

Break and Continue Statements in Java

1. Introduction

In Java, break and continue are control flow statements used inside loops and switch statements. They help control the execution of loops by stopping or skipping iterations based on conditions.

2. break Statement

The break statement is used to immediately terminate a loop or switch statement. When break is encountered, control jumps outside the loop or switch.

Uses of break:

- 1 To stop a loop when a condition is met
- 2 To exit from infinite loops
- 3 To terminate a case in switch statement

Example: break in for loop

```
for(int i = 1; i <= 10; i++) {  
    if(i == 5) {  
        break;  
    }  
    System.out.println(i);  
}
```

3. continue Statement

The continue statement skips the current iteration of a loop and moves to the next iteration. Unlike break, it does not terminate the loop.

Uses of continue:

- 1 To skip specific values in a loop
- 2 To avoid executing remaining code for an iteration

Example: continue in for loop

```
for(int i = 1; i <= 5; i++) {  
    if(i == 3) {  
        continue;  
    }  
    System.out.println(i);  
}
```

4. Labeled break and continue

Java supports labeled break and continue, which are used with nested loops. They allow control to jump to a specific labeled loop.

Example:

```
outer:  
for(int i = 1; i <= 3; i++) {  
    for(int j = 1; j <= 3; j++) {
```

```
        if(i == 2 && j == 2) {  
            break outer;  
        }  
        System.out.println(i + " " + j);  
    }  
}
```

5. Basic Programs

1. Print numbers from 1 to 10 except 5

```
for(int i=1;i<=10;i++){  
    if(i==5) continue;  
    System.out.println(i);  
}
```

2. Stop loop when number is divisible by 7

```
for(int i=1;i<=100;i++){  
    if(i % 7 == 0) break;  
    System.out.println(i);  
}
```

6. Interview Questions

- 1 What is the difference between break and continue?
- 2 Can break be used outside loops?
- 3 What is labeled break in Java?
- 4 Difference between break in loop and break in switch?
- 5 Is continue allowed in switch statement?
- 6 What happens if break is not used in switch case?
- 7 Can we use multiple labels in Java?

7. Key Differences (Summary)

break terminates the loop completely, while continue skips only the current iteration. Both improve control over loop execution and are commonly asked in interviews.