

9: iDrawing 2.0

Due: March 24

Description

In this assignment, you will enhance the iDrawing application that we have developed in class. The new features to be implemented will enable artists/users to use additional tools (e.g., tools to draw rectangles, ellipses), or modify attributes such as color and stroke thickness.

Requirements

The features to be implemented are the following:

1. Users should have the ability to select any color of their liking, using an appropriate view (Hint: look into SwiftUI's ColorPicker).
2. Users should have the ability to select from three different tools.
 - I. Pen Tool: this feature has already been implemented in the first version of the app (refer to the sample code for iDrawing). This tool allows user to draw any form of shapes freely.
 - II. Rectangle Tool: this allows users to draw filled rectangles with the color selected using the feature implemented in 1.
 - III. Ellipse Tool: this tool allows users to draw filled ellipses with the color selected using the feature implemented in 1.
3. When using the Pen tool, users can select the thickness of the line from the range [1,30] (Hint: Look into SwiftUI's slider view)

All of the above features can be implemented as settings that can either be on some sort of a tool bar on the canvas, or using a separate settings view (e.g., sheet).

4. Users should have the ability to undo/redo any shape that has be drawn on the canvas.

Testing

Thoroughly test your app for all possible user interactions you can imagine. Be sure to clean up any compiler or runtime warnings. When testing for the rectangle and ellipse tools, make sure that the user can draw the shape on all directions.

Hints

When implementing the rectangle and ellipse tool, you will need to rectify (calculate) the appropriate origin for the shape based on the direction of the translation. I suggest implementing a helper method to do so.

Submission

Your submission should be pushed on the master branch. Be sure to verify that your project builds and remove all cruft and compiler warnings.