**Brandt Cotherman**

**Standard Focus:**     2-AP-14 (Functions)

**Technology Overview:** *How would you describe this CS concept to a peer?*

In this program students will learn how to build a keyboard game using the programming language JavaScript. The program will randomly select a number 1,2,3, or 4 and display it in the browser. Then it will listen for the user to press one of the following keyboard buttons: 1, 2, 3, or 4. If the keyboard number button pressed matches the number generated then it will generate another a number for the user to press. If there is not a match it will wait for the user to press the correct button.

This project will teach the student the following programming concepts: variables, if statements (used to make comparisons), addEventListener (used to listen for key pressed), getElementById (used to display number generated), Math.random (used to generate random number), commenting code (used to leave notes on code to explain how it works), and code structure (used to make code visually easier to read).

If needed we can also teach the student about console.log and alert. These two concepts will help the student trouble shoot code while they build it.

We could use this project as a minimum viable product that could be further developed as teaching tool. This project could be further developed by adding file structure/organization and more game features like: timer, lives, points, visuals, more/different buttons, and etc.

Tools that could be used for this project Jfiddle or Visual Studio and Google Chrome.

**Activity Overview:** *A description of the program you suggest for students to build*

In this program you will learn how to use Javascript to create a game that randomly generates a number 1 through 4. Then it will wait for the user to press the keyboard button that matches the number generated. If it is a match the program will generate another number. If there is no match then it waits for the user to press the correct button.