

Good Evening Everyone

We will start @ 09:10 pm

Nested Conditional statement

↳

Condⁿ inside another condⁿ is called as nested condⁿ statement.

```
↳ if ( ---- ) {  
    if ( ---- ) {  
        if ( --- ) {  
            }  
        }  
    }  
}
```

```
if ( --- ) {  
    }  
elseif ( --- ) {  
    if ( --- ) {  
        }  
    }  
}
```

```
if ( --- ) {  
    if ( --- ) {  
        }  
    }  
    elseif ( --- ) {  
        if ( --- ) {  
            }  
        }  
        elseif ( --- ) {  
            }  
        }  
    }  
    else {  
        if ( --- ) {  
            }  
        }  
        elseif ( --- ) {  
            }  
        }  
        else {  
            }  
    }  
}
```

⑥

Q- Login validation → valid → "abcd" valid pass → "efgh"

↳ Ask user for the username and password

↳ if username is valid

↳ if password is valid

print("Login successful")

↳ If not

print("Login unsuccessful due to password failure")

↳ if username not valid

print("Invalid user name")

Q- Electricity bill unit

if units < 100 → ₹ 3/unit

if units > 100 but less → 200

↳ first 100 units → ₹ 3/unit

↳ else → ₹ 5/unit

↳ > 200

↳ first → ₹ 3/unit

↳ 100-200 → ₹ 5/unit

↳ > 200 → ₹ 7/unit

⑥

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Q- check a given character is

↳ an alphabet → "Alphabet"

↳ Uppercase → "Uppercase"

↳ Lowercase → "Lowercase"

↳ digit → "Digit"

↳ "special symbol"

⑥

Q- Discount → cost price

if purchase > 1000:

