

```

//import java.util.; /* import everything in util. util imports
methods from a certain class.

import java.util.Scanner;
import java.util.ArrayList; //type 'import ArrayList' + press ctrl
space to autofill
import java.util.List;

public class Wk03_04_Assignment { //open class

    public static void main(String[] args) { //main method

System.out.println("Question 1a");

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

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

        System.out.println(subtractLastFirst);

//        ArrayList<Integer> arr=new ArrayList<>(); //better to use
List first as general so can modify later if needed.

System.out.println("Question 1b");

        List<Integer> arr=new ArrayList<>();
        System.out.println(arr.size()); //Prints 0; currently 0
elements as I haven't imported my static Array into the dynamic
Array/Array list.

        for (int i = 0; i < ages.length; i++) {
            arr.add(ages[i]);
        } //for loop is not a method, it's an iterator
        arr.add(24);

        System.out.println(arr); // prints [3, 9, 23, 64, 2, 8, 28,
93, 24]

System.out.println("Question 1c");

        int sumAge = 0;
        for (int i = 0; i < ages.length; i++) {
            sumAge += ages[i];
        }
        int averageAge = sumAge / ages.length;

```

```
System.out.println(averageAge);
```

```
System.out.println("Question 2a");
```

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

```
int sum = 0;  
for (int i = 0; i < names.length; i++) {  
    sum += names[i].length(); //when you take length of  
string have to use (), when it's an array you don't, see lines below.  
}
```

```
int size = names.length; //gives you the length of the array  
(no. of elements it has), when it's an array you don't use ()
```

```
String name = "sam";  
System.out.println("the length of the name is " +  
name.length()); //prints the length of the name is 3 - the no. of  
characters in the string, have to use ()  
int average = sum / size;  
System.out.println(average);
```

```
System.out.println("Question 2b");
```

```
String concatenate = "";
```

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

```
System.out.println("Question 5");
```

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

```
for (int i = 0; i < nameLengths.length; i++) {  
    nameLengths[i] = names[i].length();
```

```
System.out.print(nameLengths[i] + " "); //omit ln so numbers  
are on same line  
}
```

```
System.out.println("");
```

```
System.out.println("Question 6");
```

```

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

```

```

System.out.println("Question 7-13 Methods");

```

```

System.out.println(words("Hello", 3));

```

```

System.out.println(fullname("Fahima", "Begum"));

```

```

int[] x = new int[] {25,50,75};

```

```

System.out.println("array bigger than 100? " + big100(x));

```

```

double[] array = new double[] {25.3,50.5,75.8};

```

```

System.out.println("array of doubles average? " +
avg(array));

```

```

double[] arr2 = new double[] {30.5, 80.4, 100.4};

```

```

System.out.println("array 1 bigger than array 2? " +
bigfirst(array, arr2));

```

```

System.out.println("will I buy a drink? " +
willBuyDrink(true, 10.6));

```

```

isyournameFahima();

```

```

} //close method

```

```

public static String words(String word, int n)
{
    String str = "";

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

    return str;
}

```

```
public static String fullname(String firstName, String
secondName)
{
    String str = "";

    str = firstName + " " + secondName;

    return str;
}
```

```
public static boolean big100(int[] arr)
{
    int sum = 0;
    for(int i = 0; i < arr.length; i++)
    {
        sum+=arr[i];
    }

    if(sum > 100)
    {
        return true;
    }

    else
    {
        return false;
    }
}
```

```
public static double avg(double[] arr)
{
    double sum = 0;
    for(int i = 0; i < arr.length; i++)
    {
        sum+=arr[i];
    }

    double avg = sum/arr.length;

    return avg;
}
```

```

public static boolean bigfirst(double[] arr, double[] arr2)
{
    double sum = 0;
    double sum2 = 0;

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

    for(int i = 0; i < arr2.length; i++)
    {
        sum2+=arr2[i];
    }

    double avg = sum/arr.length;

    double avg2 = sum2/arr2.length;

    if(avg > avg2)
    {
        return true;
    }

    else
    {
        return false;
    }

}

public static boolean willBuyDrink(boolean isHotOutside, double
moneyInPocket)
{
    if(isHotOutside == true && moneyInPocket > 10.50)
    {
        return true;
    }

    else
    {
        return false;
    }

}

```

```

public static void isyournameFahima()
{
    Scanner sc = new Scanner(System.in);
    System.out.println("what is your name?");
    String str = sc.nextLine();
    if(str.toLowerCase().equals("fahima")) //.toLowerCase()
method converts a string to lower case letters. Java String class
equals() method compares the two given strings based on the content of
the string.
    {
        System.out.println("Niiiiice you have a cool name");
    }

    else
    {
        System.out.println("your name isn't Fahima how
unfortunate");
    }

}
} //close class

```