***Final Report***

This project of the passcode game makes use of many functionalities found in HTML, CSS, and Javascript. Before programming, my partner and I first thought of the design so we know exactly what to program. Since this is a game, I thought that there should be a loading page. Then, my partner Kevin Mai recommended that we should program a “Fake” G-Mail application to create a little story line. So, I decided that when the loading finishes, there will be a button that will take the user to the G-Mail site. Of course, to make this more unique, we change the name to F-Mail. This F-Mail site consisted some main design cues from G-Mail. For one, we have a F-Mail logo on the top right corner just as G-Mail has. We made the logo by using a website that allows me to create one. Right under it is a column of the same width was the logo to show uniformity. This column shows some information such as how many inboxes there are or how much storage was taken up. This was done to make the site more engaging and realistic. Finally, in the center of the screen there is a narrow bar that will “glow” when a message comes. Once this happens, other things will happen. The inbox indicator will increase to one and the storage used will increase in number. To get the message to come, I used the help of setTimeout which basically allows me to execute any function I have defined after a certain number of milliseconds. When the user clicks on the message, the message will expand and inform the user that there grade has dropped by a lot of points. To redeem themselves, they will be able to go to this passcode guessing site and if they get the passcode correct, there grade in PupilPath will change to a higher grade. Right under this message is a button the user can click to take them to the site. Here I used href to link the gaming site to the button.

When the user finally enters the gaming site, they will greeted with a nice visual. For one, I have used a custom font which I have downloaded and linked to the CSS file. This font is pixelated, and I used this to give a more old style computer look rather than an ordinary modern look. In addition, I have set the screen to black to imitate what we see in the command prompt. The black screen visually went well with the sound bars I had in the sides. There were two per side and basically changed it’s height which was generated at random in Java script. By doing so, it looks as if the bars are dancing with the music. To make a more visual appeal, I decided to make the bars change random colors when they go up. To make it look smooth, I added transitions to both the bars as well as transitions for the background color (transition:background-color 600ms). In between the two dancing bars is the main user interface, which is a square and right under it is a narrow rectangle which will be used for the user input. In the beginning, they will be greeted with a hello message which also changes the same colors as the bars are doing. This affect was also applied to the title of the page. Going back to the menu, there will be a start playing button, a stats button, and a mode toggle. There will be two modes in this game, a hard mode and a normal mode. In the normal mode, the user will get eight guesses for the passcodes and will be able to access all the hints that were given to them. The hard mode will offer five guesses and the user won’t be able to access all the hints given to them. The user has to pick either of these modes, or else they can’t start the game. If they do press start playing, I have a conditional to check whether they picked any of the modes and if they haven’t, a message will appear and they won’t be able to start. When they start playing, in the top the user can see how many tries he or she has left and when they type they will be able to see what they are typing in real time. Every time they get it wrong, a hint will appear right under it. When they get it right the stat page will appear showing how many guesses they took, how many times they won, etc. There will be two buttons in the bottom of the stat page. One will go back to the main menu, while the other allows the user to retry. If the retry the data will be saved. However, if the back button is clicked, the page will be refreshed and the data will be erased. The final area of the game site that is interactable is the top right corner. In this area there are three buttons called hints, ?, and about us. Under about us and ? the user can learn more about my partner and I while in the ? the user might be able to find any answers to general questions. The hints button will be deactivated before the user starts playing. It will be activated when the user picks normal mode and starts playing.