

1.) Write a program to print the following pattern

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

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

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

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

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

```
{ system.out.print(c);
```

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

```
}
```

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

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

```
public class ok
```

```
{
```

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

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

```
System.out.print("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 the number of factors for the given number

```
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.print("number of factors = " + factors);
```

4.) Write a program to print the given number is perfect number or not?

```
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.print("It's a perfect number");
```

5.) Write a program to print the number of vowels in the given statement

```
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] == '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);

```

26.) Write a program to print hollow square symbol pattern:

```

Scanner input = new Scanner(System.in);
String name = input.nextLine();
int len = name.length();
char a[] = new char[len];
char vow[] = new char[len];
char con[] = new char[len];
int v = 0, c = 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[v] = a[i];
        v++;
    }
    else {
        con[c] = a[i];
        c++;
    }
}
System.out.print("consonants:");
for (int i = 0; i < c; i++)
{
    System.out.print(vow[i]);
}
System.out.print("\n vowels :");
for (int j = 0; j < v; j++)
{
    System.out.print(con[j]);
}

```



7.) Write a program to print the fibonacci series

```
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.) Write a program to print the below pattern

```
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.println();
}
```

9.) Write a program to find the same cube given decimal number.

```
Scanner input = new Scanner(System.in);
float n = input.nextFloat();
System.out.print("Scanner: " + (n * n));
System.out.print(" (se * + (n * n * n));
```

10.) Write a program to print given numbers.

```
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.print("It is a perfect number");
```