

# Assignment – 6

## Practice Questions : 1

Q1) WAP to accept a line from user and count the number of vowels and consonants and words in it.

CODE :

```
Count.java x
1 package Practice4;
2
3 public class Count { 2 usages  RevanMidha005
4     String checkVowelCons(char s){ 1 usage  RevanMidha005
5         if (s >= 'a' && s <= 'z'){
6             if (s == 'a' || s == 'e' || s == 'i' || s == 'o' || s == 'u'){
7                 return "Vowel";
8             }
9             else {
10                return "Consonant";
11            }
12        }
13        else {
14            return "Special";
15        }
16    }
17
18    void countVowelCons(String line, int len){ 1 usage  RevanMidha005
19        String check;
20        int v = 0, cons = 0;
21
22        for (int i = 0; i < len; i++) {
23            char c = line.charAt(i);
24            check = checkVowelCons(c);
25
26            if (check == "Vowel"){
27                v += 1;
28            }
29            else if (check == "Consonant"){
30                cons += 1;
31            }
32        }
33
34        System.out.println("No of Vowels: " + v);
```

```

35         System.out.println("No of Consonants: " + cons);
36     }
37
38     void countWord(String line, int len){ 1 usage  ⚡ RevanMidha005
39         int c = 1;
40         char ch;
41
42         for (int i = 0; i < len; i++) {
43             ch = line.charAt(i);
44             if (ch == ' ') {
45                 c += 1;
46             }
47         }
48         System.out.println("No of Words: " + c);
49     }
50 }
51
52

```

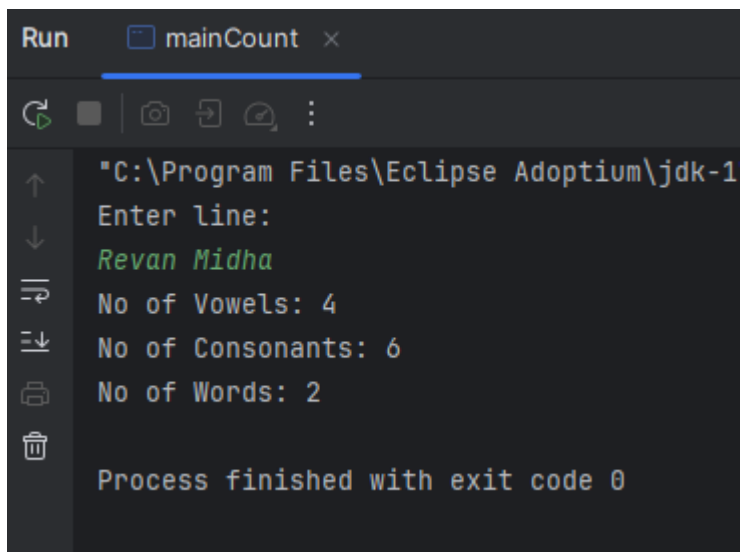
Count.java
mainCount.java

```

1 package Practice4;
2 import java.util.Scanner;
3
4 public class mainCount {
5     public static void main(String[] args) {
6         Scanner scn = new Scanner(System.in);
7         System.out.println("Enter line: ");
8         String line = scn.nextLine();
9         String LowerLine = line.toLowerCase();
10
11         Count obj = new Count();
12         obj.countVowelCons(LowerLine, LowerLine.length());
13         obj.countWord(LowerLine, LowerLine.length());
14     }
15 }

```

## OUTPUT :



The screenshot shows the Eclipse IDE's Run console window. The title bar indicates the file 'mainCount' is open. The console output is as follows:

```
"C:\Program Files\Eclipse Adoptium\jdk-1
Enter line:
Revan Midha
No of Vowels: 4
No of Consonants: 6
No of Words: 2

Process finished with exit code 0
```

On the left side of the console, there is a vertical toolbar with icons for: running, pausing, stepping through code, and other debugging actions.

**HANDWRITTEN :**

Ans) package Count.java

package Practice4;

public class Count {

String checkVowelChar (char S) {

if (S >= 'a' && S <= 'z') {

if (S == 'a' || S == 'e' || S == 'i' || S == 'o' || S == 'u') {

return "Vowel";

}

else {

return "Consonant";

}

}

else {

return "Special";

}

}

void countVowelChar (String line, int len) {

String check;

int v = 0; int c = 0;

```

for (int i=0; i < len; i++) {
    char c = line.charAt(i);
    check = checkVowel(c);

```

```

    if (check == "Vowel") {
        V+=1;
    }

```

```

    else if (check == "Consonant") {
        cons+=1;
    }
}

```

```

System.out.println("No. of Vowels: " + V);
System.out.println("No. of Consonants: " + cons);
}

```

```

void countWord (String line, int len) {
    int c=1;
    char ch;

```

```

    for (int i=0; i < len; i++) {
        ch = line.charAt(i);
        if (ch == ' ') {
            c+=1;
        }
    }
}

