

Worksheet - 7

Ques 1: Write a Java program for counting the digits present in a number.

```
// Scanner import
import java.util.Scanner;
public class CountingDigitsInInteger {
    public static void main(String args[]){
        Scanner sc = new Scanner(System.in);
//initialize variable count
        int count = 0;
        System.out.println("Enter a number ::");
        int num = sc.nextInt();
//while loop when number not equal to 0
        while(num!=0){
            num = num/10;
            count++;
        }
// print the result
        System.out.println("Number of digits in the entered integer are :: "+count);
    }
}
```

Input : Enter a number :: 1254566

Output : Number of digits in the entered integer are :: 7

Ques 2:- Find length of String without using any inbuilt method in java?

```
//scanner import
import java.util.Scanner;
public class Main {
    public static void main(String[] args) {
//initialize the variable length to calculate the length of String
        int length=0;
        String s = "fliprobo";
//s.toCharArray() is used to convert the string into a char array
        for (char c1 : s.toCharArray())
            length++;
    }
}
```

```
//print the result
        System.out.println("Length of String is : "+length);
    }
}
```

Output : Length of String is : 8

Ques 3: - Write a program to print all permutations of String in java?

```
import java.util.*;
class Main {
    // Function to print all the permutations of str
    static void printPermutn(String str, String ans) {
        // If string is empty
        if (str.length() == 0) {
            System.out.print(ans + " ");
            return;
        }
        for (int i = 0; i < str.length(); i++) {
            // ith character of str
            char ch = str.charAt(i);
            // Rest of the string after excluding the ith character
            String r = str.substring(0, i) + str.substring(i + 1);
            // Recursive call
            printPermutn(r, ans + ch);
        }
    }
}
// Driver code
public
static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    String s = sc.next();
    printPermutn(s, "");
}
}
```

Input : abb

Output : abc acb bac bca cab cba

Ques 4: Write a java Program to find the smallest and largest element in an array.

```

import java.util.*;
public class Main{
    public static void main(String[] args) {
        //scanner
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        //numbers array
        int numbers[] = new int[n];
        //take input from user
        for(int i =0;i<n;i++){
            numbers[i] = sc.nextInt();
        }
        //assign first element of an array to largest and smallest
        int smallest = numbers[0];
        int largest = numbers[0];
        for (int i = 1; i < n; i++) {
            if (numbers[i] > largest)
                largest = numbers[i];
            else if (numbers[i] < smallest)
                smallest = numbers[i];
        }
        System.out.println("Largest Number is : " + largest);
        System.out.println("Smallest Number is : " + smallest);
    }
}

```

Input: 5

[12, 56, 45, 34, 30]

Output: Largest Number is : 56

Smallest Number is : 12

Ques 5: Write a Java Program to Print the Right Triangle Star Pattern.

```

public class Main {
    public static void main(String[] args) {
        //Scanner
        Scanner sc = new Scanner(System.in):
    }
}

```

```
//No. of rows
int n = sc.nextInt();
// Outer loop for number of rows
for (int i = 1; i <= n; i++) {
    // Inner loop for number of stars in each row
    for (int j = 1; j <= i; j++) {
        System.out.print("*");
    }
    // Move to the next line after printing stars in each row
    System.out.println();
}
}
```

Input : 5

Output :

```
 *
* *
* * *
* * * *
* * * * *
```