

Computer Science by AP Tutorial

Java `do-while` Loop

What is a `do-while` loop?

A `do-while` loop is a control flow statement in Java that executes a block of code **at least once**, and then continues to execute it **as long as a condition is true**.

Syntax:

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

Key Points:

- The loop body runs **before** the condition is checked.
- Ensures the code runs **at least once**, even if the condition is false on the first check.

Example:

```
int i = 0;  
do {  
    System.out.println("i = " + i);  
    i++;  
} while (i < 5);
```

Output:

```
i = 0  
i = 1  
i = 2
```

```
i = 3  
i = 4
```

Step-by-step:

1. Runs the code inside the `do { }` block.
2. Checks the `while` condition.
3. If the condition is true, the loop runs again.
4. If false, the loop stops.

Example Showing One-Time Execution:

```
int x = 10;  
do {  
    System.out.println("This will print once.");  
} while (x < 5);
```

Output:

```
This will print once.
```

Notes:

- Use `do-while` when the loop must run at least once.
- `break` can be used to exit the loop early.
- `continue` skips the rest of the loop body and goes straight to the condition check.