

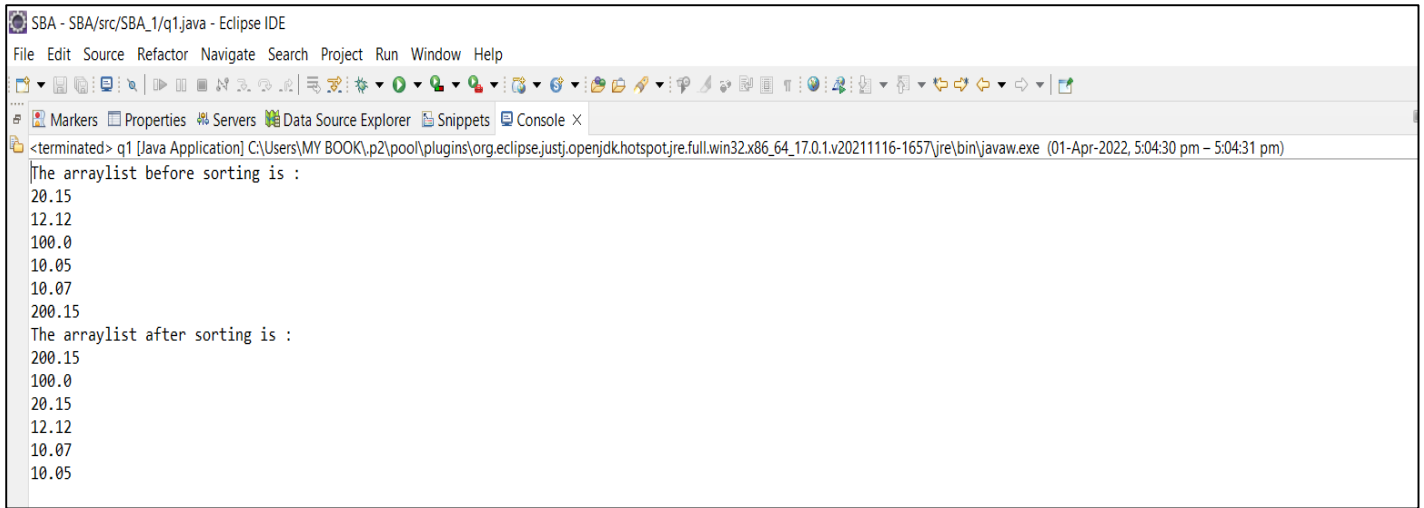
1. Write a program to create an arraylist of double element and add the elements. sort the elements in descending order and print it.

```
package SBA_1;

import java.util.ArrayList;
import java.util.Collections;

public class q1 {

    public static void main(String[] args) {
        ArrayList<Double> list=new ArrayList<Double>();
        list.add(20.15);
        list.add(12.12);
        list.add(100.0);
        list.add(10.05);
        list.add(10.07);
        list.add(200.15);
        System.out.println("The arraylist before sorting is : ");
        for(double newlist:list)
        {
            System.out.println(newlist);
        }
        Collections.sort(list, Collections.reverseOrder());
        System.out.println("The arraylist after sorting is : ");
        for(double newlist:list)
        {
            System.out.println(newlist);
        }
    }
}
```



```
SBA - SBA/src/SBA_1/q1.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Markers Properties Servers Data Source Explorer Snippets Console x
<terminated> q1 [Java Application] C:\Users\MY BOOK\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.1.v20211116-1657\jre\bin\javaw.exe (01-Apr-2022, 5:04:30 pm - 5:04:31 pm)
The arraylist before sorting is :
20.15
12.12
100.0
10.05
10.07
200.15
The arraylist after sorting is :
200.15
100.0
20.15
12.12
10.07
10.05
```

