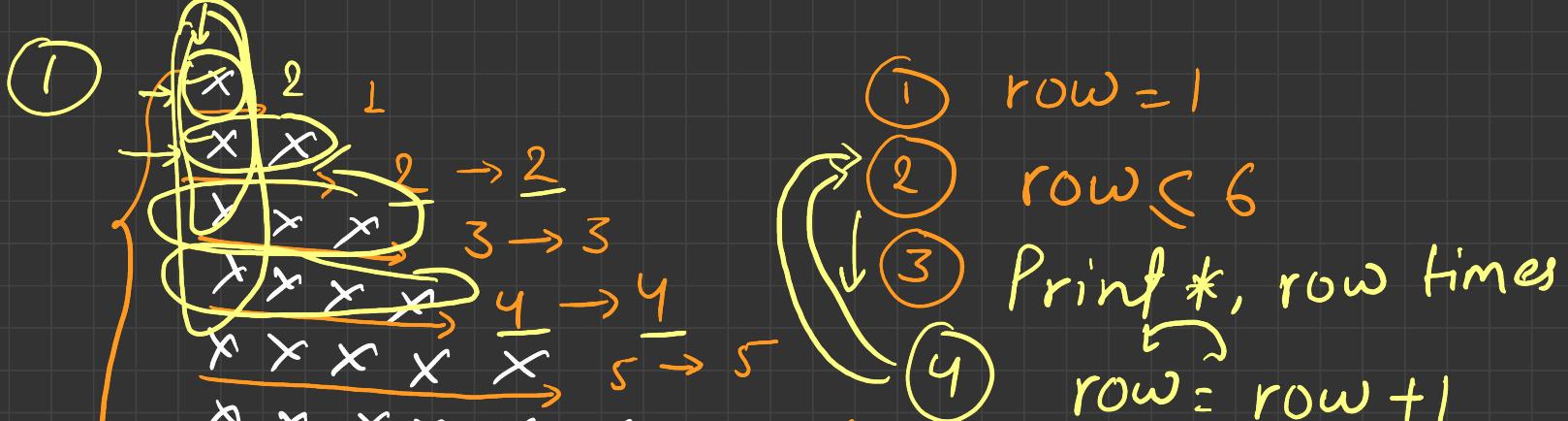


DSA - 7

medium
level Pattern
Questions

Sunfire Sensei



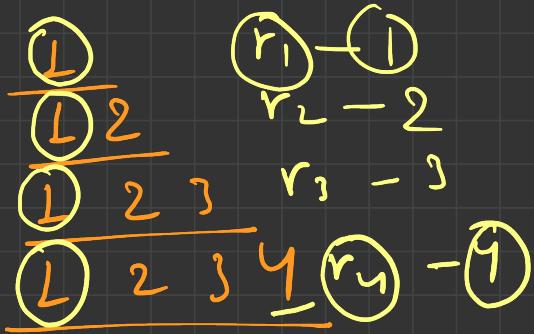


for(row=1 ; row \leq 6 ; row++)

// Print *, row times

```
for (col = 1; col <= row; col++)  
{  
    cout << "*";  
}  
cout << endl;
```

②



① $\text{row} = 1$

② $\text{row} \leq 4$

③ print L to row

④ $\text{row}++$

$r = 1 - 2 \checkmark \times \checkmark$
 $c : X 2 \checkmark \times \checkmark$

$L \rightarrow 2 \rightarrow$
 $L \rightarrow 2 \rightarrow 3 \rightarrow 4$

for (row = 1; row ≤ 4 ; row++) {
 for (col = 1; col $\leq \frac{row}{2}$; col++) {
 cout << col;
 }
 cout << endl;
}

③

L → r₁ → l → row n₄

2 2 → r₂ → 2 → row n₄

3 3 3 → r₃ → 3

4 4 4 4 → r₄ → 4

5 5 5 5 5

6 6 6 6 6 6

n

' , n
n

① row = 1

② row < 6

③ print row no,
row time

④ row ++

```
for (row=1; row3≤6; row++) {  
    for (col=1; col≤row; col++) {  
        cout << row //  
    }  
    cout << endl;  
}
```