→ customer → "premium" → 10% discount

→ else → 5% discount

else

→ prem → 5%

→ else → 2%

print final price

→ price, p/n

↳ > 1000

↳ p → 20%

↳ n → 10%

< 1000

↳ p → 5%

→ 2%

Nested Loops

↳ One loop inside another loop →

for(— — —) {
 while (— — —) { → row

 }

}

}

for(— — —) { → row

 for(— — —) { → col

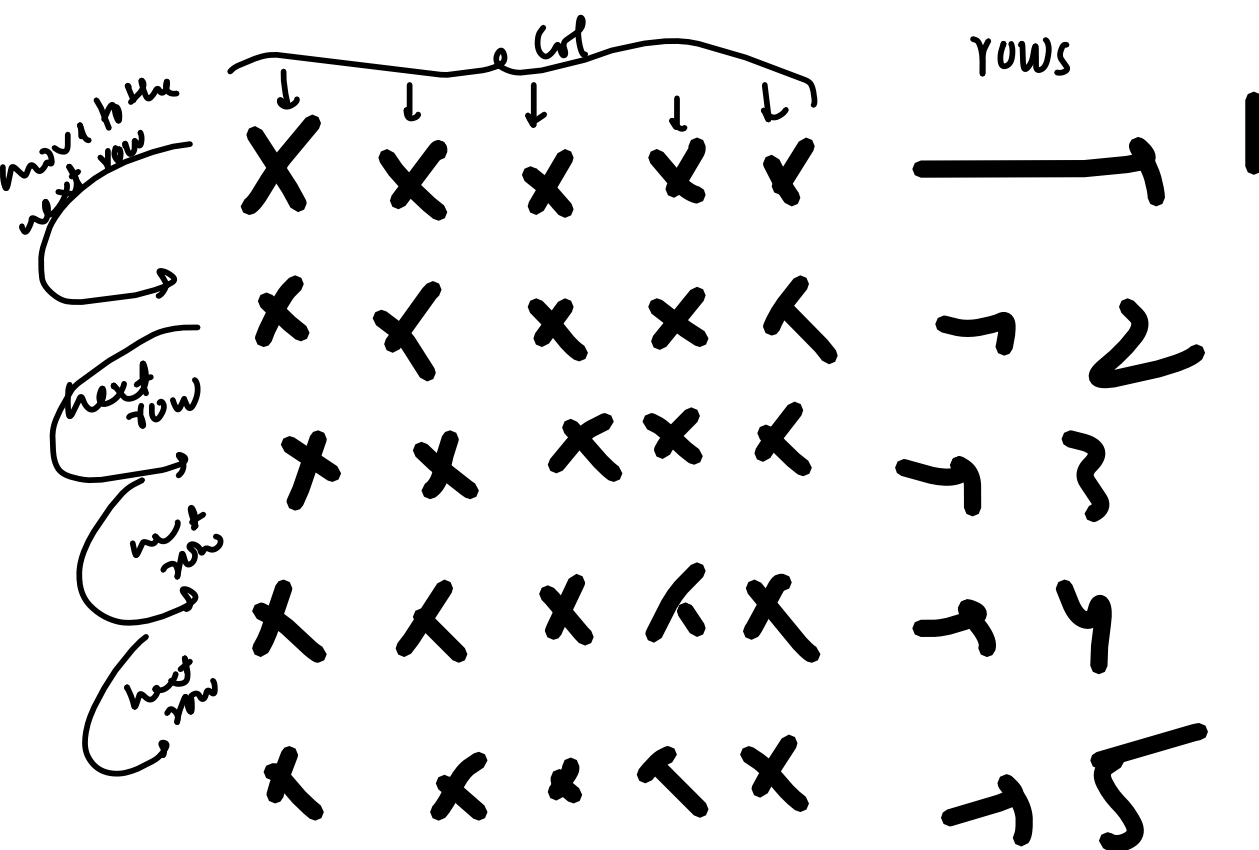
 }

}

2D

row

col



$i=1 \leq 5 (T) \rightarrow j=1 \leq 5$
 $\rightarrow j=2 \leq 5$
 $\rightarrow j=3 \leq 5$
 $\rightarrow j=4 \leq 5$
 $\rightarrow j=5 \leq 5$
 $\rightarrow j=6 \leq 5 \times$

```

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

```

```

for (int i=1; i<=5; i++) { // row
    for (int j=1; j<=5; j++) {
        print("*");
    }
    move to the next row
    print("\n");
}

```

$i=2 \leq 5 \rightarrow j=1 \leq 5$
 $\rightarrow j=2 \leq 5$
 $\rightarrow j=3 \leq 5$
 $\rightarrow j=4 \leq 5$
 $\rightarrow j=5 \leq 5$
 $\rightarrow j=6 \leq 5$

$i=6 \leq 5$

Print the following patterns

①

$\begin{array}{cccccc} & j & j & & & \\ & \downarrow & \downarrow & & & \\ 1 & 2 & 3 & 4 & 5 & \rightarrow \\ 1 & 2 & & 3 & 4 & 5 \rightarrow \\ 1 & 2 & & & 3 & 4 & 5 \rightarrow \\ 1 & 2 & & & & 3 & 4 & 5 \rightarrow \\ 1 & 2 & & & & & 3 & 4 & 5 \rightarrow \end{array}$

⑥

$i=1, c=5$

$\hookrightarrow j=1, c=5 \rightarrow 1 \ 2 \ 3 \ 4 \ 5$
 $\rightarrow 1 \ 2 \ 3 \ 4 \ 5$

②

⑥

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$\begin{array}{cccccc} i & & & & & \\ \downarrow & & & & & \\ 1 & 1 & 1 & 1 & 1 & \rightarrow \\ 2 & 2 & 2 & 2 & 2 & \rightarrow \\ 3 & 3 & 3 & 3 & 3 & \rightarrow \\ 4 & 4 & 4 & 4 & 4 & \rightarrow \\ 5 & 5 & 5 & 5 & 5 & \rightarrow \end{array}$

$i=1 \Rightarrow 5$

$j=1, c=5 \rightarrow 1 \ 1 \ 1 \ 1 \ 1$

$i=2$

$\hookrightarrow j=1, c=5 \rightarrow 2 \ 2 \ 2 \ 2 \ 2$

c

$$j = 65$$

$$\text{temp} = 65 > 0$$

cj

while (temp > 0)

$$cj++$$

$$\text{temp} /= 10;$$

}

$$cj = \cancel{8} \times 2$$

$$\text{temp} = \text{temp} / 10$$

$$65 / 10 = 6$$

$$\text{temp} = \cancel{6} 0$$