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

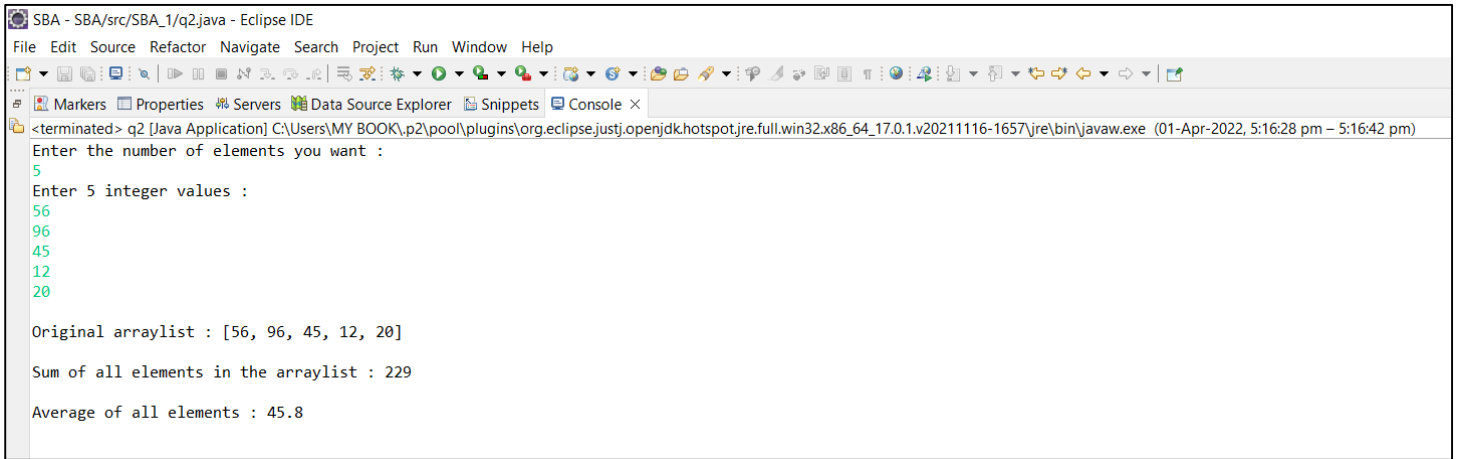
```
package SBA_1;

import java.util.ArrayList;
import java.util.Scanner;

public class q2 {

    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number of elements you want :");
        int n = sc.nextInt(), sum = 0;
        double avg = 0;
        System.out.println("Enter " + n + " integer values :");
        ArrayList<Integer> list = new ArrayList<Integer>();
        for (int i = 0; i < n; i++)
        {
            list.add(sc.nextInt());
        }
        System.out.println("\nOriginal arraylist : " + list);
        // finding sum
        for (int i : list)
        {
            sum += i;
        }
        System.out.println("\nSum of all elements in the arraylist : " + sum);
    }
}
```

```
// finding average
avg = (double) sum / list.size();
System.out.println("\nAverage of all elements : " + avg);
}
}
```



The screenshot shows the Eclipse IDE interface with the console window open. The console output is as follows:

```
<terminated> q2 [Java Application] C:\Users\MY BOOK\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.1.v20211116-1657\jre\bin\javaw.exe (01-Apr-2022, 5:16:28 pm - 5:16:42 pm)
Enter the number of elements you want :
5
Enter 5 integer values :
56
96
45
12
20

Original arraylist : [56, 96, 45, 12, 20]

Sum of all elements in the arraylist : 229

Average of all elements : 45.8
```

