1. What are the Conditional Operators in Java?

   In Java, conditional operators check the condition and decides the desired result on the basis of both condition or boolean values. Conditional operators are used for decision-making that include

   Ternary Operator (? :): A shorthand for if-else.

   Syntax: condition ? value1 : value2;

   Logical Operators (&&, ||, !): Used to perform and operation, or operation and not operation on boolean values.

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

   Unary: Operates on one operand
   e.g., increment operator (++) ,decrement ( --)

   Binary: Operates on two operands

   E.g.,  addition (+), subtraction (-), multiplication ( *),  division ( /).

   Ternary: Operates on three operands

   E.g., a shorthand for if-else ( ? :).

3. What is the use of Switch case in Java programming?

   It mimics the behaviour of multiple if else-if else condition. So, it helps in multi-way branching.

   switch(expression) {

   case value1:

   // Code to execute

   break;

   case value2:

```
        // Code to execute

        break;

    default:

        // Code to execute if no cases match

}
```

It is similar to this code :

```
if(expression == value1) {

        // code

        // break;

}
else if(expression == value2) {

        // code

        // break;

}
else {

        // code

}
```

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

    The priority of arithmetic operations (from highest to lowest):

1. Parentheses (())
2. Multiplication (*), Division (/), and Modulus (%)
3. Addition (+) and Subtraction (-).

5. What are the conditional Statements and use of conditional statements in Java?

Conditional statements are used to perform decision-making based on conditions. They are:

1. if
2. if-else
3. else if
4. **switch**

6. What is the syntax of if else statement?

```
if (condition) {

    // Code to execute if the condition is true

} else {

    // Code to execute if the condition is false

}
```

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

For Loop: Used when the number of iterations is known.

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

        // body

}
```

While Loop: Used when the condition is evaluated before the loop.

```
while(condition) {

        // body

}
```

Do-While Loop: Executes the loop body at least once before checking the condition.

```
do {
        // body
} while(condition)
```

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

While Loop: Used when the condition is evaluated before the loop. May not execute the code at all if the condition is false initially.

Syntax for while loop :

```
while(condition) {
            // body
}
```

Do-While Loop: Executes the loop body at least once before checking the condition.

Syntax for do-while loop :

```
do {
        // body
} while(condition)
```

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

```
public class PrintNumbers {
    public static void main(String[] args) {
```

```java
    for (int i = 1; i <= 10; i++) {

        System.out.println(i);

    }

  }

}
```