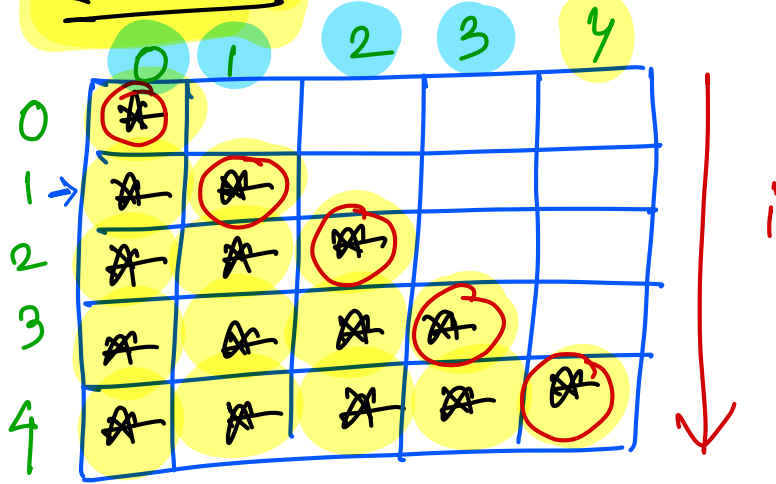


Pattern - 1

$n=5$



$j \leq i$

```
for(int i=0; i < 5; i++) {
    for(int j=0; j <= i; j++) {
        printf(" * ");
    }
    printf("\n");
}
```

i

0					
1					
2					
3					
4					

j

0	1	2	3	4	5
0	1	2	3	4	5
0	1	2	3	4	5
0	1	2	3	4	5
0	1	2	3	4	5

Pattern-2

	0	1	2	3	4
0	*	*	*	*	*
1	*	*	*	*	
2	*	*	*		
3	*	*			
4	*				

$$i=0$$

$$j=4$$

$$i=1$$

$$j=3$$

$$i=2$$

$$j=2$$

$$i=3$$

$$j=1$$

$$j=4 \quad i=0$$

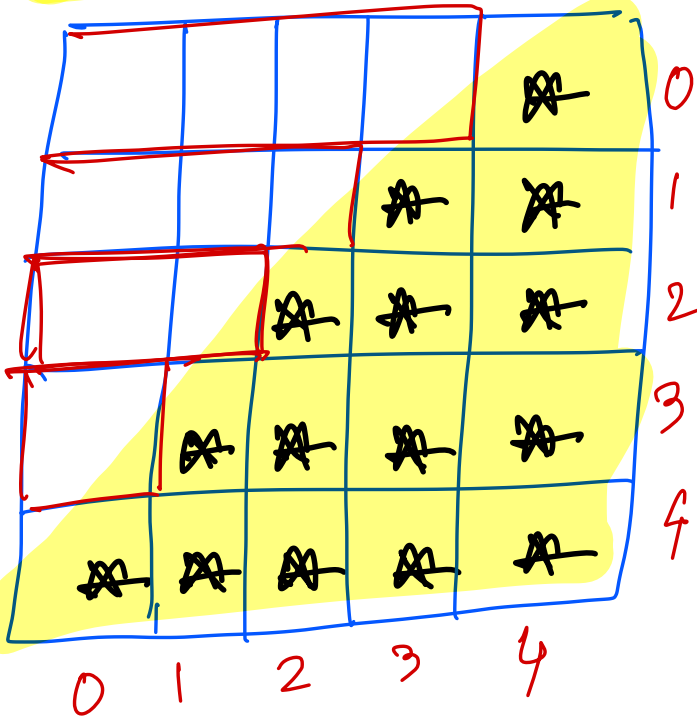
$$j \leq 4 - i$$

$$j \leq 5 - i$$

$$O(n^2)$$

```
for(int i=0; i<5; i++){  
    for(int j=0; j<5-i; j++){  
        printf(" * ");  
    }  
    printf("\n");  
}
```

Pattern - 3



pattern 2 + pattern 3!

```
for(int i=0; i<5; i++) {  
    for(int j=0; j<4-i; j++) {  
        printf("  ");  
    }
```

$O(n^2)$

```
    for(int k=0; k<=i; k++) {  
        printf(" * ");  
    }
```

```
    printf("\n");  
}
```

Pattern - 4

pattern 1 + pattern 2

	0	1	2	3	4
0	*	*	*	*	*
1		*	*	*	*
2			*	*	*
3				*	*
4					*

$i = 0$ 1
 $i = 1$ 1

```
for (int i = 0; i < 5; i++) {  
    for (int j = 0; j < i; j++) {  
        printf(" ");  
    }  
    for (int k = 0; k < 5 - i; k++)  
        printf("* ");  
    printf("\n");  
}
```

O(n²)