

Ques: Print the given pattern

1 2 3 4 → j
|
1 - - - *
2 - - * *
3 - * * *
4 * * * *
↓ i
n=4

Method - 1

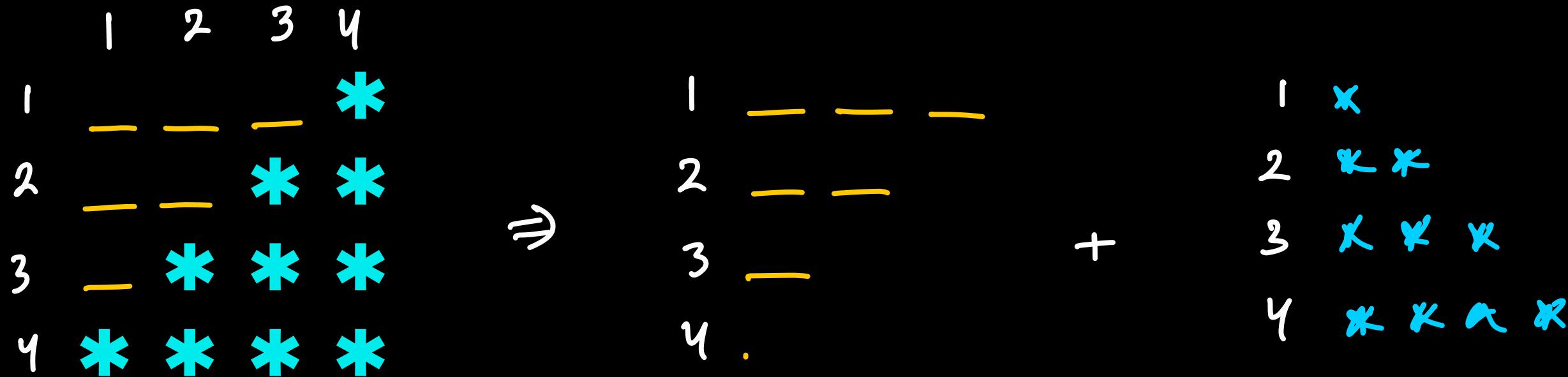
Consider this a square

if ($i+j > n$) cout(*)
else cout(" ");

Star Triangle Vertically Flipped

Method-2 : 2K loop ke andar 2 loops

Ques: Print the given pattern



← har line me kuch spaces print ho rahi hai & kuch stars print ho rahi hai.

← har line me 2 loops chal rahi hai

Star Triangle Vertically Flipped

Ques: Print the given pattern

$$\begin{array}{r} 1 \\ 2 \\ 3 \\ 4 \end{array} \begin{array}{c} \text{---} \\ \text{---} \\ \text{---} \\ \text{---} \end{array} \begin{array}{c} 1 \\ 12 \\ 123 \\ 1234 \end{array} = \begin{array}{r} 1 \\ 2 \\ 3 \\ 4 \end{array} \begin{array}{c} \text{---} \\ \text{---} \\ \text{---} \\ \text{---} \end{array} \begin{array}{c} 1 \\ 12 \\ 123 \\ 1234 \end{array} + \begin{array}{r} 1 \\ 2 \\ 3 \\ 4 \end{array} \begin{array}{c} | \\ | \\ | \\ | \end{array} \begin{array}{c} 2 \\ 3 \\ 4 \\ 4 \end{array}$$

Number Triangle Vertically Flipped

HW: Print the given pattern

A
B B
C C C
D D D D

Alphabet Triangle Vertically Flipped

Ques: Print the given pattern

1 * * * *
2 * * * *
3 * * * *
4 * * * *

= 1 ---
 2 ---
 3 ---
 4 .
 + 1 * * * *
 2 * * * *
 3 * * * *
 4 * * * *

Rhombus

Q Homework

* * < K K *

— * K * K

— — < K K

— — — * K

— — — — *

$n=5$

Method-1



Ques: Print the given pattern

1 *
2 * * *
3 * * * * *
4 * * * * * * *

= 1 - - - -
2 - - -
3 - - -
4 .
1 *
2 * * *
3 * * * * *
4 * * * * * * *

$n=4$

Pyramid

Method-2



Ques: Print the given pattern

```
1      *  
2  _ _ * * *  
3  _ * * * * *  
4 * * * * * * *
```

