Samyuktha.S.S
192311066

JAVA PROGRAMMING

1) Write a program to print the following pattern.

```
import java.util.scanner;
Public class PatternPrinter {
    Public static void main [String[] args ] {
        scanner input = new scanner (system.in);
        char c = input.next().charAt(0);
        int n = input.nextInt();
        for (int i = 1 ; i <= n ; i++)
        &
        system.out.println(string.valueof(c+" ").repeat(i)
                                                .trim());
        }
    }
}
```

2) Find the year of the given data is leap year or not.

```
import java.util.scanner;
Public class leapyear checker {
    Public static void main (String [] args) {
        scanner input = new scanner (system.in);
        int year = integer.presentInt (input.next().split("/")[2]);
        If (year %.4 == 0 && year %.100 != 0) || (year %.400 == 0)) {
        system.out.println(" Given year is leap year");
        } else {
         system.out.println(" Given is not leap year");
        }
        }
```

3) Find the number of factors for the given number.

```
import java.util.scanner;
Public class factor counter {
    Public static void main (String [] args) {
    int n = new scanner (System.in).nextint(), factors = 0;
    For (int i = 1; i <= n; i++) if (n %.i == 0) factors++;
    system.out.println("Number of factors =" + factors);
     }
     }
```

4) Perfect number or not

```
import java.utlb.scanner;
Public class perfect Number Checker {
    Public static void main[string [] args) {
    int n = new scanner (System.in).nextint(), sum = 0;
    For(int i = 1; i < n; i++) if (n %.i == 0) sum += i;
     If (n == sum) {
        system.out.println("Its a perfect number");
      } else {
        system.out.println(" Its not a perfect number:");
        }
      }
}
```

5) Print the num of vowels of given statement

```
import java.util.scanner;
Public class vowelcounter {
    Public static void main(string[] args) {
    int vows = 0;
    For(char c : new scanner(system.in).nextLine().toCharArray())
    If ("AEIOU aeiou".indexOf(c) != -1) vow++;
    system.out.println("Number of vowels=" + vow);
     }
    }
```

6) Write a program to print consonants & vowels seperately in the given word.

```
import java.util.scanner;
Public class ConsonantVowelSeparator {
    Public static void main(string[] args) {
        scanner input = new scanner(system.in);
        string name = input.nextLine(), vowels = "", consonants = "";
        For(char c : name.toCharArray())
          If ("AEIOU aeiou" indexOf(c) != -1) vowels += c + " ";
            else consonants += c + " ";
        system.out.Println("consonants:" + consonants.trim());
        system.out.Println("vowels:" + vowels.trim());
        }
        }
```

7) Fibonacci series

```
import java.util.scanner;
Public class fibonacciSeries{
    Public static void main (String[] args) {
    scanner input = new scanner (system.in);
    int n = input.nextint(), a1 =0, a2=1;
    For (int i=0; i<n; i++) {
        system.out.println (a1 + " ");
        a2 = a1 + (a1 = a2);
    }
}
```

8) write a program to find the square, cube of the given decimal number.

```
import java.util.scanner;
    Public class square cube {
        Public static void main(String [] args) {
            float n = new scanner (system.in).nextFloat();
            system.out.println ("Square number:" + (n *n));
            system.out.println ("cube Number:" + (n * n * n));
        }
    }
```

29) Find the frequency of each element in the array.

```
import java.util.Scanner;
Public class Frequencycounter {
    Public static void main(String[] args) {
    int[] a = {1,2,8,3,2,2,2,5,1};
    Map<Integer, Integer> freq = new HashMap<>();
    For(int num:a) freq.put(num, freq.getOrdefault(num,0)
                                                +1);
     freq.forEach((key, value) -> System.out.Println
                                    (key + " " + value));
    }
}
```

30) Perfect number or not.

```
import java.util.scanner;
Public class PerfectNumberchecker {
    Public static void main(String[] args) {
    int n = new Scanner(System.in).nextint(), sum=0;
    For(int i=1; i<n; i++)
      If(n%i==0) sum+=i;
    If(n==sum)
      System.out.Println("If is a perfect number");
    else
      System.out.Println("If is not a perfect number:");
    }
```