3.Create two arraylist of strings to take First_name and Last_name of the students,and print their whole name.

```
package SBA_1;

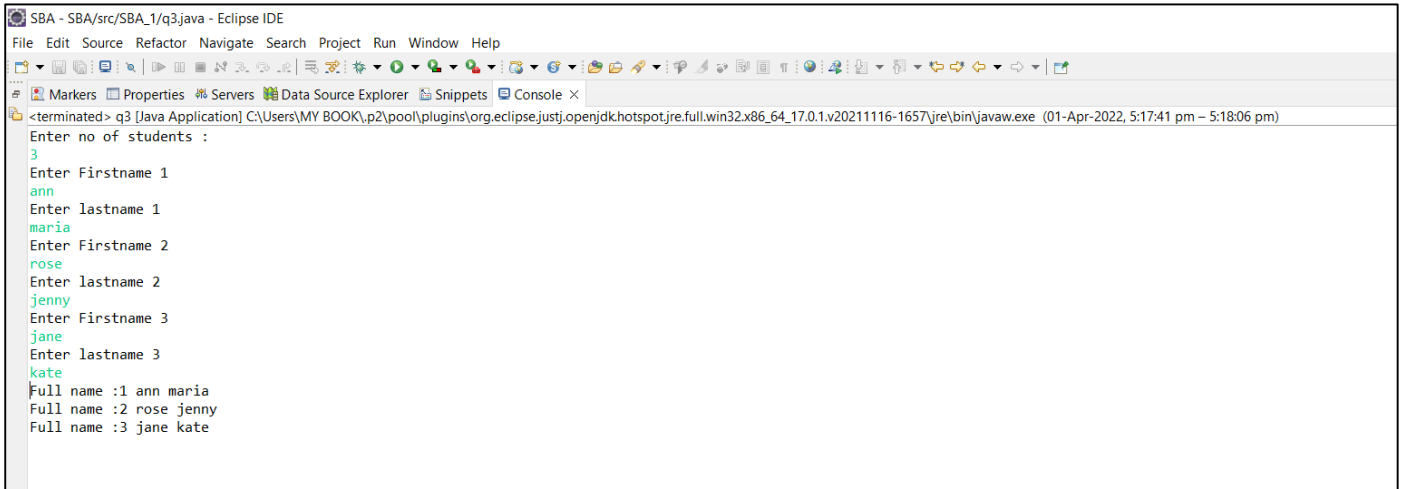
import java.util.ArrayList;
import java.util.Scanner;

public class q3 {
    public static void main(String[] args) {
        ArrayList <String> firstName = new ArrayList <String>();
        ArrayList <String> lastName = new ArrayList <String>();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter no of students :");
        int n= sc.nextInt();
        for(int i=1;i<=n;i++)
        {
            System.out.println("Enter Firstname "+i);
            firstName.add(sc.next());
            System.out.println("Enter lastname "+i);
            lastName.add(sc.next());
        }
        for(int i=0;i<n;i++)
        {
```

```

System.out.println("Full name :"+(i+1)+" " +firstName.get(i)+" "+lastName.get(i));
}
}
}

```



```

SBA - SBA/src/SBA_1/q3.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Markers Properties Servers Data Source Explorer Snippets Console X
<terminated> q3 [Java Application] C:\Users\MY BOOK\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.1.v20211116-1657\jre\bin\javaw.exe (01-Apr-2022, 5:17:41 pm - 5:18:06 pm)
Enter no of students :
3
Enter Firstname 1
ann
Enter lastname 1
maria
Enter Firstname 2
rose
Enter lastname 2
jenny
Enter Firstname 3
jane
Enter lastname 3
kate
Full name :1 ann maria
Full name :2 rose jenny
Full name :3 jane kate

```

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.

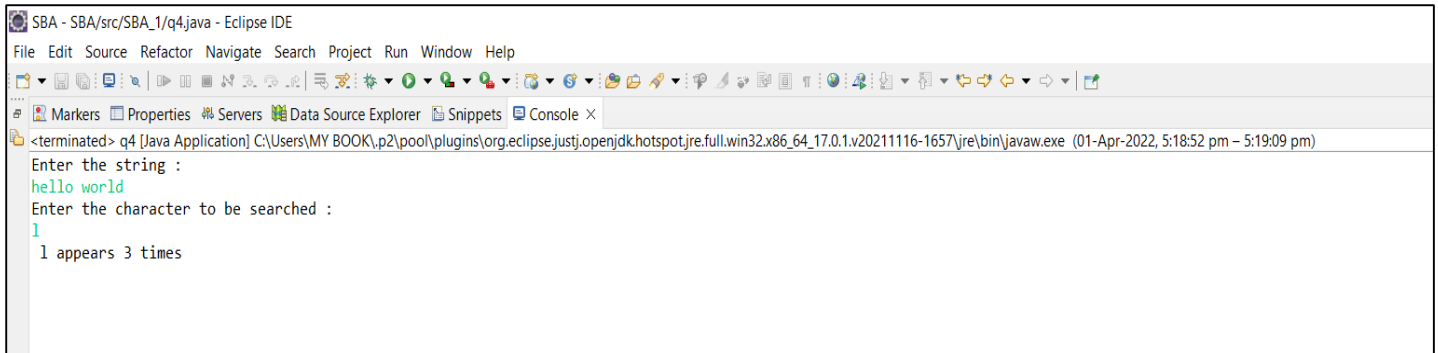
```

package SBA_1;

import java.util.Scanner;

public class q4 {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int count=0;
        System.out.println("Enter the string : ");
        String s1=sc.nextLine();
        System.out.println("Enter the character to be searched :");
        char c=sc.next().charAt(0);
        for(int i=0;i<s1.length();i++)
        {
            if(s1.charAt(i)==c)
            count++;
        }
        System.out.println(" "+c+" appears "+count+" times");
    }
}

