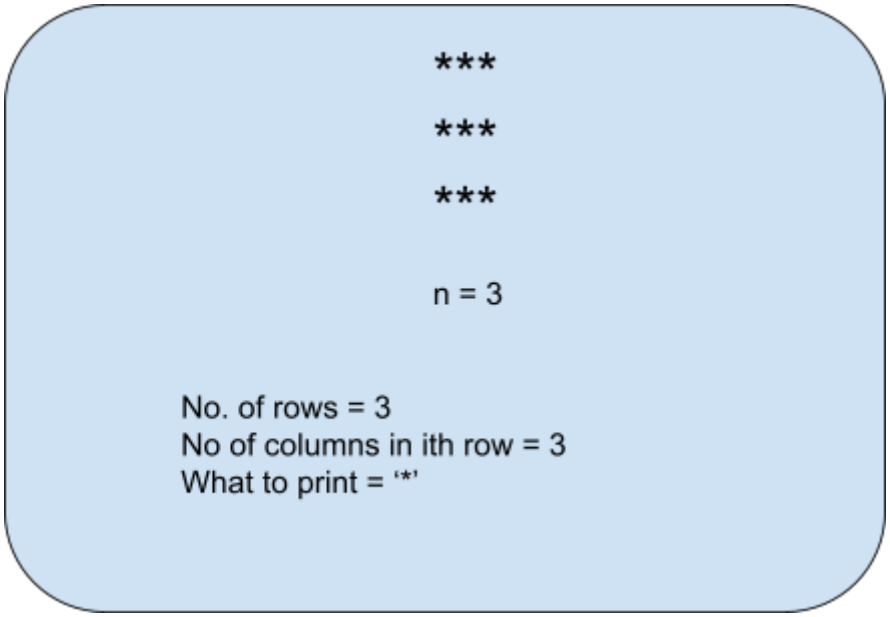
Patterns - 1

Answer the questions then start building pattern

1. How many rows does the pattern have?
2. How many columns does the ‘i’ th general row have?
3. What to print?



*****

*****

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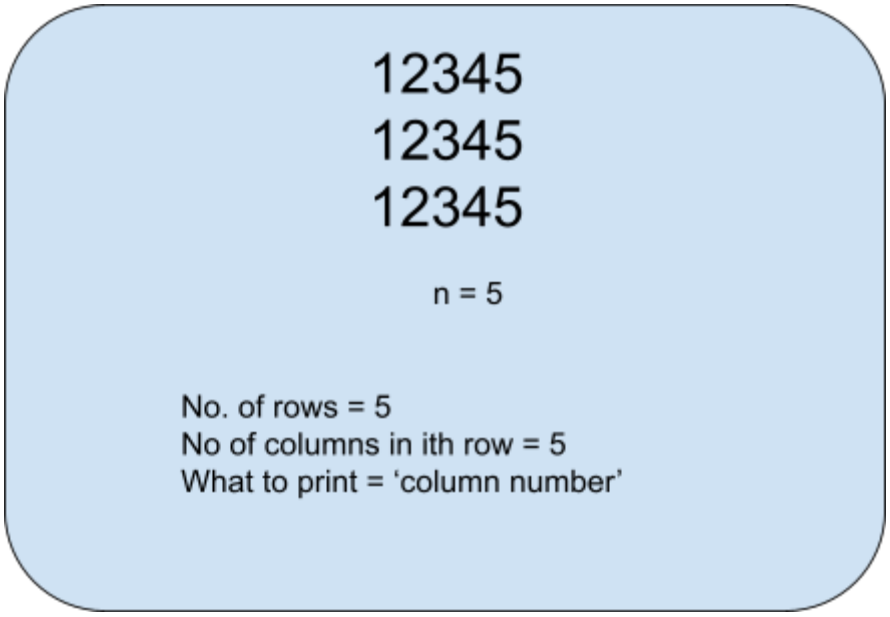
n = 5

No. of rows = 5
No of columns in ith row = 5
What to print = '*'

123
123
123

n = 3

No. of rows = 3
No of columns in ith row = 3
What to print = 'column number'



Note:

- You can only go left to right while printing pattern
- You can not come back to row once you move on to next row
- Print the row completely then move on to the next row

