Lindy Hagedorn

URL to GitHub Repository: https://github.com/lindhage22/Week4_Arrays_Methods_LH
URL to Public Link of your Video: https://youtu.be/7sVPp3HQl_0

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Instructions:
1. Follow the Coding Steps below to complete this assignment.
In Eclipse, or an IDE of your choice, write the code that accomplishes the objectives listed below. Ensure that the code compiles and runs as directed.
Create a new repository on GitHub for this week's assignment and push your completed code to this dedicated repo.
Create a video showcasing your work:
In this video: record and present your project verbally while showing the results of the working project.
Easy way to Create a video: Start a meeting in Zoom, share your screen, open Eclipse with the code and your Console window, start recording & record yourself describing and running the program showing the results.
Your video should be a maximum of 5 minutes.
Upload your video with a public link.
Easy way to Create a Public Video Link: Upload your video recording to YouTube with a public link.
2. In addition, please include the following in your Coding Assignment Document:
The URL for this week's GitHub repository.
The URL of the public link of your video.
3. Save the Coding Assignment Document as a .pdf and do the following:
Push the .pdf to the GitHub repo for this week.
Upload the .pdf to the LMS in your Coding Assignment Submission.

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Coding Steps — Arrays and Methods

## **Lindy's Coding Assignment:**

```
package week04;



public class Java_Week4_Testing_Assignment {

	public static void main(String[] args) {
		// TODO Auto-generated method stub

		//Coding Steps — Arrays and Methods

		//Create an array of int called ages that contains the following values: 3, 9, 23, 64, 2, 8, 28, 93.

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

		// 1) Programmatically subtract the value of the first element in the array
		    //from the value in the last element of
		    //the array (i.e. do not use ages[7] in your code).
		    //Print the result to the console.
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        System.out.println(ages[0]- ages[ages.length-1]);


    // 2)Add a new age to your array and repeat the step above to
        //ensure it is dynamic (works for arrays of different lengths).

        ages = new int []{3, 9, 23, 64, 2, 8, 28, 93, 22};

        System.out.println(ages[0]- ages[ages.length-1]);


        // 3)Use a loop to iterate through the array and calculate
        //the average age. Print the result to the console.

         int sum = 0;
         double avg = 0.0;

         for (int i = 0; i < ages.length; i++) {
            sum = sum + ages [i];

         }
         avg = (double)sum/ages.length;
         System.out.println("The average is :" + avg);

    //Create an array of String called names that contains
      //the following values: “Sam”, “Tommy”, “Tim”, “Sally”, “Buck”, “Bob”.

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

    // 1)Use a loop to iterate through the array and calculate the
        //average number of letters per name. Print the result to the console.
         int totalNumLettersName = 0;
         double avgNumLettersName = 0.0;

            for(int i = 0; i < names.length; i++) {
                    totalNumLettersName += names[i].length();
            }
            avgNumLettersName = (double)totalNumLettersName /names.length;
            System.out.println(avgNumLettersName);


// 2)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.
```

```
        // String result = "";
          ///for (int i = 0; i < names.length; i++) {
               // result += names [i] + " ";
         // }
        //  System.out.println(result);
                for (int i = 0; i < names.length; i++) {
                        System.out.print(names [i] + " ");
                    }
                    System.out.println();


      //How do you access the last element of any array?

                System.out.println(names[5]);




      //How do you access the first element of any array?


    System.out.println(names[0]);



      //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.
      // first I messed up and out printed :[I@1175e2db I did the out print
    //incorrectly by putting it out side the loop


    int []nameLengths = new int [names.length -1];
                        for (int i = 0; i < nameLengths.length; i++) {
                        nameLengths[i] = names[i].length();
                        //System.out.println(nameLengths[i]);
                }




//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.

                        int sumOfAllElements = 0;
                        for (int i1 = 0; i1 <nameLengths.length; i1++) {
```

```
                    sumOfAllElements += nameLengths[i1];


}

        System.out.println("The sum of all the elements is the array is: " + sumOfAllElements);


        //must call method to run because it lives out side of the runner method so it can be reused again.

        //System.out.println(concatenateWord("hello", 3)); (Hello to print)

        //System.out.println(fullName("Lindy","Hagedorn")); (first and last name)

        //int []arr = new int []{15,22,16, 45};
   //System.out.println(sumOfInt(arr)); (sum great than 100)

         //double []array = new double[]{45.8,78.5,11.2};
           // System.out.println(averageofTheElement(array)); (returns the average of elements)

        //double []myArr1 = new double[]{6.4,2.1};
   //double []myArr2 = new double[]{7.2,2.6,6.7};
   //System.out.println(avgOfElemInBothArrays(myArr1,myArr2)); (avg of elements 1st array is greater 2nd
array)

        //System.out.println(willBuyDrink(true,12.50)); (weather and drink)

        System.out.println(newString("Lindy Hagedorn", "Washburn"));
//(my creation with method with hyphen)

        }

        //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 concatenateWord (String word, int n) {
      String cWord = "";
        for (int i = 0; i < n; i++) {
     cWord += word;
   }
     return cWord;
   }


        //Write a method that takes two Strings, firstName and lastName,
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```
    //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){
      return firstName + " " + lastName;
  }

          //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 sumOfInt (int [] arr){
      int sum = 0;
      for (int i =0; i< arr.length;i++){
          sum += arr[i];
      }
      if (sum>100){
          return true;
      }
      return false;
  }

          //Write a method that takes an array of double
  //and returns the average of all the elements in the array.


 public static double averageofTheElement(double [] array){
      double sum = 0.0;
      double avg =0.0;
      for (int i = 0; i< array.length; i++){
          sum += array[i];
      }
      avg =  sum/ array.length;
      return avg;


 }

//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 avgOfElemInBothArrays(double [] arr1, double []arr2){
      double sum1 = 0.0;
      double sum2 = 0.0;
      double avg1, avg2;
```

```
        for (int i =0 ; i<arr1.length;i++){
            sum1 += arr1[i];
        }
        for(int i = 0; i<arr2.length; i++){
            sum2+=arr2[i];
        }
        avg1 = sum1/ arr1.length;
        avg2 = sum2/ arr2.length;

        if (avg1>avg2){
            return true;
        }
        return false;
    }


//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;
        }
        return false;

    }




//Create a method of your own that solves a problem.
    //In comments, write what the method does and why you created it.
    //String ages


    //This method will add a hyphen to the if a person has a secondary last name.
    // I choose this because in my early days in IT working with applications
    // developers missed this a lot when building applications.  Something it is still a problem.

 public static String newString(String firstLastName, String hyphenLastName) {
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    return firstLastName + "-" + hyphenLastName;
  }
}
```

Command Prompt Screenshot HERE: