

Q1. Write a program to print the following Pattern.

= Scanner;

import java.util.Scanner;

class main {

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++) {

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

System.out.println(c);

}

System.out.println();

}

Q2) find the given year is leap year or not.

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

```
public class main {
```

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

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

```
        System.out.println ("Enter the year : ");
```

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

```
        if (n % 4 == 0 && n % 100 != 0 || n % 400 == 0) {
```

```
            System.out.println ("It is leap year");
```

```
        }
```

```
    } else {
```

```
        System.out.println ("It is not a leap year");
```

```
    }
```

```
}
```

```
}
```

(23)

find the number of factors for given number.

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

```
public class main {
```

```
    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 (factors);
```

```
    }
```

```
}
```

Q4) write a program to perfect number or not?

```
import java.util.Scanner;  
public class main {  
    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 a perfect num");  
        }  
    }  
}
```

(25) write a program to number of vowels in string?

```
import java.util.Scanner;

public class main {

    public static void main (String args[]) {

        Scanner input = new Scanner(System.in);
        String name = input.nextLine();
        int len = name.length();
        char a[] = new char[len];
        int row = 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')
                row = row + 1;
        }
        System.out.println(row);
    }
}
```

Q2 write a program to print hollow square pattern

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

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

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

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

```
        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.println (c + " ");
```

```
            else
```

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

```
            }
```

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

```
    }
```

```
}
```

Q# write program to print consonants and vowels separately?

```
import java.util.Scanner;

public class main {

    public static void main (String args[]) {

        Scanner input = new Scanner (System.in);

        String name = input.nextLine();

        int len = name.length();

        char a[] = new char [len];

        char vowel[] = new char [len];

        char cons[] = 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')

                v = v + 1;

            else {

                cons[i] = a[i];

                c = c + 1;
            }
        }
    }
}
```



3  
system.out.println("vowels:");

for (int i=0; i<v; i++)

{  
    system.out.println(vow[i]);

}

system.out.println("consonants:");

for (int j=0; j<c; j++)

{  
    system.out.println(conc[j]);

}

}

3



(28) Write a program to print fibonacci series ?

```
=
import java.util.Scanner;

public class main {

    public static void main (String args[]) {

        Scanner input = new Scanner (System.in);

        int n = input.nextInt();

        int a1 = 0 , a2 = 1;

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

            System.out.println (a1 + " ");

            int a3 = a1 + a2;

            a1 = a2;

            a2 = a3;

        }

        System.out.println ();

    }

}
```

Q0 write a program to find the square, cube  
of given decimal number?

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

```
public class main {
```

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

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

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

```
        System.out.println ("square: " + (n * n));
```

```
        System.out.println ("cube: " + (n * n * n));
```

```
    }
```

```
}
```

Q0 write a program to find the square, cube  
of given decimal numbers?

```
import java.util.Scanner;  
public class main {  
    public static void main (String args[])  
    {  
        Scanner input = new Scanner (System.in);  
        float n = input.nextFloat();  
        System.out.println ("square: " + (n * n));  
        System.out.println ("cube: " + (n * n * n));  
    }  
}
```

}