# CS3305 W04 Assignment 3

Ryan Brinson

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## Output:

A screenshot of a computer

Description automatically generated

## Source Code:

// Name: Ryan Brinson  
// Class: CS 3305 W04  
// Term: Spring 2023  
// Instructor: Carla McManus  
// Assignment: 3 – Part 2 Capitals  
  
  
import java.util.\*;  
  
public class GuessTheCapital {  
 public static final int *STATE* = 0;  
 public static final int *CAPITAL* = 1;  
 public static int *correct* = 0;  
 public static int *wrong* = 0;  
  
  
 public static void main(String[] args) {  
 // Initialize the string using the StringInit function  
 String[][] stateCities = *StringInit*();  
 Scanner input = new Scanner(System.*in*);  
  
 // Introduction to the Quiz  
 System.*out*.println("Let's test your knowledge of States and their Capitals.");  
 System.*out*.println("You will be presented with 5 random States and you must try and guess their respective Capital.");  
 System.*out*.println("Let's begin!");  
  
  
 // Cycle through the five different states  
 for (int i = 0; i < 5; i ++){  
 System.*out*.printf("\nQuestion %d\n", i + 1);  
 *Prompt*(input, stateCities);  
 }  
  
  
  
 System.*out*.printf("Correct: %d\nWrong: %d", *correct*, *wrong*);  
 }  
  
 public static void Prompt(Scanner input, String[][] stateCities){  
 Random rand = new Random();  
 String tempString;  
 int tempNum;  
  
 // Set tempNum to a random integer of 0-49  
 tempNum = rand.nextInt(stateCities.length);  
 System.*out*.print("What is the capital of ");  
  
 // Using tempNum, pick a random row in the array  
 // and print the state column  
 System.*out*.println(stateCities[tempNum][*STATE*] + "?");  
  
 // Grab the users guess  
 tempString = input.nextLine();  
  
 // Using the same index value from about,  
 // Check if the users' guess matches the associated capital.  
 // If they match, increment correct by 1, if wrong increment wrong by 1  
 if ((tempString.equals(stateCities[tempNum][*CAPITAL*]))  
 || (tempString.equals(stateCities[tempNum][*CAPITAL*].toLowerCase())))  
 *correct*++;  
 else *wrong*++;  
 }  
  
 // Function that initializes the array with the necessary values  
 public static String[][] StringInit(){  
 return new String[][]{{"Alabama", "Montgomery"},  
 {"Alaska", "Juneau"},  
 {"Arizona", "Phoenix"},  
 {"Arkansas", "Little Rock"},  
 {"California", "Sacramento"},  
  
 {"Colorado", "Denver"},  
 {"Connecticut", "Hartford"},  
 {"Delaware", "Dover"},  
 {"Florida", "Tallahassee"},  
  
 {"Georgia", "Atlanta"},  
 {"Hawaii", "Honolulu"},  
 {"Idaho", "Boise"},  
 {"Illinois", "Springfield"},  
  
 {"Maryland", "Annapolis"},  
 {"Minnesota", "Saint Paul"},  
 {"Iowa", "Des Moines"},  
  
 {"Maine", "Augusta"},  
 {"Kentucky", "Frankfort"},  
 {"Indiana", "Indianapolis"},  
 {"Kansas", "Topeka"},  
  
 {"Louisiana", "Baton Rouge"},  
 {"Oregon", "Salem"},  
 {"Oklahoma", "Oklahoma City"},  
  
 {"Ohio", "Columbus"},  
 {"North Carolina", "Raleigh"},  
 {"North Dakota", "Bismark"},  
  
 {"New York", "Albany"},  
  
 {"New Mexico", "Santa Fe"},  
 {"New Jersey", "Trenton"},  
 {"New Hampshire", "Concord"},  
  
 {"Nevada", "Carson City"},  
 {"Nebraska", "Lincoln"},  
 {"Montana", "Helena"},  
 {"Missouri", "Jefferson City"},  
  
 {"Mississippi", "Jackson"},  
 {"Massachusetts", "Boston"},  
 {"Michigan", "Lansing"},  
  
 {"Pennsylvania", "Harrisburg"},  
 {"Rhode Island", "Providence"},  
  
 {"South Carolina", "Columbia"},  
 {"South Dakota", "Pierre"},  
 {"Tennessee", "Nashville"},  
 {"Texas", "Austin"},  
  
 {"Utah", "Salt Lake City"},  
 {"Vermont", "Montpelier"},  
 {"Virginia", "Richmond"},  
  
 {"Washington", "Olympia"},  
 {"West Virginia", "Charleston"},  
 {"Wisconsin", "Madison"},  
 {"Wyoming", "Cheyenne"}};  
 }  
}