Lab 5, Part 1: Array Exercises

For each of the problems below, create an array, or write a function in a file named *ArrayExercises.js*
This HTML page contains code to test your solution code.

Basic Array Operations

1. Declare an array named *degrees*, but don't initialize it.
2. Write a function named *addDegree* that takes a degree name as a parameter and adds it to the *degrees* array.
   Here is a listing of the array:

   0, Network Operations
   1, Cybersecurity
   2, Computer Programming
   3, Game Development
   4, ASOT CS

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3. Write a function named *renameDegree* that takes an index number and degree name as parameters. It will let you change the name of a degree in the global *degrees* array by index.
   We'll change the name of Computer Programming to Software Development
   The degree with index 2 is named: Software Development

Using Arrays in Loops

1. Write a function named *copyDegrees* to create a copy of the global *degrees* array.
   It should take no parameters, just return a new array.
   We'll create a new array named *programs* and we'll change the name of the third degree back to "Computer Programming".
   In *degrees*, the third degree is: Software Development
   In *programs*, the third degree is: Computer Programming
2. Write a function named *countMatches*, that takes two parameters, compares two arrays, and returns the number of elements with matching values.
   We will compare the two arrays above. There should be 4 elements that contain the same values.
   Number of matches: 4

Working with 2D Arrays

1. Declare an array named *checkers* to represent a checker board. Don't initialize it.
   The checkers array has been initailzed with 64 squares.
2. Write a function named *displayBoard* to display the board (it will have no parameters and will return a string with the HTML that represents the board.)
   The board:

   BRBRBRBR
   RBRBRBRB
   BRBRBRBR
   RBRBRBRB
   BRBRBRBR
   RBRBRBRB
   BRBRBRBR
   RBRBRBRB

3. Write a function named *makeMove* to place a Red or Black checker on the board. Your function will take these parameters: row, column, letter.
   We'll use lower case letters to represent the checkers and just put 4 checkers on the board.
   Checker board:
   bRbRBRBR
   RBRBRBRB
   BRBRBRBR
   RBRBRBRB
   BRBRBRBR
   RBRBRBRB
   BRBRBRBR
   rBrBRBRB