1
2 2
3 3 3

- ⑨
- ① $\rightarrow L$
 - ② $\begin{matrix} 2 & 1 \\ \cancel{2} & \cancel{1} \end{matrix} \rightarrow r_2$
 - ③ $\begin{matrix} 3 & 2 & 1 \\ 3 & 2 & 1 \end{matrix}$
 - ④ $\begin{matrix} 4 & 3 & 2 & 1 \\ 5 & 4 & 3 & 2 & 1 \\ 6 & 5 & 4 & 3 & 2 & 1 \end{matrix}$
 - ⑤ $\begin{matrix} 5 & 4 & 3 & 2 & 1 \\ 6 & 5 & 4 & 3 & 2 & 1 \end{matrix}$

$r=1$
 $c=x2$ \downarrow \downarrow
 \downarrow \downarrow \downarrow

① $\text{row} = 1$
 ② $\text{row} \leq 6$
 ③ print row to L
 ④ $\text{row} = \text{row} + 1$

```

for (row = 1; row <= 6; row++) {
    for (col = row; col >= 1; col--){  

        cout << col; X      2  

    }  

    cout << endl; ✓
}
    
```

5

a
b b
c c c
d d d d

char ss =

a b c d

.a

a +
a + (row - 1)

① row = 1

② row ≤ 4

③

print (char), routine

④

row ++

```

for (row = 1 ; row <= 8 ; row++) {
    char ss = 'a' + (row - 1)
    for (col = 1 ; col <= row ; col++) {
        cout << ss;
    }
    cout << endl;
}

```

a →
 a → b →
 a → b → c →
 a → b → c → d →
 a → b → c → d → e →
 a → b → c → d → e → f →
 a → b → c → d → e → f → g →
 a → b → c → d → e → f → g → h →

ss = 6

⑥ \rightarrow * * * *

* * *

* *

*

row

$\left\{ \begin{array}{l} 1 \\ 2 \\ 3 \\ 4 \end{array} \right.$

print

$\left\{ \begin{array}{l} 4 \\ 3 \\ 2 \\ 1 \end{array} \right.$

① row = 1

② row ≤ 4

③ print *, $4 - (\text{row} - 1)$ times

④ row ++

$1 \times 4 \rightarrow 1 \checkmark$
 $2 \times 3 \rightarrow 6 \times$

$4 - (3 - 1)$

$4 - 2$

2

$4 - (4 - 1)$

$4 - 3$
 1

$4 - (\text{row} - 1)$
 $4 - \frac{1}{3} (2 - 1)$

```
for (row=1; row<=4; row++) {  
    for (col=1; col<=4-(row-1); col++) {  
        cout << '*';  
    }  
    cout << endl; }
```

```
for (row = 7 ; row >= 1 ; row = row - 1) {  
    for (col = 1 ; col <= row ; col++) {  
        cout << '*';  
    }  
    cout << endl;  
}
```

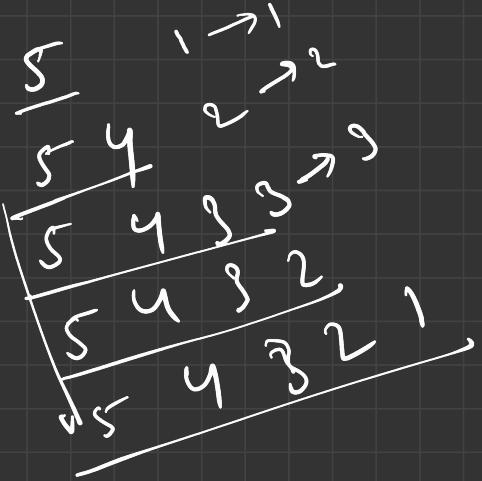
* 1 2 3 4
 | 2 3
 | 2
 |

$4 - (\text{row} - 1)$

row print 4
 |
 2 3
 | |
 3 2
 |
 4

① row = 1
② row ≤ 4

③ print 1 to 4 - (row - 1)
④ row ++



$s \rightarrow 1$
 $s - (row - 1)$

row = 1

row $\leq s$

print $s \rightarrow s - (row - 1)$

row ++