$nspace = n-1$
 $nest = 1$

$nspace = 1$
 $nest += 2$

Pyramid

Ques: Print the given pattern

1	—	—	—	*		
2	—	—	*	*	*	
3	—	—	*	*	*	
4	*	*	*	*	*	*

1	—	*	*	*	*	*
2	—	—	*	*	*	
3	—	—	—	*		

$n=4$

Diamond

→ $nsp = n-1$ | $nsp--$
 $nst = 1$ | $nst += 2$

→ $nsp = 1$ | $nsp++$
 $nst = 2n-3$ | $nst -= 2$

$n=1$ $n=2$

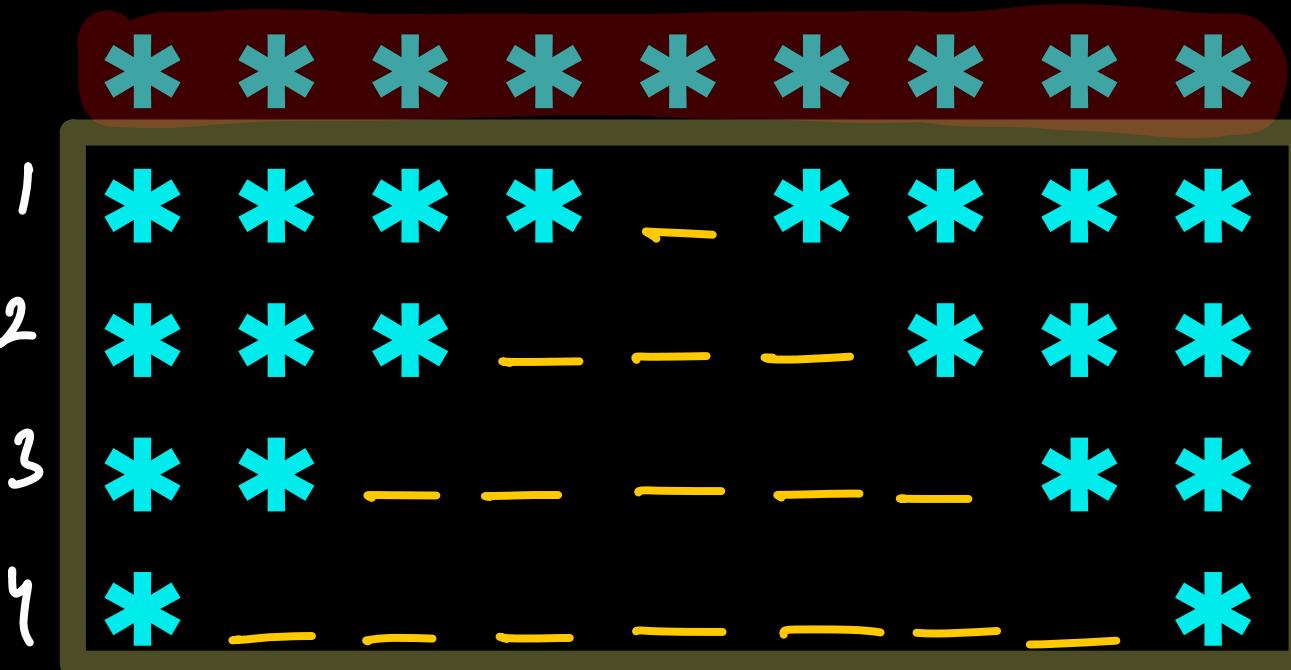
*

 *
 *
* * *
 *

$n=3$

 *
* * *
* * *
* * *
* * *
* * *

Ques: Print the given pattern



$n=5$

$$\begin{array}{c}
 = \quad \begin{array}{c} 1 \quad \alpha \quad \alpha \quad \alpha \quad \alpha \\ 2 \quad \alpha \quad \alpha \quad \alpha \\ 3 \quad \alpha \quad \alpha \\ 4 \quad \alpha \end{array} \\
 + \quad \begin{array}{c} 1 \quad - \\ 2 \quad - \quad - \\ 3 \quad - \quad - \quad - \\ 4 \quad - \quad - \quad - \end{array} \\
 + \quad \begin{array}{c} 1 \quad \alpha \quad \alpha \quad \alpha \quad \alpha \\ 2 \quad \alpha \quad \alpha \quad \alpha \\ 3 \quad \alpha \quad \alpha \\ 4 \quad \alpha \end{array}
 \end{array}$$

Bridge

	1	2	3	4	5	6	7
1	1	1	1	1	1	1	1
2	1	2	2	2	2	2	1
3	1	2	3	3	3	2	1
4	1	2	3	4	3	2	1
5	1	2	3	3	3	2	1
6	1	2	2	2	2	2	1
7	1	1	1	1	1	1	1

 $n=1$ $n=2$ $n=3$

1

1	1	1
1	2	

1	1	1	1	1
1	2	2	2	1
1	2	3	2	1
1	2	2	2	1
1	1	1	1	1

Concept of fake values.

 $n=4 \rightarrow 2n-1$ lines

Number Spiral

	1	2	3	4	5	$\rightarrow j$
1	1	1	1	1	1	
2	1	2	2	2	2	
3	1	2	3	3	3	
4	1	2	3	4	4	
5	1	2	3	4	5	
\downarrow	i					

$n=5$

for(i=1 to n)

 for(j=1 to n)

 |

 | sout(min(i,j));

 |

 | soutl()

 |

 |



THANKYOU
Cuties