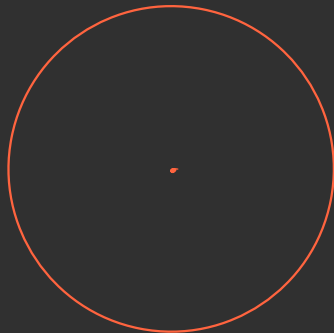
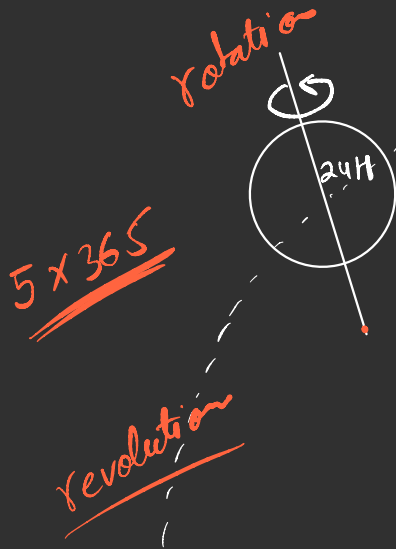


L5

Nested Loops

For Discord email - support@learnyard.com

What are Nested Loops ?



i=1

1 1

1 2

1 3

2 1

2 2

2 3

3 1

3 2

3 3

4 1

4 2

4 3

5 1

5 2

5 3

Dry run of basic Nested Loop

```
for(xint i=1; i<=5; i++) {
```

```
    for(int j=1; j<=3; j++) {
```

```
        cout << i << " " << j << endl;
```

```
    }
```

```
}
```

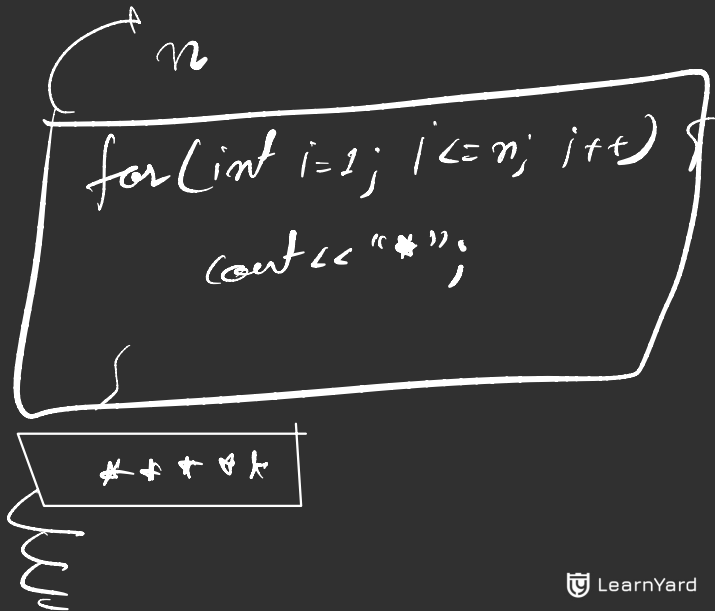

Square Pattern

Input

Input number of rows: 5

Output

```
*****  
*****  
*****  
*****  
*****
```



Rhombus Pattern

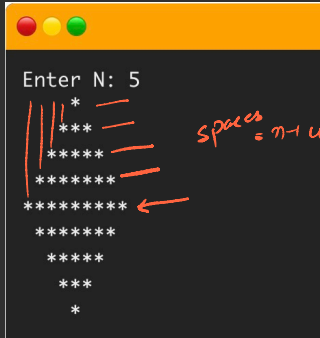
Input

Input rows: 5

Output

```
*****
 *  *****
  *  *****
   *  *****
    *  *****
```

Diamond star Pattern



Stars = 1	+2	1
<u>3</u>	+2	2
5	+2	3
7	+2	4
9	-2	5
1	-2	6
5	-2	7
3	-2	8
1		9

Discussion on Number Patterns

1
12
123
1234
12345

1
21
321
4321
54321

Input

Input N: 5

Output

5
44
333
2222
11111

$$\begin{aligned} & \xrightarrow{\quad} \overset{1}{n-i+1} \\ & \xrightarrow{\quad} \underline{5-1+1=5} \\ & \quad \quad \quad 5-2+1=4 \end{aligned}$$

Practice and Homework Questions

Homework questions -

<https://codeforwin.org/c-programming/c-program-to-print-number-pattern-with-1-0-at-alternate-columns>

<https://codeforwin.org/c-programming/number-pattern-22-in-c>

<https://codeforwin.org/c-programming/equilateral-triangle-star-pattern-program-in-c>

<https://codeforwin.org/c-programming/c-program-to-print-x-star-pattern>

Thank You!

Please practice more questions and examples as above !!