

# JAVA PROGRAMMING

## ASSIGNMENT-1

DATE:8/7/2024

1. Write a program to reverse a word using loop? (Not to use inbuilt functions)

Sample Input:

String: TEMPLE

Sample Output:

Reverse String: ELPMET

```
class main{
    public static void main(String[] args)
    {
        String S="Harika";
        String r="";
        for (int i=0;i<S.length();++i)
            r= S.charAt(i)+r;
        System.out.println("Reversed word is:"+r);
    }
}
```

java -cp ./tmp/9e5A2sJ1XL/main  
Reversed word is:akirah  
=== Code Execution Successful ===

2. Write a program to convert the given string to integer?

Sample Input:

String: 1234

Sample Output:

Out put String: 1234

```
1- class main{
2-     public static void main(String[] args)
3-     {
4-         String str ="1234";
5-         int num=Integer.parseInt(str);
6-         System.out.println("integer is:"+num);
7-     }
8- }
9
10
```

Java -cp ./tmp/vGdWkxV3A/main  
integer is:1234  
=== Code Execution Successful ===

3. Write a program to check the entered user name is valid or not. Get both the inputs from the user.

```
1 import java.util.Scanner;
2
3 public class Main {
4     public static void main(String[] args) {
5         Scanner scanner = new Scanner(System.in);
6
7         System.out.print("Enter a username: ");
8         String username = scanner.nextLine();
9
10        System.out.print("Enter a password: ");
11        String password = scanner.nextLine();
12
13        boolean isValid = isValidUsername(username, password);
14
15        if (isValid) {
16            System.out.println("Username is valid");
17        } else {
18            System.out.println("Username is not valid");
19        }
20    }
21
22    public static boolean isValidUsername(String username, String password) {
23        // Check if username is empty
24        if (username.length() == 0) {
25            return false;
26        }
27
28        // Check if password is empty
29        if (password.length() == 0) {
30            return false;
31        }
32
33        // Check if username contains only letters
34        if (username.matches("[a-zA-Z]*")) {
35            return true;
36        }
37
38        // Check if password contains only letters
39        if (password.matches("[a-zA-Z]*")) {
40            return true;
41        }
42    }
43 }
```

Enter a username: Harika1234  
Enter a password: 1234567  
Username is valid  
=== Code Execution Successful ===

5. Write a program to print the special characters separately and print number of Special characters in the line?

```

1- import java.util.Scanner;
2-
3- public class CountAlpDigSpl1 {
4-     private static Scanner sc;
5-     public static void main(String[] args) {
6-         String aldisp_str;
7-         int i, alph, digi, spl;
8-         alph = digi = spl = 0;
9-         char ch;
10-
11-         sc = new Scanner(System.in);
12-         System.out.print("\nPlease Enter Alpha Numeric Special String = ");
13-         aldisp_str = sc.nextLine();
14-
15-         for(i = 0; i < aldisp_str.length(); i++)
16-         {
17-             ch = aldisp_str.charAt(i);
18-             if(ch == 'A' && ch <= 'Z' || ch == 'a' && ch <= 'z') {
19-                 alph++;
20-             }
21-             else if(ch == '0' && ch <= '9') {
22-                 digi++;
23-             }
24-             else {
25-                 spl++;
26-             }
27-         }
28-         System.out.println("\nNumber of Alphabet Characters = " + alph);
29-         System.out.println("Number of Digit Characters = " + digi);
30-         System.out.println("Number of Special Characters = " + spl);
31-     }
}

```

```

java -cp ./tmp/jgm1pk/Src/CountAlpDigSpl1
Please Enter Alpha Numeric Special String = asdert456789

Number of Alphabet Characters = 6
Number of Digit Characters = 6
Number of Special Characters = 0

--- Code Execution Successful ---

```

6. Write a program to print the number of vowels in the given statement?

Sample Input:

Saveetha School of Engineering

Sample Output:

Number o vowels = 12

```

Main.java
1- import java.util.Scanner;
2- public class CountingVowels {
3-     public static void main(String args[]){
4-         int count = 0;
5-         System.out.println("Enter a sentence ");
6-         Scanner sc = new Scanner(System.in);
7-         String sentence = sc.nextLine();
8-
9-         for (int i=0; i<sentence.length(); i++){
10-             char ch = sentence.charAt(i);
11-             if(ch == 'a' || ch == 'e' || ch == 'i' || ch == 'o' || ch == 'u' || ch == 'A' || ch == 'E' || ch == 'I' || ch == 'O' || ch == 'U'){
12-                 count++;
13-             }
14-         }
15-         System.out.println("Number of vowels in the given sentence is "+count);
16-     }
}

```

```

java -cp ./tmp/07xEnu0j/CountingVowels
Enter a sentence :
Saveetha school of engineering
Number of vowels in the given sentence is 15

--- Code Execution Successful ---

```

7. Write a program to print consonants and vowels separately in the given word

Sample Input:

Given Word: Engineering

Sample Output:

