JAVA PROGRAMMING

ASSIGNMENT-1

DATE:8/7/2024

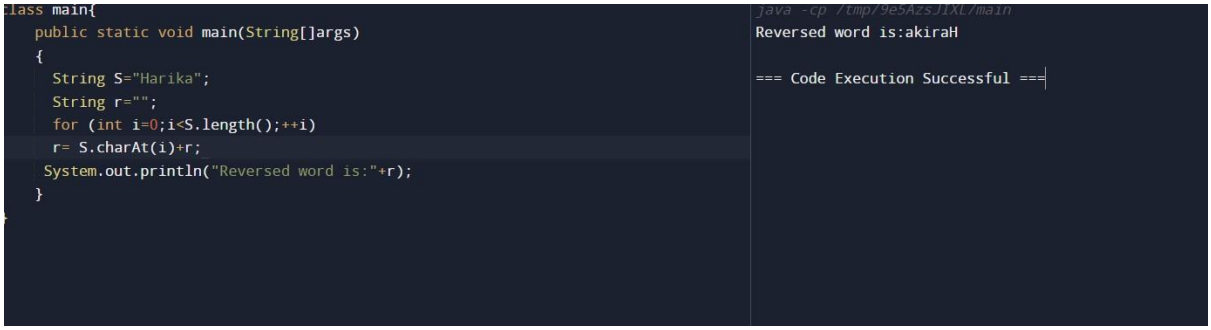
1.Write a program to reverse a word using loop? (Not to use inbuilt functions)

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/9e5AzsJ1XL7main
Reversed word is:akiraH

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

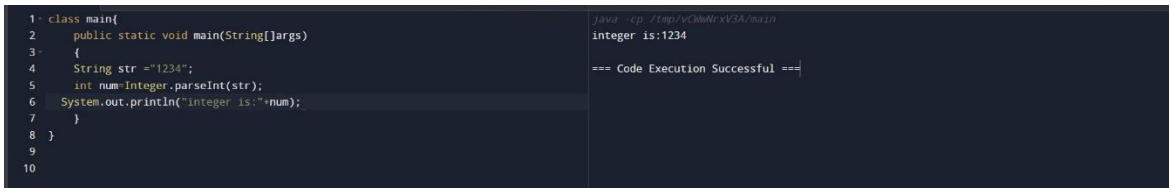
2.Write a program to convent the given string to integer?

Sample Input:

String: 1234

Sample Output:

Out put String: 1234



```
class main{
    public static void main(String[]args)
    {
    String str ="1234";
    int num=Integer.parseInt(str);
   System.out.println("integer is:"+num);
    }
}
```

```
java -cp /tmp/vCWwNrxV3A/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.

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a username: ");
        String username = scanner.nextLine();

        System.out.print("Enter a password: ");
        String password = scanner.nextLine();

        boolean isValid = isValidUsername(username, password);

        if (isValid) {
            System.out.println("Username is valid");
        } else {
            System.out.println("Username is not valid");
        }
    }

    public static boolean isValidUsername(String username, String password) {
        // Username must be at least 6 characters long
        if (username.length() < 6) {
            return false;
        }

        // Username must contain at least one digit
        if (!username.matches(".*\\d.*")) {
            return false;
        }

        // Username must not contain any spaces
        if (username.contains(" ")) {
            return false;
```

```
Enter a username: Ha4"rika7*78//
Enter a password: *IRLJHG*/
Username is valid

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

4.Write a program that would sort a list of names in alphabetical order Ascending or Descending, choice get from the user?

Sample Input:

Banana

Carrot

Radish

Apple

Jack

Order(A/D) : A

Sample Output:

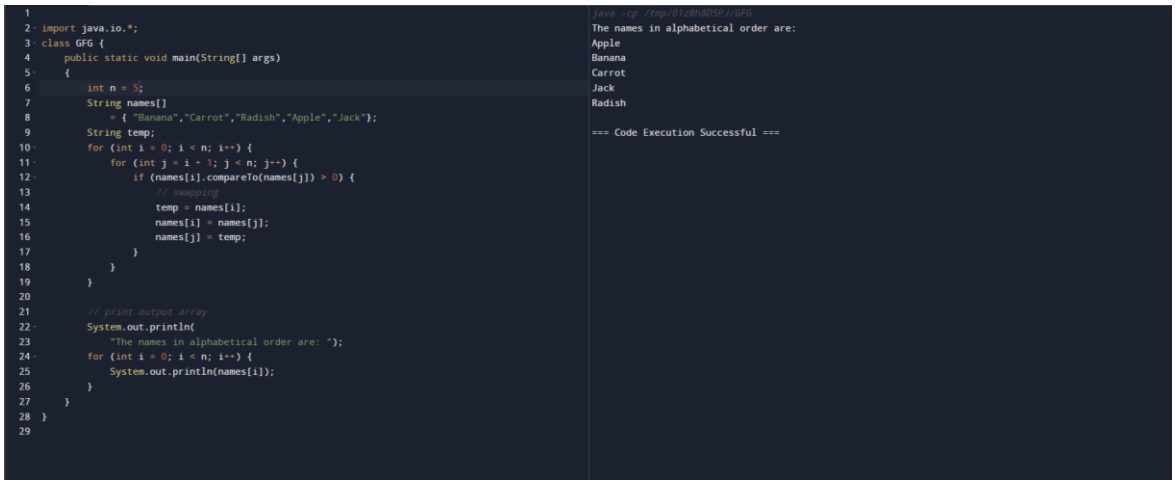
Apple

Banana

Carrot

Jack

Radish



