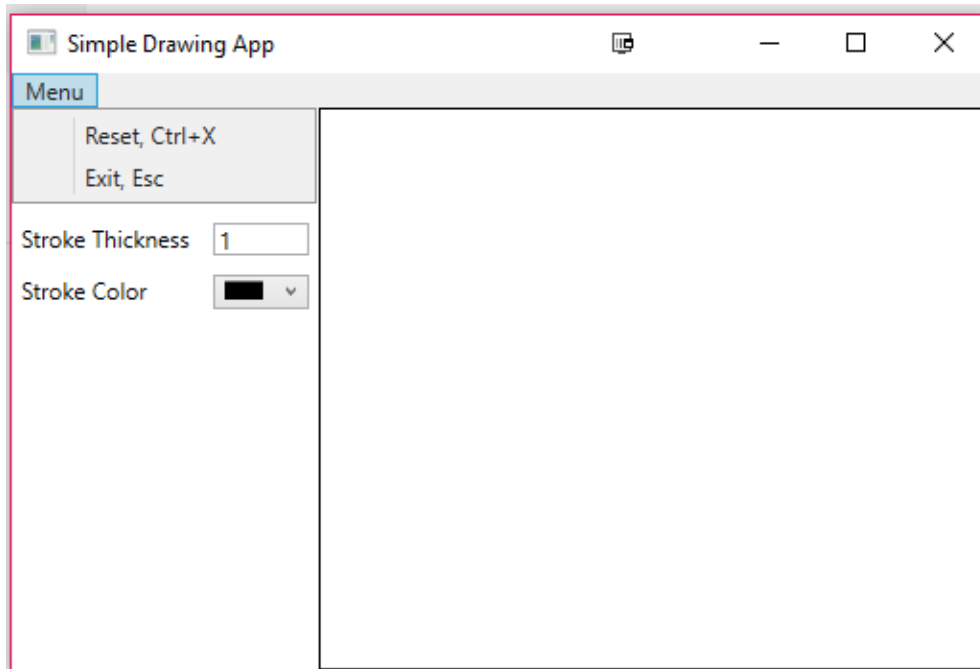


Homework 4

The task is to create a simple drawing app.

Menu has same functionality as in previous homework:

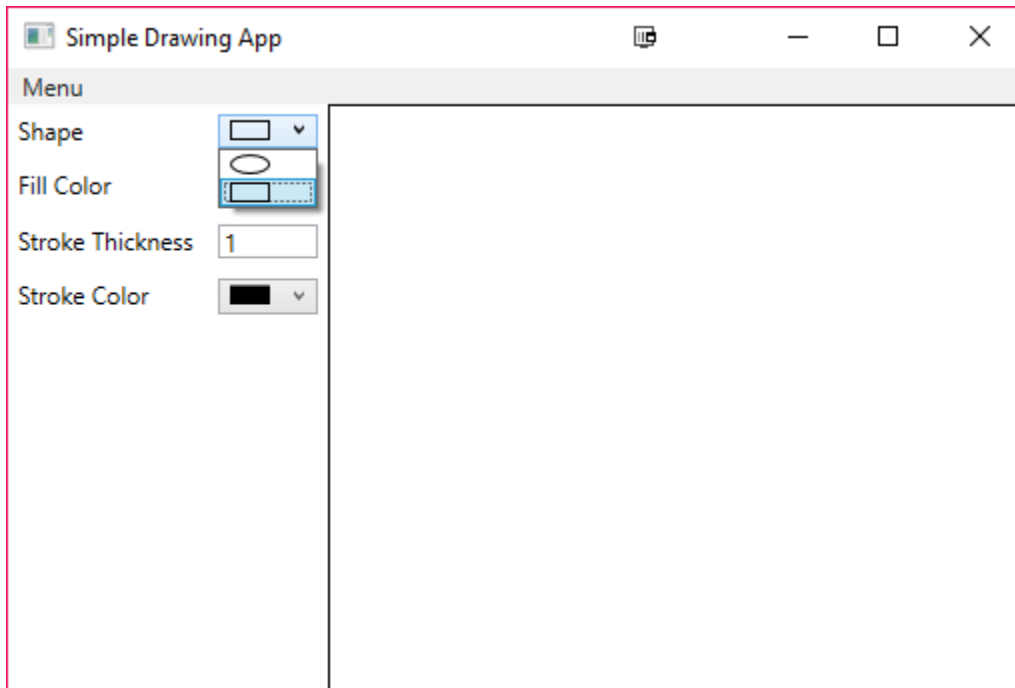


With hotkeys Ctrl+X and Escape.

