CST 238

Puzzle 6: Poor Man’s Snapchat

You and your friends (Danielle, Ally and Josh) create a startup, but you need an idea. Ally wants to make a Snapchat spinoff because she doesn’t feel Snapchat lets her express herself as much as she would like. You have no idea what Snapchat is, but from what you can gather -- Snapchat is an app that allows you to record video or pictures and send them to your friends. It does a lot more than that actually, but that is the gist of it.

You are the strongest programmer among your friends and they want you to build a working prototype of something they can build off of. Basically you are going to write a poor man’s snapchat in less than an hour. Danielle already wrote some starter code, but is clueless on how to proceed. Josh is gone surfing for the day (it’s LA, what do you expect?), so it’s up to you to get this done.

To do:

1. Get camera to appear as background. Icons should have a z-index to where they are stacked on top of the camera output.
2. Get sound effect to play when camera button is pressed (sound effect is already in the project + contains an audio element to call it).
3. Get camera to save image to your pictures folder (i.e. on Windows, this is the default location).
4. Get canvas to paint (i.e. recall may\_2 lecture).
5. When user presses Pen Icon, user should be able to draw to the screen using canvas. Otherwise, user should not be able to draw on the screen.

Extra Credit:

1. Create new icons for additional functionality of the Poor Man’s Snapchat. Doesn’t have to work, yet…just get the icons in and make sure they’re intuitive (i.e. users should know what the icon does by just looking at it). Also make sure any extra credit requirement listed below has a corresponding icon associated with it (i.e. Wave effect should have it’s own icon, Bending Effects (if you choose to incorporate these), etc).
2. When user presses Crayon icon, user should be able to select (or change) the color of the pen and text.
3. When user presses T icon, it should pop up a text input dialog and allow user to type text. After user presses enter, text input dialog should be disabled and the text should stay on picture.
4. Create an erase icon and have it erase anything drawn to the screen using canvas.
5. Create a wave effect for the video output (i.e. remember first day of class with Bishop Fianchetto’s example…use Shader effects reference below).
6. Add a blur effect preferably through a slider that is visible when you click the blur icon (i.e. the farther I move the slider to the right, the more blurred the image gets…the farther to the left the move clear the image gets).
7. Add sound effects to any event, action or icon press.
8. For canvas, allow user to change the
9. Add a blend, color (hue, gamma, brightness, etc), gradient (conical, linear, radial), distortion, drop shadow, glow and/or mask as an effect.
10. When camera button is pressed, have screen flash white or some type of bright light that fades away.
11. For the crayon icon, create a color picker or color slider for the color.
12. Any effect you can think that would be cool to have in a Snapchat-like app would be great.
13. Any other feature that you think would be cool to have in a Snapchat-like app (i.e. swipe between windows or something).

Reference(s):

Graphical effects: <http://doc.qt.io/qt-5/graphicaleffects.html>

Shader effects: <https://qmlbook.github.io/en/ch09/index.html>