

REPORT RECORD

Q1 List the modifications and extension that you have made to the template file (400 words).

Extension

function ShapeTool()

This extension allow user draw 3 different shapes by clicking the buttons (Circle, Triangle and Square). The shape width thickness can be adjusted by sliding the slide range bar between 1 and 50 by default. User can fill the shape by changing color in the color palette. Or, by clicking the button No Fill to change back only stoke colour shape.

function StampTool()

This extension allow user draw the stamp sticker. The size and the number of the stamp sticker can be adjusted by changing the slider bar. User can choose sticker by clicking the stamp sticker icon under the canvas.

function Eraser()

This extension allow user to remove the drawing. The default colour is in white colour. User won't change colour in the colour palette even they click them by accident. The default size of the eraser is 30, user can adjust the width by changing the slider.

They are all individual new function tool under the toolbox. All three extensions were added new functions. When user click the icon in the siderBarItem, new button or slide appear. When user click handler to the options area, function will be changed.

Modifications

Added strokeWeight() to adjust the object thickness in

function FreehandTool(), function mirrorDrawTool(), function LineToTool() and function SprayCanTool().

User can adjust the pencil width or stoke thickness by changing the number between 1 to 50 in the slider bar. All these function work well with the modification of stroke. I put them in the different local function as this modify is not apply to all the function.

Added editMode in function FreehandTool().

In this code, by clicking the button Edit Shape, user can adjust the vertexes when the vertex is shown and leave by clicking Add vertices. Then click the button Finish Shape to stop drawing the same line. It is also store in the function locally.

Added extra sliders to SprayCanTool()

The user can adjust the spray width, number of points and the spread area within ranges with the slider bar.

Style and colour changed

To make this application more interesting, I changed colour in Side bar item, title and footer. The icon for each tool were changed to match the theme. New style and colour for all the buttons. Cursor icon changed or zoom in when hover different area in order to differentiate different functionality. For example, when the curser is in the canvas, the pointer is crosshair.

Q2 Describe how effective your plan was in completing your project (250 words). Your answer should include:

My plan was to learn everything from the school first and apply them in the coursework. I followed the schedule suggested from the lectures. After the mid-term, I continued learn new skills from the lecture videos and searched some references on internet.

After the essential study, eventually I had about one month to focus on the project. I started with design the wireframe for the drawing app with the extension I wanted to add. And tried to write the extension and collaborate them in the app with some small testing to make sure they can be able to interactive with the exist functions.

I faced some difficulty when I wanted to add some new functions like the range slide bar for changing the pencil width. I studied some extra examples online, but it was too advance and I couldn't use this idea for the app. I used the method from the lessons and modified, the user can adjust the slide range to change the stroke thickness. It is a simplify method so at the end I still come up the result I wanted.

Another challenge is shape extension that user can draw a shape, it works well with just only one shape. But when I wanted to implement other shape such as triangle and square, it took me very long time to study how to make it work. Initially, I wanted to apply a function that can change vertex number so as to change the different shape. It was too advance that I have to drop the idea.

Overall, with the planned Gantt Chart, I am satisfied with the time management.

Q3 Evaluate the process of completing the project and how effective the final product is. (250 words) Your answer should include:

I did the systematic testing log with 10 pages and I did some testing with 6 people by asking them to draw a photo from the same template photo. I noticed there are some errors after received the photos. I did also test by myself and list all the testing report in the excel file. I adjusted some problems after received their responses.

The slider bar for the stamp tool: Some users cannot discover where the bar is which allow user to change the number and size of the stamp by sliding the bar. The user may find a bit hard to see where the bar is, because I couldn't put the slider inside the canvas that I already know. I was planning to keep it if I can't fix it at the end as it still works well but the position is not good. But at the end I managed to place them.

Another error is in the freehand tool, some users responded they have problem to start a new line. They drew a line and released mouse, but when they start again another line, the line continued link with the previous point. And when click to the button (Edit shape) without click back the button (Add vertices) before move on, the vertices will keep showing in the canvas regarding to the loadPixels() and updatePixels().

In the future version of the application, I would upgrade more functions such as the Undo and Redo. Make nicer the design interface, for example when user hover some button, the small tips description will show up. Also, I will apply extra libraries and use ES6 instead of ES5.

Q4 List any external sources that you have actively utilised in your project.

[1] p5js.org, 'Libraries', 2021. [Online]. Available: <https://p5js.org/libraries/> [Accessed: 26- July- 2021].

[2] p5js.org, 'Reference', 2021. [Online]. Available: <https://p5js.org/reference/#/libraries/p5.dom> [Accessed: 6- August- 2021].

[3] w3schools.com, ' CSS Gradients ', 2021. [Online]. Available: https://www.w3schools.com/css/css3_gradients.asp [Accessed: 28- August - 2021].

[4] tatyadeniz.com, ' How to Draw Kawaii Cat With Easy Step-by-step Tutorial', 2021. [Online]. Available: <https://tatyadeniz.com/how-to-draw-kawaii-kitty/> [Accessed: 8- September - 2021].