```java
import java.io.*;
class GFG {
    public static void main(String[] args)
    {
        int n = 5;
        String names[]
            = { "Banana","Carrot","Radish","Apple","Jack"};
        String temp;
        for (int i = 0; i < n; i++) {
            for (int j = i + 1; j < n; j++) {
                if (names[i].compareTo(names[j]) > 0) {
                    // swapping
                    temp = names[i];
                    names[i] = names[j];
                    names[j] = temp;
                }
            }
        }

        // print output array
        System.out.println(
            "The names in alphabetical order are: ");
        for (int i = 0; i < n; i++) {
            System.out.println(names[i]);
        }
    }
}
```

```
java -cp /tmp/OtzRh8OSPJ/GFG
The names in alphabetical order are:
Apple
Banana
Carrot
Jack
Radish

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

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

```java
import java.util.Scanner;

public class CountAlpDigiSpl1 {
    private static Scanner sc;
    public static void main(String[] args) {
        String aldisp_str;
        int i, alph, digi, spl;
        alph = digi = spl = 0;
        char ch;

        sc= new Scanner(System.in);
        System.out.print("\nPlease Enter Alpha Numeric Special String =  ");
        aldisp_str = sc.nextLine();

        for(i = 0; i < aldisp_str.length(); i++)
        {
            ch = aldisp_str.charAt(i);
            if(ch >= 'a' && ch <= 'z' || ch >= 'A' && ch <= 'Z' ) {
                alph++;
            }
            else if(ch >= '0' && ch <= '9') {
                digi++;
            }
            else {
                spl++;
            }
        }
        System.out.println("\nNumber of Alphabet Characters  =  " + alph);
        System.out.println("Number of Digit Characters     =  " + digi);
        System.out.println("Number of Special Characters   =  " + spl);
    }
```

```
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

```java
import java.util.Scanner;
public class CountingVowels {
   public static void main(String args[]){
      int count = 0;
      System.out.println("Enter a sentence :");
      Scanner sc = new Scanner(System.in);
      String sentence = sc.nextLine();

      for (int i=0 ; i<sentence.length(); i++){
         char ch = sentence.charAt(i);
         if(ch == 'a'|| ch == 'e'|| ch == 'i' ||ch == 'o' ||ch == 'u'||ch == ' '){
            count ++;
         }
      }
      System.out.println("Number of vowels in the given sentence is "+count);
   }
```

```
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

```java
public class test {
    public static void main(String[] args) {
        String text = "Java";
        System.out.println("Original String: "+text);
        System.out.println("Separate consonants and vowels of the said string: "+validate(text
            ));
    }
    public static String validate(String text) {
        String text1 = text.replaceAll("(?i)[^aeiou]", "");
        String text2 = text.replaceAll("(?i)[aeiou]", "");
        return text2 + text1;
    }
}
```

```
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:

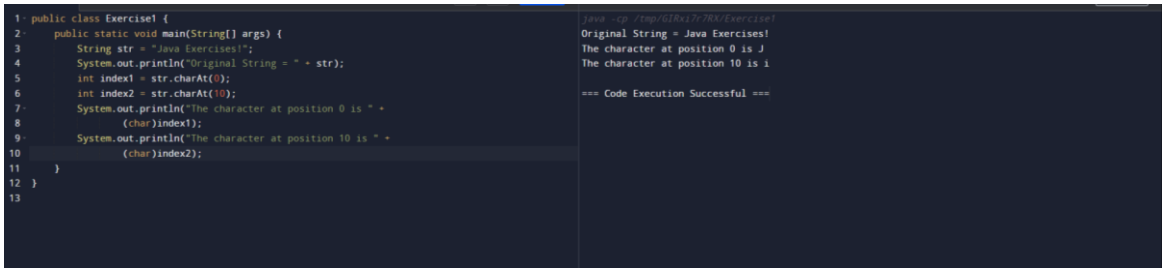
Enter the string: I am a programmer

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.



