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Pattern

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

. . .

. . .

. . .

n = 4

1. 1

2. 1 2

3. 1 2 3

4. 1 2 3 4

for (i = 1 to n) {

for (j = 1 to i) {

sout (j + " ") ;

}

sout ln ( ) ;

}

n = 4

i = 1 2 3 4

j = 1 2 3 4 5

1 ↵

1 _ 2 _ ↵

1 _ 2 _ 3 _ ↵

1 _ 2 _ 3 _ 4 _ ↵

```java
for (int i = 1; i <= n; i++) {
    for (int j = 1; j <= i; j++) {
        System.out.print(j + " ");
    }
    System.out.println();
}
```

factorial :

n = 5

5 x 4 x 3 x 2 x 1 = 120

fibonacci series :-

0 1 1 2 3 5 8 13 21 . . .

0 1 2 3 4 5 6 7 8 . . .

a = 0 1 1 2 3 . . .

b = 1 1 2 3 5 . . .

c = a + b = 1 2 3 5 8 . . .

n = 8

a = 0 1 1 2 3 5 8 13

b = 1 1 2 3 5 8 13 21

c = 0 1 2 3 5 8 13 21

i = 2 3 4 5 6 7 8 9

```java
public static int fibonacciSeries(int n) {
    if (n < 0) {
        System.out.println("Invalid input");
        return -1;
    } else if (n == 0) {
        return 0;
    } else if (n == 1) {
        return 1;
    }
    int a = 0;
    int b = 1;
    int c = 0;
    for (int i = 2; i <= n; i++) {
        c = a + b;
        a = b;
        b = c;
    }
    return c;
}
```

1
2
3
4
5