In the upper left corner is located a Grid with 2 columns and 4 rows. It has fixed width and height.

Shape should be populated with at least 2 types: Rectangle and Ellipse. Default selection should be rectangle.

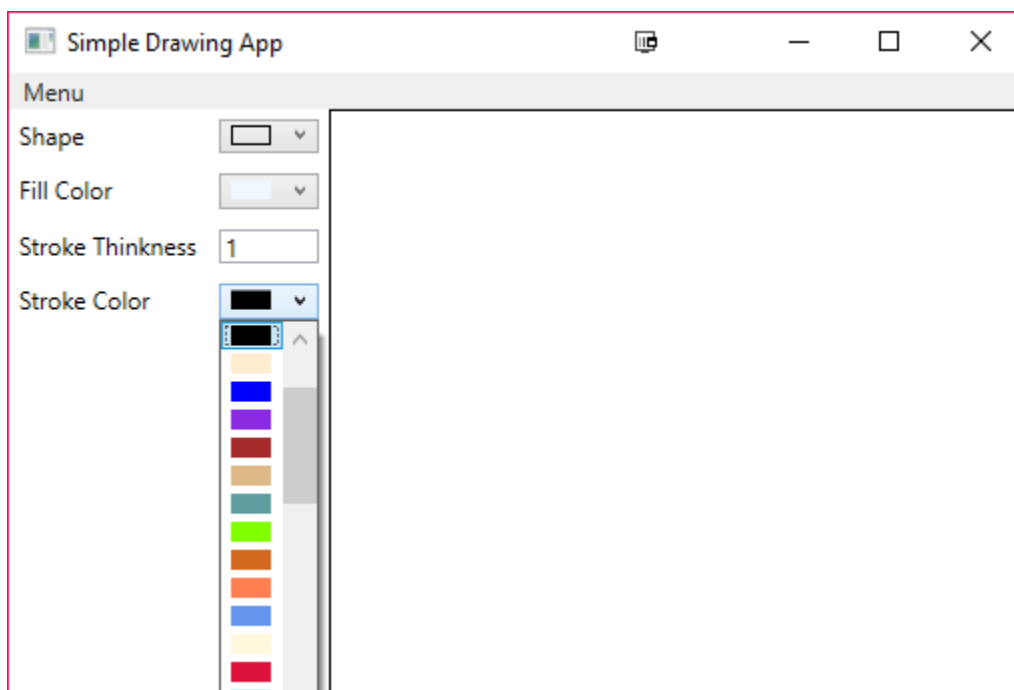
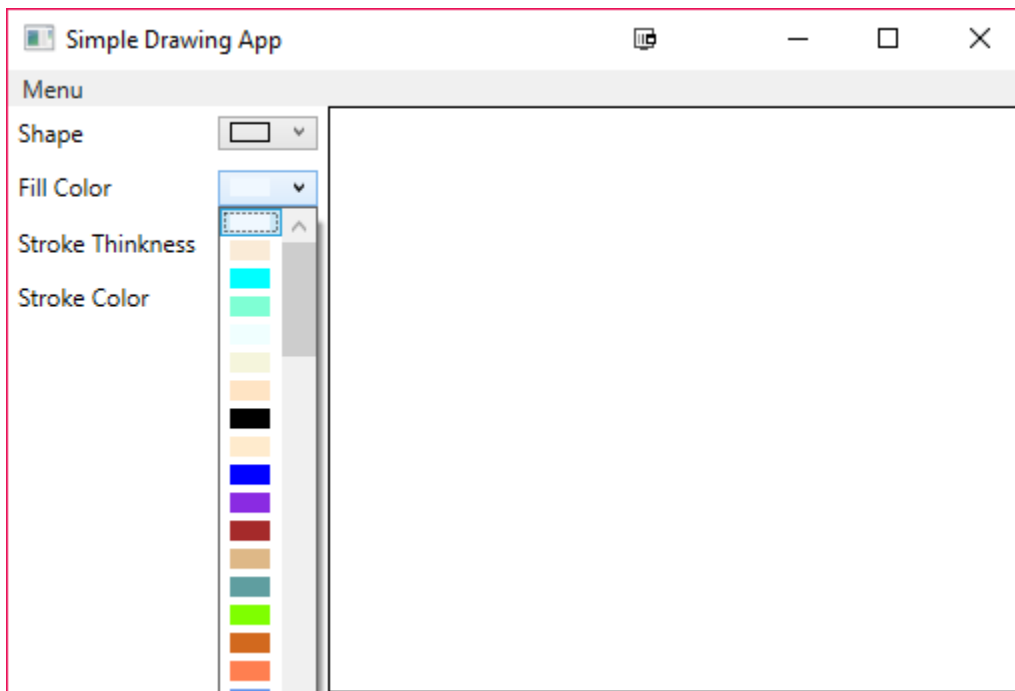
Note: for bonus points you can add support for other shapes like polyline path or curves.



