public class Week3And4 {

public static void main(String[] args) {

/\*Question 1: Create an array of int called ages

\* that contains the following values: 3, 9, 23, 64, 2, 8, 28, 93

\*/

int [] ages = {3, 9, 23, 64, 2, 8, 28, 93};

/\*Question 1a: Programmatically subtract the values of the first element in the

\* array from the value of the last element in the array (i.e. do not use ages

\* [7] in your code). Print the result to the console.

\*/

System.***out***.println("\nQuestion # 1a:");

int lastElementMinusFirstElement = (ages[ages.length - 1] - ages[0]);

System.***out***.println(lastElementMinusFirstElement);

/\* Question 1b: Add a new age to your array and repeat the step above to ensure it

\* is dynamic (works for arrays of different lengths)

\*/

System.***out***.println("\nQuestion# 1b:");

int[] ages2 = {3,9,23,64,2,8,28,93,95};

int lastElementMinusFirstElement2 = ages2[ages2.length-1]- ages2[0];

System.***out***.println(lastElementMinusFirstElement2);

/\* Question 1c: Use a loop to iterate through the array and calculate the average

\* age. Print the result to the console.

\*/

System.***out***.println("\nQuestion# 1c:");

double sum = 0; //not sure if I should've used double or int to show the average of the ages

for(int x : ages) {

sum += x;

}

System.***out***.println(sum/ages.length);

/\* Question 2: Create an array of String called names that contains the following

\* values: “Sam”, “Tommy”, “Tim”, “Sally”, “Buck”, “Bob”.

\*/

String [] names = {"Sam", "Tommy", "Tim", "Sally", "Buck", "Bob"};

/\* Question 2a: Use a loop to iterate through the array and calculate the average

\* number of letters per name. Print the result to the console

\*/

System.***out***.println("\nQuestion # 2a:");

int sumAvg = 0;

for (int i = 0; i < names.length; i++) {

sumAvg += names[i].length();

}

int average = sumAvg / names.length;

System.***out***.println("The average number of letters in the array is " + average + ".");

/\* Question 2b: Use a loop to iterate through the array again and concatenate

\* all the names together, separated by spaces, and print the result to the console.

\*/

System.***out***.println("\nQuestion # 2b:");

String concatedNames = "";

for (int i = 0; i < names.length; i++) {

concatedNames += ( names[i] + " ");

}

System.***out***.println(concatedNames);

/\* Question 3: How do you access the last element of any array?

\*/

System.***out***.println("\n Question # 3:");

System.***out***.println("To access the last element of an arrary, enter: 'arrayName[arrayName.length - 1]'.");

/\*

\* Question 4: How do you access the first element of any array?

\*/

System.***out***.println("\n Question # 4:");

System.***out***.println("To access the first element of an array, enter: 'arrayName[0]'.");

/\*

\* Question 5: Create a new array of int called nameLengths. Write a loop to iterate

\* over the previously created names array and add the length of each name to the nameLengths array

\*/

System.***out***.println("\n Question # 5:");

int [] nameLengths = new int[names.length];

for (int i = 0; i < names.length; i++) {

nameLengths[i] = names[i].length();

//System.out.println( "Value of i: " + i);

}

for (int x : nameLengths) {

System.***out***.println(x);

}

/\*

\* Question 6: Write a loop to iterate over the nameLengths array and calculate the sum

\* of all the elements in the array. Print the result to the console.

\*/

System.***out***.println( "\nQuestion # 6:");

int sumElementsArray = 0;

for ( int i = 0; i < nameLengths.length; i ++) {

sumElementsArray += nameLengths[i];

}

System.***out***.println(sumElementsArray);

}

/\*

\* Question 7: Write a method that takes a String, word, and an int, n, as arguments and

\* returns the word concatenated to itself n number of times. (i.e. if I pass in “Hello” and 3,

\* I expect the method to return “HelloHelloHello”).

\*/

public static String concatWords(String word, int n) {

String answer = "";

for (int i = 0; i < n; i++) {

answer += word;

}

return answer;

}

/\*

\* Question 8: Write a method that takes two Strings, firstName and lastName, and returns a

\* full name (the full name should be the first and the last name as a String separated by a space).

\*/

public static String fullName(String firstName, String lastName) {

String fullName = firstName + " " + lastName;

return fullName;

}

/\*

\* Question 9: Write a method that takes an array of int and returns true if the sum of all the

\* ints in the array is greater than 100.

\*/

public static boolean validate(int array) {

int[] numArray = new int[array];

int sumArray = 0;

for (int i = 0; i < numArray.length; i++) {

sumArray += numArray[i];

}

if (sumArray > 100) {

return true;

} else {

return false;

}

}

/\*

\* Question 10: Write a method that takes an array of double and returns the average of all the

\* elements in the array.

\*/

public static double doubleAvg(int averageNumbers) {

double[] avgNumber = new double[averageNumbers];

double doubAvg = 0;

for (int i = 0; i < avgNumber.length; i++) {

doubAvg += avgNumber[i];

}

double averageNum = doubAvg / avgNumber.length;

return averageNum;

}

/\*

\* Question 11: Write a method that takes two arrays of double and returns true if the average

\* of the elements in the first array is greater than the average of the elements in the second array.

\*/

public static boolean arrayTest(int one, int two) {

double[] doubOne = new double[one];

double[] doubTwo = new double[two];

double doubAvgOne = 0;

double dubAvgTwo = 0;

for (int i = 0; i < doubOne.length; i++) {

doubAvgOne += doubOne[i];

}

double avgNumOne = doubAvgOne / doubOne.length;

for (int i = 0; i < doubTwo.length; i++) {

dubAvgTwo += doubTwo[i];

}

double avgNumTwo = dubAvgTwo / doubTwo.length;

if ( avgNumOne > avgNumTwo) {

return true;

} else {

return false;

}

}

/\*

\* Question 12: Write a method called willBuyDrink that takes a boolean isHotOutside, and a

\* double moneyInPocket, and returns true if it is hot outside and if moneyInPocket is greater than 10.50.

\*/

public static boolean willBuyDrink(boolean isHotOutside, double moneyInPocket) {

if (isHotOutside == true && moneyInPocket > 10.50) {

return true;

} else {

return false;

}

}

/\*

\* Question 13: Create a method of your own that solves a problem. In comments, write what the method

\* does and why you created it.

\*/

public static boolean getCoffee(double moneyOnGiftcard, boolean noCoffeeAtHome) {

if (moneyOnGiftcard >= 7.50 && noCoffeeAtHome == true) {

return true;

} else {

return false;

}

}

/\*

\* The method above will determine if you are able to get coffee depending on how much money you have

\* on a gift card, and if you have no coffee at home. I created this method because I love getting Starbucks on

\* my way to work in the mornings, and I was given gift cards this past Christmas to fund my addiction.

\*/

}

Text

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