Consonants: n g n r n g

Vowels: e i e ei

```

1- public class test {
2-     public static void main(String[] args) {
3-         String text = "Java";
4-         System.out.println("Original String: "+text);
5-         System.out.println("Separate consonants and vowels of the said string: "+validate(text));
6-     }
7-     public static String validate(String text) {
8-         String text1 = text.replaceAll("(?!a|e|i|o|u)", "");
9-         String text2 = text.replaceAll("(?!a|e|i|o|u)", "");
10-        return text2 + text1;
11-    }
12- }
13-

```

```

java -cp ./tmp/kMTVj3Ct/test
Original String: Java
Separate consonants and vowels of the said string: Jvaa

--- Code Execution Successful ---

```

8. Write a program that finds whether a given character is present in a string or not. In case it is present it prints the index at which it is present. Do not use built-in find functions to search the character.

Sample Input:

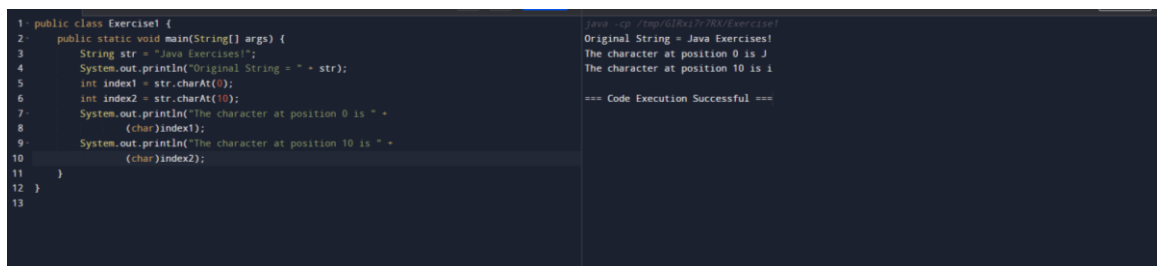
Enter the string: I am a programmer

Enter the character to be searched: p

Sample Output:

P is found in string at index: 8

Note: Check for non available Character in the given statement as Hidden Test case.



```
1 public class Exercise1 {
2     public static void main(String[] args) {
3         String str = "Java Exercises!";
4         System.out.println("Original String = " + str);
5         int index1 = str.charAt(0);
6         int index2 = str.charAt(10);
7         System.out.println("The character at position 0 is " +
8             (char)index1);
9         System.out.println("The character at position 10 is " +
10            (char)index2);
11     }
12 }
13
```

```
java -cp /tmp/GDRx17c78K/Exercise1
Original String = Java Exercises!
The character at position 0 is J
The character at position 10 is i

=== Code Execution Successful ===
```

9. Write a program to arrange the letters of the word alphabetically in reverse order

Sample Input:

Enter the word: MOSQUE

Sample Output:

Alphabetical Order: U S Q O M E

Test Case:

1. HYPOTHECATION
2. MATRICULATION
3. MANIPULATION

```
1: import java.io.*;
2: class GFG {
3:     public static void main(String[] args)
4:     {
5:         int n = 4;
6:         String names[]
7:             = { "Rahul", "Ajay", "Gourav", "Riya" };
8:         String temp;
9:         for (int i = 0; i < n; i++) {
10:             for (int j = i + 1; j < n; j++) {
11:                 if (names[i].compareTo(names[j]) > 0) {
12:                     temp = names[i];
13:                     names[i] = names[j];
14:                     names[j] = temp;
15:                 }
16:             }
17:         }
18:         System.out.println(
19:             "The names in alphabetical order are: ");
20:         for (int i = 0; i < n; i++) {
21:             System.out.println(names[i]);
22:         }
23:     }
24: }
25: }
```

```
java -cp /tmp/1V10geCM7/GFG
The names in alphabetical order are:
Ajay
Gourav
Rahul
Riya

=== Code Execution Successful ===
```

10. Write a program that accepts a string from user and displays the same string after removing vowels from it.

Sample Input & Output:

Enter a string: we can play the game

The string without vowels is: w cn ply thgm

```
1: import java.util.Scanner;
2: public class Practice {
3:     public static void main(String[] args)
4:     {
5:         Scanner sc = new Scanner(System.in);
6:         String s = sc.nextLine();
7:         for (int i = 0; i < s.length(); i++) {
8:             if (s.charAt(i) == 'a' || s.charAt(i) == 'e'
9:                 || s.charAt(i) == 'i' || s.charAt(i) == 'o'
10:                 || s.charAt(i) == 'u' || s.charAt(i) == 'A'
11:                 || s.charAt(i) == 'E' || s.charAt(i) == 'I'
12:                 || s.charAt(i) == 'O'
13:                 || s.charAt(i) == 'U') {
14:                 continue;
15:             }
16:             else {
17:                 System.out.print(s.charAt(i));
18:             }
19:         }
20:     }
21: }
```

```
java -cp /tmp/sjCB0sZSC/Practice
we can play the game
w cn ply thgm

=== Code Execution Successful ===
```