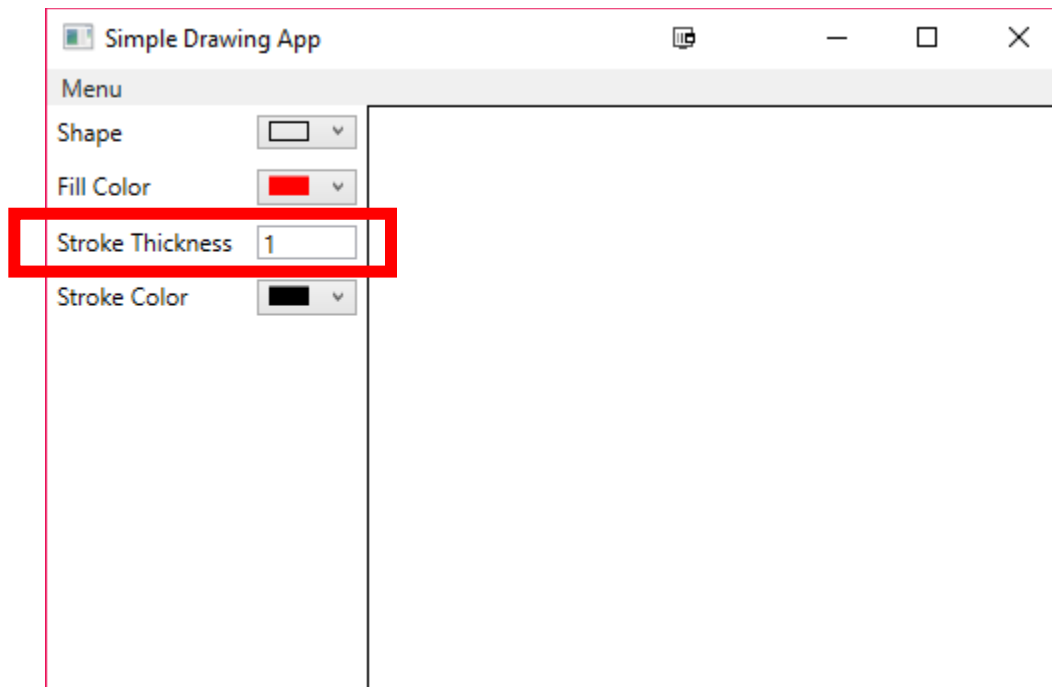
Fill stroke stroke color comboboxes should allow user to select color of a shape going to be drawn next. Defaults are RED for fill color and BLACK for stroke color and thickness is 1.