```



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.

```
package SBA_1;

import java.util.Scanner;

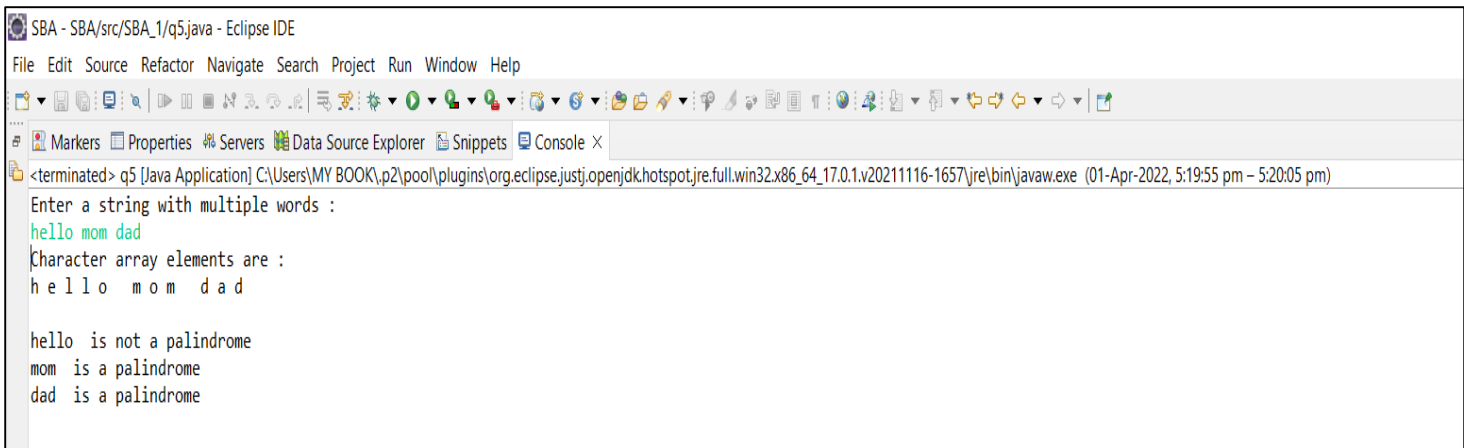
public class q5 {
    public static boolean check(String str)
    {
        int len=str.length();
        for(int i=0;i<len/2;i++)
        {
            if(str.charAt(i)!=str.charAt((len-i-1)))
                return false;
        }
        return true;
    }

    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter a string with multiple words : ");
        String str=sc.nextLine();
        char[] ch = str.toCharArray();
        int len = ch.length;
        System.out.println("Character array elements are : ");
        for (int i = 0; i < len; i++)
        {
            System.out.print(ch[i]+" ");
        }
    }
}
```

```

}
System.out.println("\n");
String[] arr=str.split(" ");
int n=arr.length;
for(int i=0;i<n;i++)
{
if(q5.check(arr[i]))
{
System.out.println(arr[i]+" is a palindrome");
}
else
{
System.out.println(arr[i]+" is not a palindrome");
}
}}}

```



SBA - SBA/src/SBA_1/q5.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Markers Properties Servers Data Source Explorer Snippets Console ×

<terminated> q5 [Java Application] C:\Users\MY BOOK\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_17.0.1.v20211116-1657\jre\bin\javaw.exe (01-Apr-2022, 5:19:55 pm – 5:20:05 pm)

```

Enter a string with multiple words :
hello mom dad
Character array elements are :
h e l l o   m o m   d a d

hello is not a palindrome
mom is a palindrome
dad is a palindrome

```