

Day 12 – for Loop in Java

In this lesson, we will first understand the for loop in Java. Then we will see multiple examples with full code. Finally, practice questions are given for revision.

1. What is a for Loop?

A for loop is used when we already know how many times a block of code needs to run. It helps reduce repetition and makes code readable.

Syntax of for loop:

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

Initialization runs once, condition is checked every time, and increment or decrement updates the loop variable.

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2. for Loop Examples (Full Code)

Example 1: Print numbers from 1 to 5

```
class Example1 {
    public static void main(String[] args) {
        for(int i = 1; i <= 5; i++) {
            System.out.println(i);
        }
    }
}
```

Example 2: Print even numbers from 1 to 10

```
class Example2 {
    public static void main(String[] args) {
        for(int i = 1; i <= 10; i++) {
            if(i % 2 == 0) {
                System.out.println(i);
            }
        }
    }
}
```

Example 3: Print table of 5

```
class Example3 {
    public static void main(String[] args) {
        int n = 5;
        for(int i = 1; i <= 10; i++) {
            System.out.println(n + " x " + i + " = " + (n*i));
        }
    }
}
```

Example 4: Sum of first 10 natural numbers

```
class Example4 {
    public static void main(String[] args) {
        int sum = 0;
        for(int i = 1; i <= 10; i++) {
            sum = sum + i;
        }
        System.out.println("Sum = " + sum);
    }
}
```

Example 5: Print numbers in reverse

```
class Example5 {
    public static void main(String[] args) {
        for(int i = 10; i >= 1; i--) {
            System.out.println(i);
        }
    }
}
```

Example 6: Count numbers from 1 to 10

```
class Example6 {
    public static void main(String[] args) {
        int count = 0;
        for(int i = 1; i <= 10; i++) {
```

```
        count++;  
    }  
    System.out.println("Count = " + count);  
}  
}
```

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3. Practice Questions

1. Print numbers from 1 to 20 using for loop.
2. Print odd numbers between 1 and 50.
3. Find factorial of a number using for loop.
4. Print multiplication table of any number.
5. Find sum of even numbers from 1 to 100.
6. Print squares of numbers from 1 to 10.
7. Reverse a number using for loop.

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