Note: List of colors doesn't have to be all possible solid colors from WPF, minimum requirement is to have at least 10 colors to choose from (white, gray, black, yellow, orange, red, green, blue, violet, pink). Options are either use small rectangle filled with color as combobox options or use mane of this color as comboboxitem (in this case foreground color has to be set to a corresponding color)

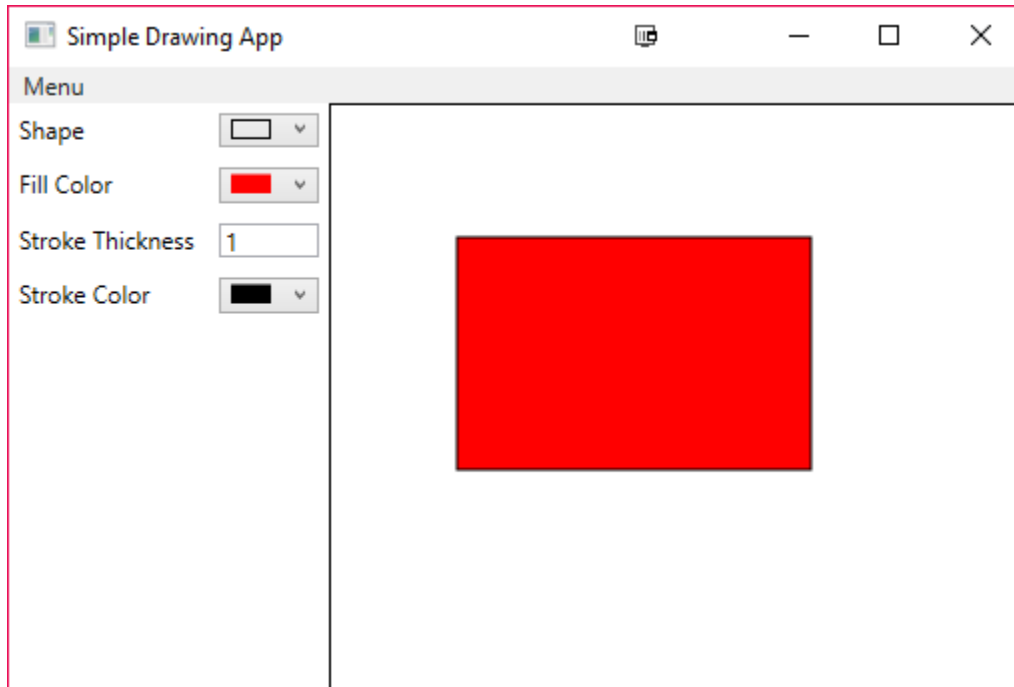
For WPF all possible colors list of brushes can be obtained as follows:
`typeof(Brushes).GetProperties().Select(p => p.GetValue(null, null) as SolidColorBrush).ToList()`



Stroke thickness is a textbox. It has to hold positive floating point number



Selected shape type colors and stroke thickness should determine figure user can draw using mouse by pressing mouse button and move it holding mouse button pressed:

