

*Conditionals And Loops

Condition:- it provide check for the statement

1. If-else statement → Used to check the condition, it checks the boolean condition True or False

Syntax:-

```
if (boolean expression True or False) {  
    // Body  
} else {  
    // Body  
}
```

Ex.

```
int salary = 25400;  
if (salary > 10000) {  
    salary = salary + 2000;  
}  
else {  
    salary = salary + 1000;  
}  
System.out.println(salary);
```

output:-

27400

2. Multi if-else statement

→ It executes one condition from multiple statements.

Syntax :-

```
if (Condition 1){  
    // code to be executed if condn 1 is true  
} else if (Condition 2){  
    // code to be executed if condn 2 is true  
} else if (Condition 3){  
    // code to be executed if condn 3 is true  
} else {  
    // code to be executed if all condns are  
    false  
}
```

Ex.

```
int salary = 25400;  
if (salary > 10000){  
    salary += 1000;  
}  
else if (salary <= 20000){  
    salary += 2000;  
}  
else {  
    salary += 3000;  
}  
System.out.println(salary);
```

Output :-

28400

• Loops :- loops are used to iterate a part of program several times.

1. For loop :- It is generally used when we know how many times loop will iterate,

Syntax :-

```
for (initialization ; condition ; increment/decrement)
{
    // body
}
```

Ex :- Print nos from 1 to 5

```
for (int num = 1 ; num <= 5 ; num += 1) {
    System.out.println(num + " ");
}
```

output :- 1 2 3 4 5

2. while loop :- It is used when we don't know how many time the loop will iterate.

Syntax :-

```
while (condition) {
    // code to be executed
    // increment / decrement
}
```


Ex :-

```
int num = 1;  
while (num <= 5){  
    System.out.print(num);  
    num++;  
}
```

Output :- 1 2 3 4 5.

3. do while loop :- It is used when we want to execute our statement at least one time.
→ It is called exit control loop because it checks the condition after execution of statement.

Syntax :-

```
do {  
    // code to be executed  
    // update statement → increment / decrement  
} while (condition)
```

Ex.

```
int n = 1;  
do {  
    System.out.println(n);  
    n++;  
} while (n <= 5);
```

Output :- 1, 2, 3 4 5.

while loop

- used when no. of iteration is not fixed.

- Entry controlled loop

- no semicolon required at the end of while (condⁿ)

Do while loop

- used when we want to execute the statement at least once

- Exit controlled loop

- semicolon is required at the end of while (condⁿ)