

① Find the year as the given date leap or not?

```

import java.util.Scanner;
public class Main {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("Enter year: ");
        String year = input.nextLine();
        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");
    }
}

```

② 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++;
System.out.println("Number of factors = " + factors);

```

⑧ write a program to print the given numbers  
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 += i;
```

3

```
if (n == factors)
    System.out.println("It's a Perfect Number");
```

4) 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[] = name.toCharArray();
```

```
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'

1. Write a program to print words in a given sentence in reverse order.

if (si == 'V')

vow = vow + i;

3

System.out.println(vow);

5. Write a program to print hollow square symbol pattern?

Scanner input = new Scanner(System.in);

int n = 5; char ch = 'I' = 45011

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

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

{

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

{

if (c == 'I' || j == 1 || j == n)

System.out.print(ch + " ");

else

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

3

System.out.println();

6. Write a program to print consonants and vowels

separately in the given word.

Scanner input = new Scanner(System.in);

String name = input.nextLine();

int len = name.length();

```
char a[7] = new char [len];
```

```
char vow[5] = new char [len];
```

```
char con[5] = new char [len];
```

```
int v=0, c=0;
```

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

{

```
a[i] = name[i] - 'A' + 'a';
```

```
if (a[i] == 'a' || a[i] == 'e' || a[i] == 'i' || a[i] == 'o' || a[i] == 'u')
```

```
v++;
```

```
else if (a[i] == 'l' || a[i] == 'r' || a[i] == 's' || a[i] == 't' || a[i] == 'd')
```

```
c++;
```

}

else {

```
con[c] = a[i];
```

```
c++;
```

}

System.out.print("vowels: ");

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

{

```
System.out.print(vow[i]);
```

}

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

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

{

```
System.out.print(con[j]);
```

}

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);
 }
 }

3

System.out.print(n);

5

9. write a program to find the sum cube  
given decimal number

scanner input = new scanner(system.in);

float n=input.nextFloat();

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

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

10. write a program to print given numbers in perfect square 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++;
}
System.out.println(factors);

```

Newton 'acted by wind' of magnetism to stir  
3 iron filings around west = magnetic process

i6 (unpublished) (continued from previous page)

System.out.print ("It is a perfect number");