```

```

System.out.println("No. of words: " + c);
}
}

```

mainCount.java

package Practice4;  
import java.util.Scanner;

public class mainCount {

public static void main (String [] args) {  
Scanner sc = new Scanner (System.in);  
System.out.println ("Enter line: ");  
String line = sc.nextLine();  
String lowerline = line.toLowerCase();

Count obj = new Count();  
obj.countVowel (lowerline, lowerline.length);  
obj.countWord (lowerline, lowerline.length);

}

f

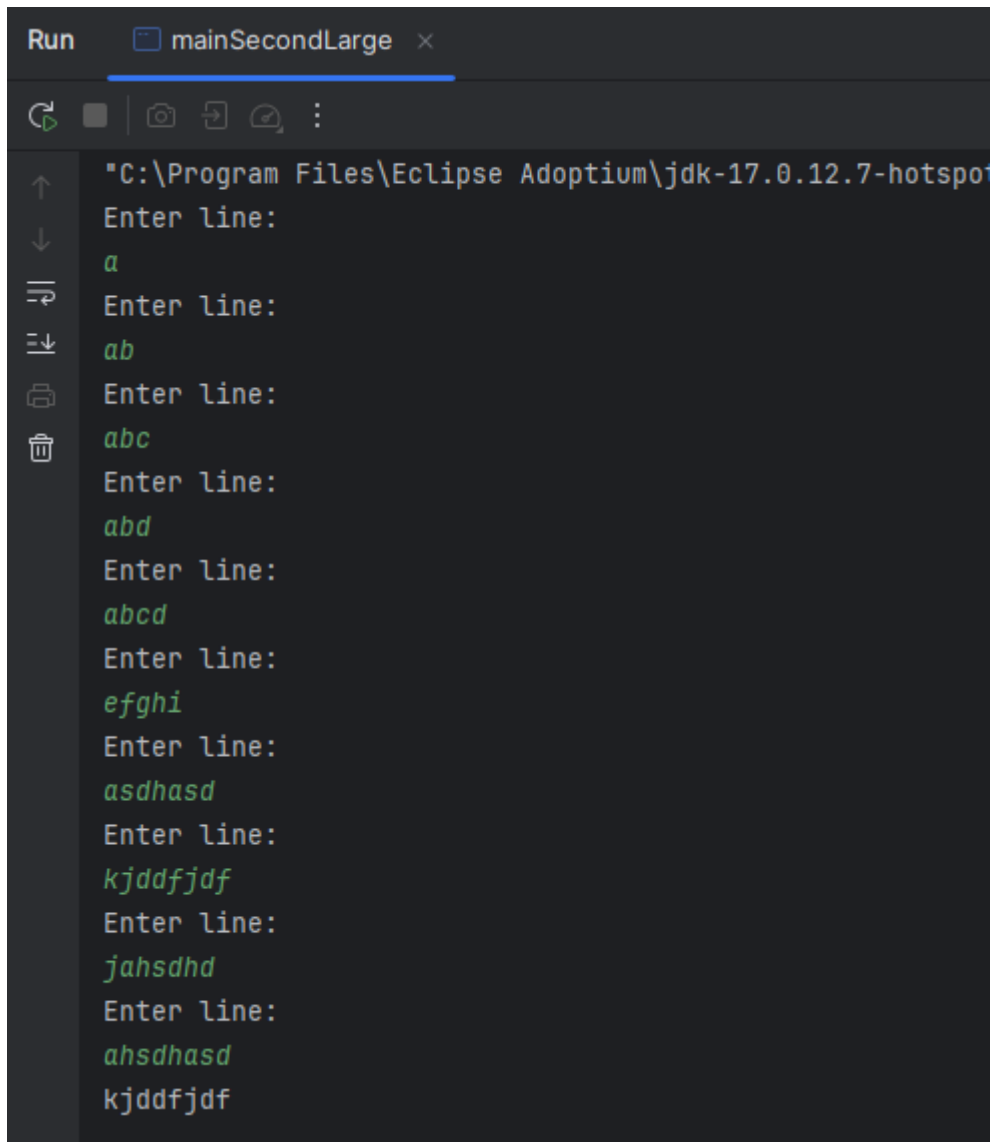
Q2) WAP to accept 10 lines from user and display the second largest line.

CODE :

```
© SecondLarge.java × mainSecondLarge.java
1 package Practice4;
2
3 public class SecondLarge { 2 usages  ⤴ RevanMidha005 *
4 @ void dispSecondLarge(String[] arr) { 1 usage  ⤴ RevanMidha005 *
5     String maxi = "";
6     String smaxi = "";
7
8     for (String s : arr){
9         if (s.length() >= maxi.length()){
10             smaxi = maxi;
11             maxi = s;
12         }
13     }
14     System.out.println(smaxi);
15 }
16 }
```

```
© SecondLarge.java mainSecondLarge.java ×
1 package Practice4;
2 import java.util.Scanner;
3
4 ▶ public class mainSecondLarge { ⤴ RevanMidha005
5 ▶     public static void main(String[] args) { ⤴ RevanMidha005
6         Scanner scn = new Scanner(System.in);
7         String []arr = new String[10];
8
9         for (int i = 0; i < 10; i++) {
10             System.out.println("Enter line: ");
11             arr[i] = scn.nextLine();
12         }
13
14         SecondLarge obj = new SecondLarge();
15         obj.dispSecondLarge(arr);
16     }
17 }
```

