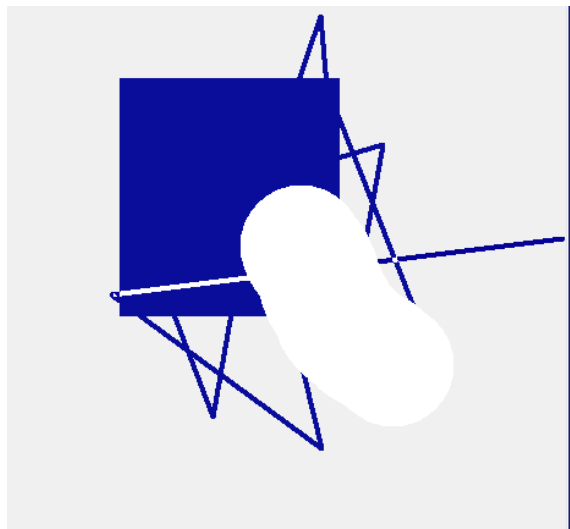


Figure 4: Eraser

Also i added a switch, it changes the ability to draw objects(they can be ether filled or not). Also i have implemented here 2 Hotkeys, same as in previous lab: "Alt + L" and "Alt + N"

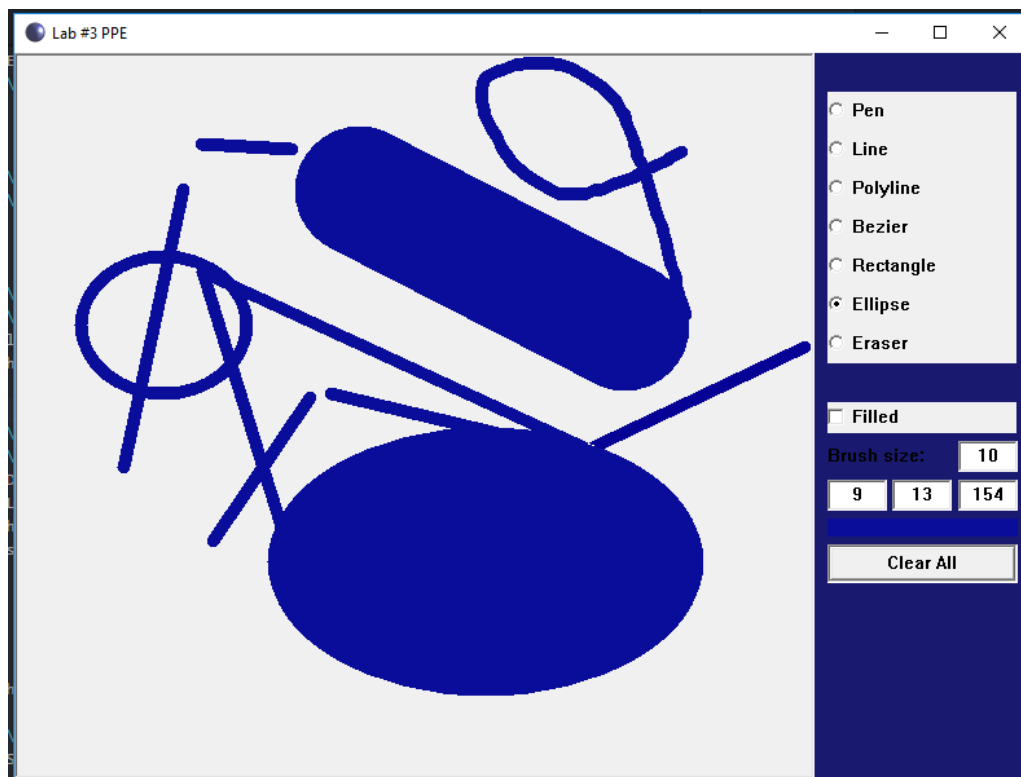


Figure 5: Overall

Conclusion

During This lab work i Understand the key features of WinApi Like list boxes, Menu, and how to add custom elements. The hardest part was repositioning all window elements on scrolling.

References

- [1] Section I, Chapter , Programming Windows by Charlez Petzold
- [2] Section I, Chapter 7, Programming Windows by Charlez Petzold