University of Regina

Drawing Board

PROJECT REPORT

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Our Project

The project we have completed is our implementation of a whiteboard. With our whiteboard, a user can draw with a pencil, paintbrush, highlighter, and more. The user can also erase the work they have done, or they can reset their canvas. The user can also change the background colour, the colour of the paintbrush, and even change the stroke size of the tool they are using. The pencil stroke size cannot be changed, but the colour can. The eraser stroke size can be changed, the eraser adapts to the background colour to ensure it erases. The paintbrush's stroke size and colour can be changed. The highlighter's stroke size can be changed, but colour and opacity cannot. We designed this program to be useful for people, such as teachers and business leaders. With our application, one has access to a fully functioning whiteboard that requires no background knowledge or skills, as well as no download. So our app is easy to use and greatly increases productivity. With the use of p5.js and some other resources, we were able to complete our project with ease.

How We Utilized P5.js

Our code greatly revolves around the p5 library. The most apparent iterations being the setup and draw functions. The setup function allows us to create the canvas, and the draw function will enable us to draw on the whiteboard with various tools and features. We also used p5 for things such as our reset button; we used a clear() function to reset the canvas, making the implementation of the reset button extremely easy. We also used p5 for implementing the stroke size, the stroke colour, manipulating the background colour, tool opacity, etc. We also added a download button so you can save your canvas as a .jpg file. We did this by using the saveCanvas() function.

Other Resources We Used

We also used other javascript resources, one being bootstrap. We used bootstrap for things such as our toolbar, the buttons, and the logos. We used the simple factory design method to create different tools under the same parent class. We also used jQuery and ES6.

Conclusion

While using p5 and other useful javascript resources, we implemented several javascript classes to achieve a flexible and reliable code. We did this because when designing our drawing board, our goal was to implement as many features as possible. So the best way to continuously add functions to our project was to create parent and child classes for said functions. If we were to do this all again, we would certainly take a similar route if not the same. The reason being is that the difficulties were at the beginning of our implementation, so once we successfully debugged our first iteration, our only obstacle was time. We implemented as much as we could, given we were working remotely and the amount of time we had, and we can both say with confidence that what we accomplished exceeded our expectations, and we are pleased with the product we produced.