```java
public class Exercise1 {
    public static void main(String[] args) {
        String str = "Java Exercises!";
        System.out.println("Original String = " + str);
        int index1 = str.charAt(0);
        int index2 = str.charAt(10);
        System.out.println("The character at position 0 is " +
                (char)index1);
        System.out.println("The character at position 10 is " +
                (char)index2);
    }
}
```

```
java -cp /tmp/GIRx17r7RX/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:

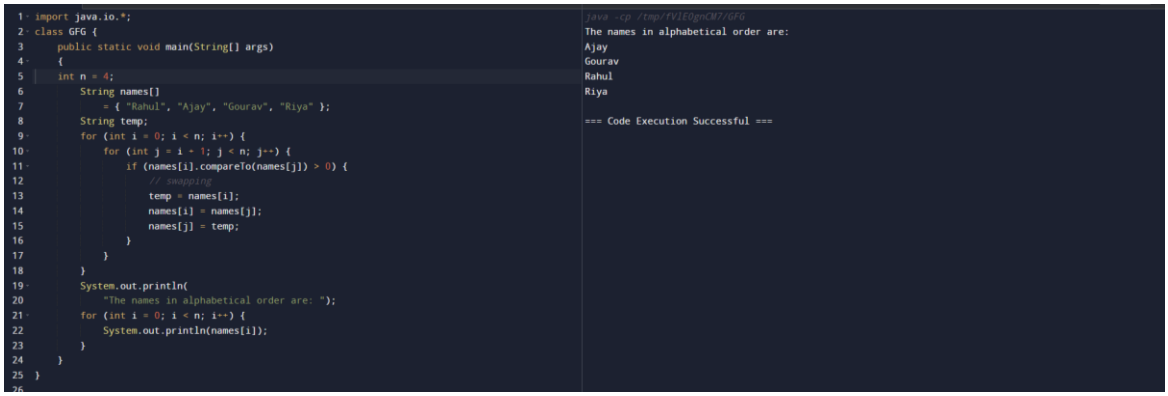
Alphabetical Order: U S Q O M E

Test Case:

1. HYPOTHECATION

2. MATRICULATION

3. MANIPULATION



```java
import java.io.*;
class GFG {
    public static void main(String[] args)
    {
    int n = 4;
        String names[]
            = { "Rahul", "Ajay", "Gourav", "Riya" };
        String temp;
        for (int i = 0; i < n; i++) {
            for (int j = i + 1; j < n; j++) {
                if (names[i].compareTo(names[j]) > 0) {
                    // swapping
                    temp = names[i];
                    names[i] = names[j];
                    names[j] = temp;
                }
            }
        }
        System.out.println(
            "The names in alphabetical order are: ");
        for (int i = 0; i < n; i++) {
            System.out.println(names[i]);
        }
    }
}
```

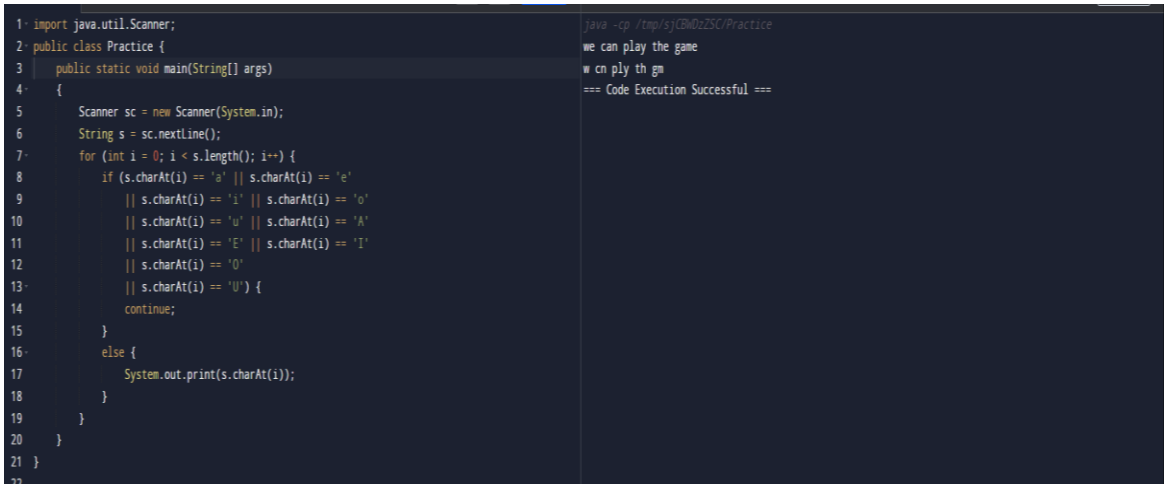
```
java -cp /tmp/fVlEOgnCM7/GFG
The names in alphabetical order are:
Ajay
Gourav
Rahul
Riya

=== 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



```java
import java.util.Scanner;
public class Practice {
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        String s = sc.nextLine();
        for (int i = 0; i < s.length(); i++) {
            if (s.charAt(i) == 'a' || s.charAt(i) == 'e'
                || s.charAt(i) == 'i' || s.charAt(i) == 'o'
                || s.charAt(i) == 'u' || s.charAt(i) == 'A'
                || s.charAt(i) == 'E' || s.charAt(i) == 'I'
                || s.charAt(i) == 'O'
                || s.charAt(i) == 'U') {
                continue;
            }
            else {
                System.out.print(s.charAt(i));
            }
        }
    }
}
```

```
java -cp /tmp/sjCBmDzZSC/Practice
we can play the game
w cn ply th gm
=== Code Execution Successful ===
```