## OUTPUT :



```
Run  mainSecondLarge  ×
Enter line:
a
Enter line:
ab
Enter line:
abc
Enter line:
abd
Enter line:
abcd
Enter line:
efghi
Enter line:
asdhasd
Enter line:
kjddfjdf
Enter line:
jahsdhd
Enter line:
ahsdhasd
kjddfjdf
```



## HANDWRITTEN :

Ans) SecondLargest.java

```
package practice4;  
public class SecondLargest {  
    void String arr dispSecLargest(String[] arr) {
```

```
        String maxi = "";  
        String smaxi = "";
```

```
        for (String s : arr) {  
            if (s.length() > maxi.length()) {  
                smaxi = maxi;  
                maxi = s;  
            }  
        }
```

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

```
    }  
}
```

mainSecondLargest.java

```
package practice4;  
import java.util.Scanner;
```

```
public class mainSecondLargest {  
    public static void main(String[] args) {  
        Scanner sc = new Scanner(System.in);  
        String[] arr = new String[10];
```

```
for (int i=0; i<10; i++) {  
    System.out.println("Enter line: ");  
    arr[i] = sc.nextInt();  
}
```

```
SecundLarge obj = new SecundLarge();  
obj.dispSecLarge(arr);
```

```
}
```

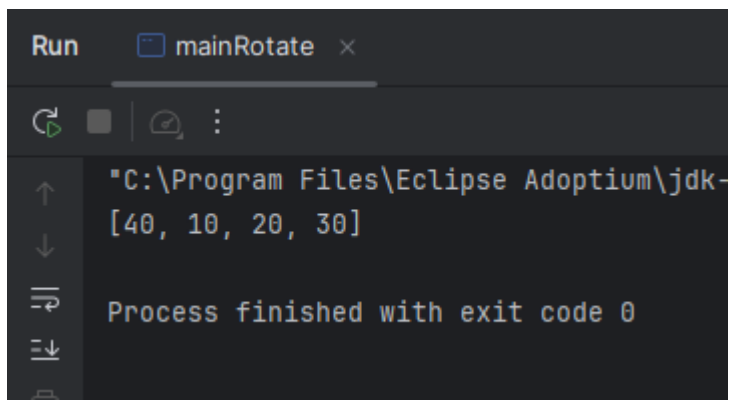
Q3) WAP to rotate (clockwise) a given array by 1.

**CODE :**

```
© RotateArray.java × mainRotate.java
1 package Practice4;
2
3 public class RotateArray { 2 usages  ⤴ RevanMidha005
4   @ int[] Rotator(int []arr, int n){ 1 usage  ⤴ RevanMidha005
5       int len = arr.length;
6       int temp = arr[len-1];
7
8       for (int i = len - 1; i >= 1; i--) {
9           arr[i] = arr[i-1];
10      }
11      arr[0] = temp;
12      return arr;
13  }
14 }
15 |
```

```
© RotateArray.java mainRotate.java ×
1 package Practice4;
2 import java.util.Arrays;
3
4 ▶ public class mainRotate {  ⤴ RevanMidha005
5 ▶     public static void main(String[] args) {  ⤴ RevanMidha005
6         RotateArray obj = new RotateArray();
7         int []arr = {10, 20, 30, 40};
8
9         arr = obj.Rotator(arr, n: 1);
10        System.out.println(Arrays.toString(arr));
11    }
12 }
```

## OUTPUT :



The screenshot shows a dark-themed IDE window titled "Run" with a sub-tab "mainRotate". The console output displays the file path "C:\Program Files\Eclipse Adoptium\jdk-" followed by the array "[40, 10, 20, 30]" on the next line. Below this, it states "Process finished with exit code 0". On the left side of the console, there is a vertical toolbar with icons for running, stepping through, and other debugging actions.

```
"C:\Program Files\Eclipse Adoptium\jdk-  
[40, 10, 20, 30]  
  
Process finished with exit code 0
```

## HANDWRITTEN :

Ans) Rotate Array.java

package Practice 4;

```
public class Rotate Array {  
    int [] rotateArr (int [] arr) {  
        int len = arr.length;  
        int temp = arr[len-1];  
  
        for (int i = len-1; i >= 1; i--) {  
            arr[i] = arr[i-1];  
        }  
        arr[0] = temp;  
        return arr;  
    }  
}
```

main Rotate.java

package Practice 4;  
import java.util.Arrays;

```
public class mainRotate {  
    public static void main (String [] args) {  
        Rotate Array obj = new Rotate Array ();  
        int [] arr = {10, 20, 30, 40};  
  
        arr = obj.rotateArr(arr);  
        System.out.println(Arrays.toString(arr));  
    }  
}
```