

ASSIGNMENT - III

Name: Adarsh

Reg No: 192321087

Course: Java Programming

Course Code: CCA0093

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Pattern.

1. write a program to print following

```

/*
/* /*
/* /* /*
    
```

```

import java.util.Scanner;
class Pattern {
    
```

```

    public static void main()
    {
        
```

```

            Scanner input = new Scanner(System.in);
            char c = input.next().charAt(0);
            
```

```

            int n = input.nextInt();
            for (int i = 1; i <= n; i++)
            {
                
```

```

                    for (int j = 1; j <= i; j++)
                    {
                        
```

```

                            System.out.print(c);
                        
```

```

                    }
                
```

```

            System.out.println();
        }
    }
}
    
```

2. Write a Program to check Leap Year or not.

```

import java.util.Scanner;
public class ok {
    
```

```

2 public static void main (String[] args) {
Scanner input = new Scanner (System.in);
System.out.println ("Enter Year:");
String year = input.next();
String a[] = year.split("/");
String d = a[2];
int num = Integer.parseInt(d);
if ((num%4 == 0 && num%100 != 0) || num%400 == 0)
    System.out.println ("It is a leap year");
else
    System.out.println ("Not a leap year");
}

```

3 Find Number of factors for the given number.

```

import java.util.Scanner;
class factor {
2 public static void main (String[] args) {
Scanner input = new Scanner (System.in);
int n = input.nextInt();
int factors = 0;
for (int i = 1; i <= n; i++)
{
    if (n%i == 0)
        factors = factors + 1;
}
}

```

```

System.out.println("Number of factors = " + factors);
Scanner input = new Scanner(System.in);
int n = input.nextInt();
int factor = 0;
for (int i = 1; i <= n; i++)
{
    if (n % i == 0)
        factors++;
}
System.out.println(factors);

```

4. Program for Perfect Number.

```

import java.util.Scanner;
class Number
{
    public static void main (String[] args)
    {
        Scanner input = new Scanner(System.in);
        int n = input.nextInt();
        int factors = 0;
        for (int i = 1; i < n; i++)
        {
            if (n % i == 0)
                factors = factors + i;
        }
        if (n == factors)
            System.out.println("It is perfect number");
    }
}

```

5. Program to print number of vowels in given statement?

```
import java.util.Scanner;  
class number {  
    {
```

```
        Scanner input = new Scanner(System.in);
```

```
        String name = input.nextLine();
```

```
        int len = name.length();
```

```
        char a[] = new char[len];
```

```
        int Vow = 0;
```

```
        for (int i = 0; i < len; i++)
```

```
        {
```

```
            a[i] = name.charAt(i);
```

```
            if (a[i] == 'a' || a[i] == 'e' || a[i] == 'i' ||
```

```
                a[i] == 'o' || a[i] == 'u' || a[i] == 'A' || a[i] == 'E'
```

```
                || a[i] == 'I' || a[i] == 'O' || a[i] == 'U')
```

```
                Vow = Vow + 1;
```

```
        }  
    }
```

```
    System.out.println(Vow);
```

bottom Square Symbol Pattern?

Program to print hollow square.

```
import java.util.Scanner;
```

```
class hollow.
```

```
{
```

```
Scanner input = new Scanner(System.in);
```

```
int n = 0;
```

```
char c = input.next().charAt(0);
```

```
for (int i = 1; i <= n; i++)
```

```
{
```

```
for (int j = 1; j <= n; j++)
```

```
{
```

```
if (i == 1 || j == 1 || i == n || j == n)
```

```
System.out.print(c + " ");
```

```
else
```

```
System.out.print(" ");
```

```
}
```

```
System.out.println();
```

4. Program to Print Fibonacci Series.

```
import java.util.Scanner;
```

```
class Fibbo
```

```
{
```

```
Scanner input = new Scanner(System.in);
```

```
int n = input.nextInt();
```

```
int a1 = 0; a2 = 1;
```

```
for (int i = 0; i < n; i++)
```

```
{
```

```
System.out.print(a1 + " ");
```

```
int a3 = a1 + a2;
```

a1-a2)

a2-a3)

8. Program to print below pattern.

```
1
2 2
3 3 3
4 4 4 4
```

```
Scanner input = new Scanner(System.in);
```

```
int n = input.nextInt();
```

```
for (int i = 1; i <= n; i++)
```

```
{
```

```
    for (int j = 1; j <= i; j++)
```

```
    {
```

```
        System.out.print(i);
```

```
    }
```

```
    System.out.print("\n");
```

```
}
```

9. Program to find Square, Cube of decimal number

```
import java.util.Scanner;
```

```
class Square
```

```
{
```

```
    public static void main (String args[])
```

```
    {
```

```
        Scanner input = new Scanner(System.in);
```

```
        float n = input.nextFloat();
```

```
        System.out.print("Square: " + (n*n));
```

```
        System.out.print("\nCube: " + (n*n*n));
```

Find Factorial of n?

Q. Melan

```
import java.util.Scanner;
```

```
class Number
```

```
{
```

```
    public static void main (String[] args).
```

```
{
```

```
    Scanner input = new Scanner(System.in)
```

```
    int n = input.nextInt();
```

```
    int fact = 1;
```

```
    for (int i = 1; i <= n; i++)
```

```
    {
```

```
        fact = fact * i;
```

```
    }
```

```
    System.out.print("Factorial = " + fact);
```