QUESTION 1

Write a program to create a arraylist of double element and add the elements. Sort the elements in descending order and print it.

```java
import java.util.ArrayList;

import java.util.Collections;

public class Question1 {

        public static void main(String[] args) {

                ArrayList<Double> sample = new ArrayList<Double>();

                sample.add(1.5);

                sample.add(2.0);

                sample.add(5.8);

                sample.add(10.2);

                System.out.println("The array list before sorting:"+ sample);

                Collections.sort(sample, Collections.reverseOrder());

                System.out.println("After sorting in decending order");

                for (double num : sample) {

                        System.out.println(num);

                }

        }

}
```

OUTPUT

```
<terminated> Question1 [Java Application] C:\Users\HP\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_
The array list of double elements before sorting:[1.5, 2.0, 5.8, 10.2]
After sorting in decending order
10.2
5.8
2.0
1.5
```

QUESTION 2

Create a arraylist of integers and find the sum and average of the entire list.

```java
package AssignmentSBA1;

import java.util.ArrayList;

public class Question2 {

    public static void main(String[] args) {

        ArrayList<Integer> list = new ArrayList<Integer>();

        list.add(10);

        list.add(8);

        list.add(32);

        list.add(54);

        list.add(2);

        System.out.println("The elements in the arraylist is: " + list);

        int sum = 0;

        for (int number : list) {

            sum += number;

        }

        System.out.println("sum of the elements is : " + sum);

        double average = sum / (list.size());

        System.out.println("The average is : " + average);

    }

}
```

OUTPUT

```
<terminated> Question2 [Java Application] C:\Users\HP\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_6
The elements in the arraylist is: [10, 8, 32, 54, 2]
sum of the elements is : 106
The average is : 21.0
```

QUESTION 3

Create two arraylist of strings to take First_name and Last_name of the students and print

their whole name.

```java
package AssignmentSBA1;
import java.util.ArrayList;
import java.util.Scanner;

public class Question3 {
        public static void main(String[] args) {
                ArrayList<String> name = new ArrayList<String>();
                ArrayList<String> name1 = new ArrayList<String>();
                Scanner sc = new Scanner(System.in);
                System.out.println("Enter the number of students");
                int n = sc.nextInt();
                for (int i = 1; i <= n; i++) {
                        System.out.println("enter the first name of the student :" + i);
                        name.add(sc.next());
                        System.out.println("enter the second name of the student :" + i);
                        name1.add(sc.next());
                }
                for (int i = 0; i < n; i++) {
                        System.out.println("full name" + (i + 1) + "::" + name.get(i) + " " +
name1.get(i));
                }
                sc.close();
        }
}
```

OUTPUT

```
<terminated> Question3 [Java Application] C:\Users\HP\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.
Enter the number of students
2
enter the first name of the student :1
swathi
enter the second name of the student :1
krishna
enter the first name of the student :2
seethal
enter the second name of the student :2
sivadas
full name of student1::swathi krishna
full name of student2::seethal sivadas
```

QUESTION 4

Write a program to check for the occurrence of a particular character in a string and display how many times it has occurred. note: take the String and the character to be checked as a input from the user.

```java
package AssignmentSBA1;
import java.util.Scanner;

public class Question4 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the string ");
        String s1 = sc.next();
        System.out.println(" Enter the  character to search ");
        char ch = sc.next().charAt(0);
        System.out.println("Enter the character to search: " + ch);
        int count = 0;
        for (int i = 0; i < s1.length(); i++) {
            if (s1.charAt(i) == ch)
                count++;
        }
        System.out.println("The Character '" + ch + "' appears " + count + " times.");
    }
}
```

OUTPUT

```
<terminated> Question4 [Java Application] C:\Users\HP\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.w
Enter the string
swwaaaaathii
 Enter the  character to search
a
The Character 'a' appears 5 times.
```

QUESTION 5

Write a program to take an input of a string with multiple words and convert it into a string array, and check if every element of that array is a Palindrome.

Note: Palindrome is a word which when reversed also is the same.

```java
package assignment;
import java.util.Scanner;
public class Q5Plindrom {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter a string");
        String str = sc.nextLine();
        String strArr[] = str.split(" ");
        System.out.println("string: " + str);
        System.out.print("String array : [");
        for (int i = 0; i < strArr.length; i++) {
            System.out.print(strArr[i] + " ,");
        }
        System.out.println("]" + "\n");
        String word;
        for (int i = 0; i < strArr.length; i++) {
            word = strArr[i];
            char[] str1 = new char[word.length()];
            int count = 0;
            for (int j = word.length() - 1; j >= 0; j--) {
                str1[count] = word.charAt(j);
                count++;
            }
            String word2 = new String(str1);
            if (word.equals(word2)) {
                System.out.println("palindrome word :" + word);
            }
        }
    }
}
```

OUTPUT

```
<terminated> Q5Plindrom [Java Application] C:\Users\HP\.p2\pool\plugins\org.eclipse
Enter a string
our madam didnt speak malayalam
string: our madam didnt speak malayalam
String array : [our ,madam ,didnt ,speak ,malayalam ,]

palindrome word :madam
palindrome word :malayalam
```