

1. What are the Conditional Operators in Java?

Answer: Java has the following conditional operators:

- a. '&&' (and) - returns true if both the conditions are true else returns false
- b. '||' (or) - returns true if either of the conditions is true else returns false
- c. '!' (not) - returns true if the condition is false and vice-versa
- d. '? :' (ternary) - provides a shorthand for an 'if-else' statement

2. What are the types of operators based on the number of operands?

Answer: There are three types of operators in Java based on the number of operands.

Those are:

- a. Unary operator (++ , -- , + , - , ! etc.);
- b. Binary Operator (+ , - , * , / , % etc.)
- c. Ternary Operator (condition ? if true : if false)

3. What is the use of switch-case in Java Programming?

Answer: The 'switch' statement in Java is used to execute a block of code bases on the value of an expression. It is used as an alternative to multiple 'if-else' statements when multiple conditions need to be tested. The expression is compared with each 'case' label in the 'switch' statement and the code block associated with the matching 'case' is executed. If no case matches an optional 'default' block is executed

Syntax of switch-case:

```
switch(expression) {
    case value1:
        // code block to be executed if expression == value1
        break;
    case value1:
        // code block to be executed if expression == value1
        break;
    ....
    default:
        // code block to be executed if no case matches
        break;
}
```

4. What are the priority levels of arithmetic operations in Java?

Answer: Priority level of arithmetic operation in Java:

- 1. Parenthesise ()
- 2. Unary Operators (eg, ++, --, +, -)
- 3. Exponentiation (e.g. Math.pow)

4. Multiplication, division, and modulo (*, /, %)
5. Addition and subtraction (+, -)
5. What are the conditional statements and use of conditional statements in Java?
Answer: In Java, conditional statements are used to control the flow of a program based on certain conditions. There are two main types of conditional statements:
 - a. If-else
 - b. switch-case

Conditional statements are useful in situations where you want to perform different actions based on different conditions. For example, you can use a conditional statement to check if a number is positive, negative, or zero and perform different actions based on the result.

6. What is the syntax of if-else statement?

Answer: Syntax of if-else statement:

```
if (condition) {  
    // code to be executed if the condition is true  
} else {  
    // code to be executed if the condition is false  
}
```

7. What are the 3 types of iterative statements in Java?

Answer: Three types of iterative statements are:

- a. for loop
- b. while loop
- c. do-while loop

8. Write the difference between for loop and do-while loop

Answer: Syntax of the for loop is:

```
for(initialization; condition; updation) {  
    // code to be executed  
}
```

for loop is generally used when the number of iterations is known in advance.
It first checks the condition and then runs the code.
for loop may not be run once depending on the condition.

Syntax of the do-while loop is:

```
do {  
    // code to be executed  
} while (condition);
```

do-while loop is generally used when the number of iterations is not known in advance.

It first runs the code and then checks for the condition to run the next iteration. do-while must run once.

9. Write a program to print numbers from 1 to 10.

Answer: Java program to print numbers from 1 to 10:

```
for(int i = 1; i <= 10; i++) {  
    System.out.println(i);  
}
```