Week 3 - 4 Coding assignment

```
import java.util.Arrays;
import java.util.Scanner;


public class application {

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

//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, 45};

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

    System.out.println(ages[i]);



//a. 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.

    int lastNumber = ages[ages.length -1];
    int total = lastNumber - ages[0];
   System.out.println(total);


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


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

    }


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


     double averageAge = ageNumber/ages.length;
     System.out.println(averageAge + " is the average age");
//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"};
```

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```
  //a. Use a loop to iterate through the array and calculate the average number of letters per
name.
    // Print the result to the console.

   int sumOfLetters = 0;
   for(String name : names) {
     sumOfLetters += name.length();
   }
   System.out.println(sumOfLetters/6);

  //b. 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 allNames = String.join(" ", names);
   System.out.println(allNames);


 //3. How do you access the last element of an array =

   //int lastNum = arrayName [arrayName.length - 1];



//4. HOw do you access the first element of an array =
   //int firstNum = arrayName[0];



//5. Create a new array of ints called nameLengths. Write a loop
  // to iterate over the previously created names array
  // and add the length of each name to the nameLengths array.

   int[] nameLengths = new int [7];
   int sum = names.length;

//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.

   for (int i = 0; i < 0; i++) {
     sum = sum + i;
   }
   System.out.println(sum);

   //System.out.println(Arrays.toString(names));



 //7. Using 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”).
```

```
   System.out.println(myMethod1("Hello",3));


   //Method - Full Name
//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).
   String firstName = "Dan";
   String lastName = "Anderson";
   String firstAndLast = fullName1(firstName, lastName);
   System.out.println(firstAndLast);


// 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

   int[] newArray = new int[7];
   newArray[0] = 80;
   newArray[1] = 15;
   newArray[2] = 10;
   newArray[3] = 30;
   newArray[4] = 140;




   System.out.println(booleanArray(newArray));



// 10. Write a method that takes an array of double and returns the average of all the elements
in the array.

   double[] newDoubleArray = {30.11, 40.11, 50.11};

   System.out.println(doubleAverage(newDoubleArray));




// 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.

  double[] array1 = {5, 3};
  double[] array2 = {1, 2};


  System.out.println(averageBooleanDouble(array1, array2));



// 12. Write a method called willBuyDrink that takes a boolean isHotOutside, and a double
```

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```
  //moneyInPocket, and returns true if it is hot outside and if moneyInPocket
  //is greater than 10.50.


  double MoneyInPocket = 16.20;
  boolean isHotOutside = true;
  System.out.println(willBuyDrink(isHotOutside, MoneyInPocket));



  //Create a method of your own that solves a problem.
  //In comments, write what the method does and why you created it.
  //Grade calculator. To determine the overall average of your grades.

  {
  int[] myArray = new int[3];
  myArray[0] = 5;
  myArray[1] = 12;
  myArray[2] = 15;

  System.out.println(sumArray(myArray)); }}


double[] grades = new double[5];
  grades[0] = 85.2;
  grades[1] = 71.8;
  grades[2] = 82.9;
  grades[3] = 70.5;
  grades[4] = 91.7;

  System.out.println(calculateGrades(grades));
  }




 public static double sumArray(int[] numbers) {
    int sum = 0;
    for (int number : numbers) {
      sum += number;
    }
    return sum;

  }




public static double calculateGrades(double[] numbers) {
   double sum = 0;
```

```
  for (double number : numbers) {
    sum += number;
  }
  return sum / numbers.length;
}
```

```
 public static boolean averageBooleanDouble(double[] array1, double[] array2) {

   double total1 = 0;
   for(double number1 : array1) {
     total1 += number1;
     double avg1 = total1/array1.length;
     double total2 = 0;
     for (double number2 : array2) {
       total2 += number2;
       double avg2 = total2/array2.length;

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


 }
```

```
  //full name
public static String fullName1(String first, String last) {

    String name = first + " " + last;
    return name;
  }
```

```
//////////7.hellohellohello

public static String myMethod1(String str, int num) {
```

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```
   String result = "";
   for (int i=0; i<num; i++) {
     result += str;
   }
   return result;
 }



 //

  public static boolean booleanArray(int[] sum) {
    int total = 0;
    for(int number: sum) {
      total += number;
      if(total < 100) {
        return false;
      }
    }

    return true;


  }


///////////////
  public static double doubleAverage(double[] average) {
    double sum = 0;
    for (double value: average) {
      sum += value;
    }
    double avg = sum / average.length;

    return avg;

  }


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

  if (moneyInPocket > 10.50 && isHotOutside == true) {
    return true;
  }
  else {
    return false;
  }
}
```

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```
//////////////
  private static char[] myMethod(String string, int i) {
    // TODO Auto-generated method stub
    return null;
  }//end of main method


}//end of class
```