Mastermind Game:

Basic setup: game generates a code using 4 colours (can be same colours) in a row of 4. Player fills in the 4 empty spots by clicking on a colour for each, with a fifth button to reset the whole line. User hits submit, and game checks their guess against the stored code. For each colour the player gets right, game fills in the dots on the left with a grey mark. If the player got a right colour in the right SPOT, they get a black dot. The position of the dots does not correspond to the guesses made, only informs the player they got something right or wrong. Games continues until out of guesses or they successfully guess the code

Plan:

random number generator to generate 4 numbers between 1 & 4. Turn them into an array (THEANSWER)

4 empty circles in middle of screen & 4 buttons on bottom of screen shown as colours. The empty circles will visually represent an empty array of FOUR INTEGERS (0-3).

When a coloured circle is clicked the LEFTMOST circle (aka array 0) is filled with that colour. The array then iterates to the next integer in the index (aka 1) And can be filled with another colour.

Colours are stored as integers within the code (aka red = 1, green =2), this will stay consistent throughout, so the guessed colours can be compared to THEANSWER.

An extra button on the right that will CLEAR the current guesses, resetting the array to 0, and another button that will SUBMIT the current guesses to be compared to THEANSWER.

Bar on the left side of the screen split into 10 sections, each section will have 4 pips (arranged differently to guesses). FOREACH number in the guess that matches a number in theAnswer, a pip will be made grey (but only once for each number). If the numbers INDEX within the guess matches that in THEANSWER as well as being the same number, a pip will be made black instead. A guess that is the wrong colour will turn a pip red. Number of non-red pips will = successful guesses this way.

Each time a guess is made and is incorrect, the NUMBEROFGUESSES will be incremented. Will need a visual representation next to the pips to show how many guesses have been made. Each subsequent guess will be made on the line above.

Game ends once the player has correctly guesses the code or run out of guesses.