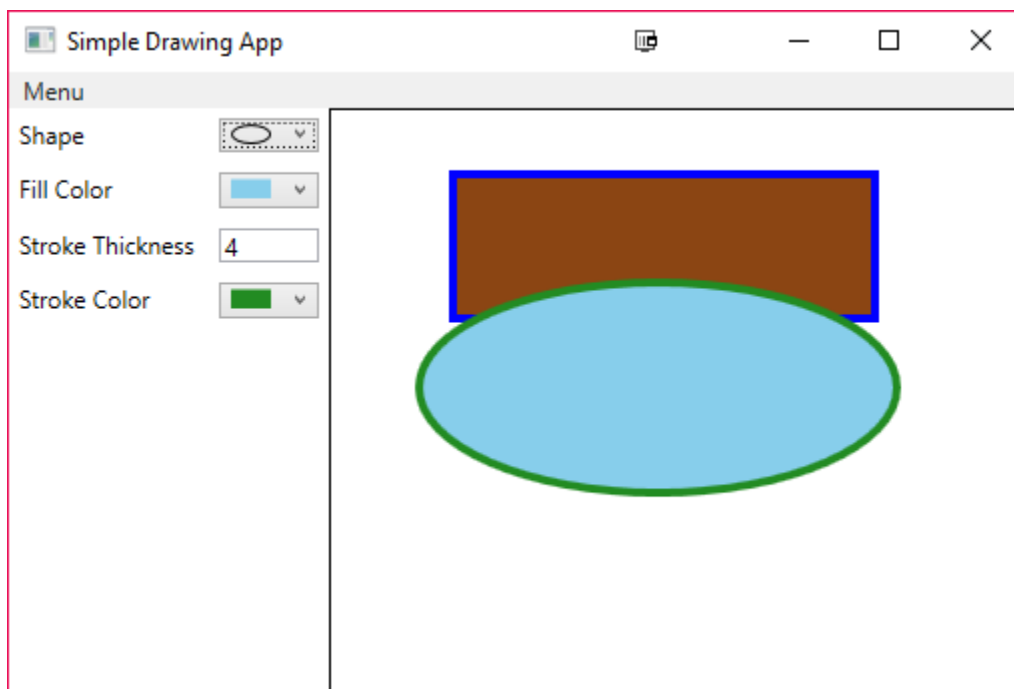
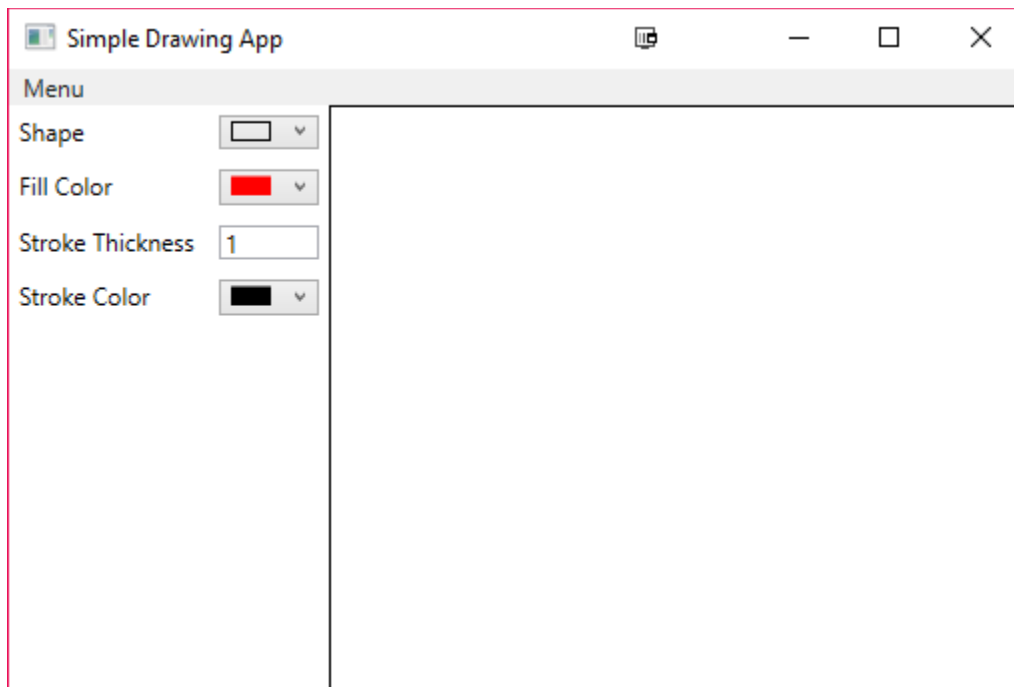


Note: drawing multiple figures on top of each other (last one in front) worth just 5 points u can remove or change properties of already present figure every time user use mouse on drawing canvas. Drawing canvas is located in the right bottom corner taking all remaining space in the window.

For WPF to avoid issues with mouse events use following example

```
<Canvas ...>
    <Canvas.Background>
        <SolidColorBrush Color="White" Opacity="0"/>
    </Canvas.Background>
</Canvas>
```

Reset button in the menu and Ctrl+X hotkey should remove everything from drawing canvas:



Note: make sure that all window titles are matching with provided on screenshots. And use attached executable to check how your program should behave. Also for both rectangle and ellipse location where mouse was pressed down and location where mouse was released should be corners of bounding box for corresponding shape (Example in class shows it for rectangle and for ellipse one of points is center and another determines radiuses, in homework the behavior for ellipse is different).

Additional requirement (mandatory for graduate students/ extra credit for others): at least one more type of a shape (besides rectangle and ellipse) is mandatory for graduate students. It can be triangle for example.