Types of Patterns

Square patterns

```
1111
2222
3333
4444
```

n = 4

```
11111
22222
33333
44444
55555
```

n = 5

Number of rows and columns are same

No of rows = no of columns = n

```
111
222
333
```

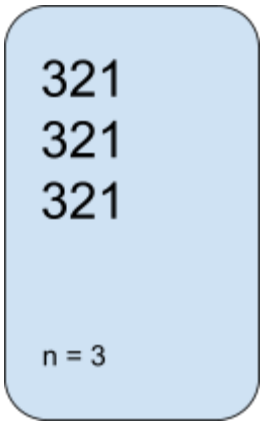
n = 3

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

```
123
123
123
```

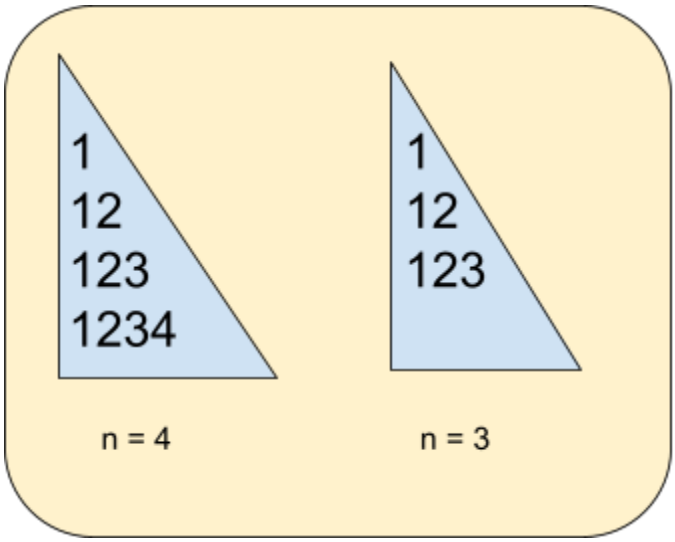
n = 3

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



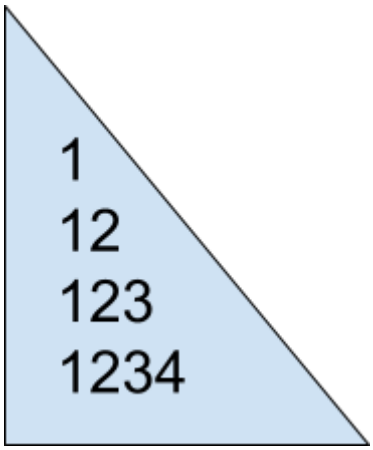

```
int i = 1;
while(i<=n){
   int j = 1;
   while(j<=n){
      System.out.print(n-j+1);
      j++;
   }
   System.out.println();
   i++;
}
```

Triangular Pattern

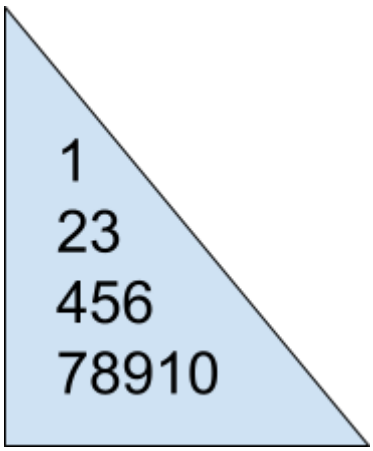


No of rows = **n**
No of columns of 'i' th row = **i**

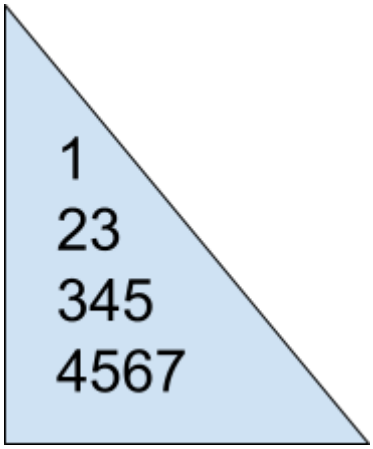
What to print = **number of column**




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

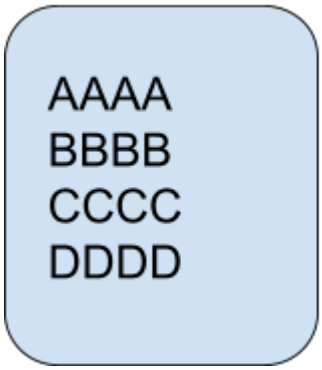


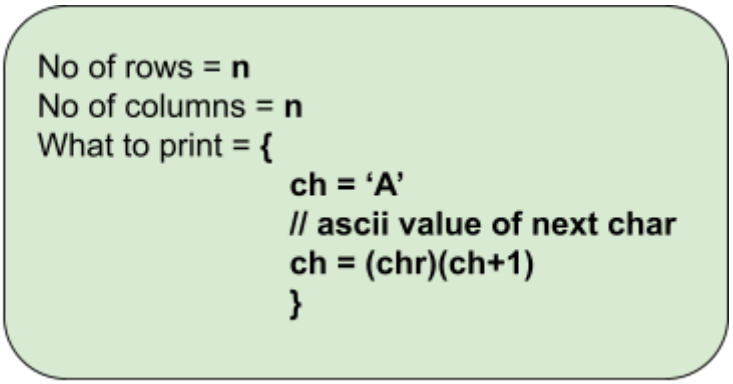

```
int i = 1;
int count = 1;
while(i<=n){
   int j = 1;
   while(j<=i){
      System.out.print(count);
count++;
j++;
   }
   System.out.println();
   i++;
}
```



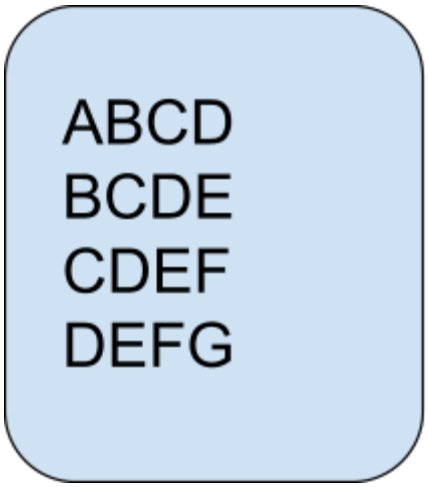

```
int i = 1;
while(i<=n){
   int j = 1;
   int count = i;
   while(j<=i){
      System.out.print(count);
      count++;
      j++;
   }
   System.out.println();
   i++;
}
```

Character Pattern






```
int i = 1;
while(i<=n){
   char ch = 'A' + i - 1;
   int j = 1;
   while(j<=n){
      System.out.print(ch);
      j++;
   }
   System.out.println();
   i++;
}
```




```
for(int i = 1; i <= n; i++){
            char ch = (char)('A'+i-1);
            for(int j = 1; j <=n; j++){
                System.out.print(ch);
                ch++;

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