ASSIGNMENT-2

Name: B. Rakesh
Reg NO: 192211257
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CSA0914

JAVA PROGRAMMING

1. Reverse a Number:

```
public class ReverseNumber {
    Public static void main(string [] args){
        scanner scanner = new scanner(system.in);
        system.out.print("Enter a number: ");
        int number = scanner.nextInt();
        int reversedNumber =0;
        while(number != 0) {
        int lastDigit = number %.10;
        reversed Number = reversed Number * 10 + last Digit;
        number = number /10;
        }
    system.out.println("Reversed Number: "+reversed Number);
    }
}
```

OUTPUT:-

INPUT : 1 2 3 4 5 6

OUTPUT : 6 5 4 3 2 1

2. Check Armstrong Number.

Program:-

```
import java.util.scanner;
  Public class ArmstrongNumber {
    Public static void main(string [] args){
      scanner scanner = new scanner(system.in);
      System.out.print("Enter a Number: ");
      int number = scanner.nextInt();
      int originalNumber = number, sum=0;
    while(number != 0){
```

```
            int digit = number % 10;
            sum += digit * digit * digit;
            number /= 10;
        }
        if (sum == originalNumber) {
            System.out.println(originalNumber + " it is Armstrong Number");
        } else {
            System.out.print(orginal Number + " 3t is Not Armstrong Num");
        }
    }
}
```

Output:-

```
Enter a number : 153
153 is an armstrong Number
```

3. Calculate the GCD of Two Numbers:.

Program:-

```
import java.util.Scanner;
    Public class GCD{
        Public static void main (String[] args) {
            Scanner scanner = new Scanner(System.in);
            System.out.print("Enter the first Number: ");
            int num1 = scanner.nextInt();
            System.out.print("Enter the second Number: ");
            int num2 = scanner.nextInt();
            int gcd = find GCD(num1, num2);
            System.out.println("GCD is" + gcd);
        }
        Public static int findGCD(int a, int b){
            while (b!=0){
                int remainder = a%b;
                a=b;
                b = remainder
            }
            return a;
        }
    }
```

OUTPUT:-

INPUT: 12, 18

OUTPUT: GCD is 6

4. Merge two sorted Arrays

Program:-

```
import java.util.Arrays;
    Public class Merge sorted Arrays {
        Public static void main(String[] args) {
            int[] arr1 = {1, 3, 5}
            int[] arr2 = {2, 4, 6}
            int[] merged = new int[arr1.length + arr2.length];
            int i=0, j=0, k=0;
           while(i<arr1.length && j<arr2.length){
            merged[k++] = (arr1[i]< arr2[j]? arr1[i++]:
                                        arr2[j++];
            }
           while(i< arr1.length)merged[k++] = arr1[i++];
           while(j< arr2.length) merged[k++] = arr2[j++];
           System.out.println(Array.toString(merged));
        }
    }
```

OUTPUT:-

INPUT:- {1,3,5} {2,4,6}

OUTPUT:- {1,2,3,4,5,6}

5. Count the frequency of characters in a String

Program:-

```
import java.util.HashMap;
import java.util.Map;
  Public class CharacterFrequency {
     Public static void main(String[] args){
        String input = "hello";
        countCharacterFrequency(input);
       }
       Public static void countCharacterFrequency(String str){
        Map<Character, Integer> frequencyMap.getOr
                                    Default(ch,0)+1);

     for(char ch:str.toCharArray()){
       frequencyMap.put(ch, frequencyMap.getOrDefault
                                    (ch,0)+1);
       }
    for(Map.Entry<Character, Integer> entry: frequencyMap
                                    .entrySet()){
       System.out.println(entry.getKey()+": "+entry.
                                    getValue());

      }
   }
}
```

OUTPUT:-

input: hello

output:

h : 1
e : 1
l : 2
o : 1