

## **C Break and Continue**

**Topics :** <u>C</u> **Written on** <u>April 12, 2023</u>

In C programming language, the break and continue statements are used in loops to modify the normal flow of control.

The break statement is used to terminate a loop prematurely. When a break statement is encountered inside a loop, the loop is immediately terminated and control is passed to the next statement following the loop. Here is an example of a for loop that prints the numbers from 1 to 5, but terminates early if the value of i is 3:

```
#include <stdio.h>
```

```
int main() {
    int i;
    for (i = 1; i <= 5; i++) {
        if (i == 3) {
            break;
        }
        printf("%d ", i);
    }
    printf("\n");
    return 0;
}</pre>
```

In this example, the loop continues as long as *i* is less than or equal to 5. However, if the value of *i* is 3, the **break** statement is executed and the loop terminates prematurely. Therefore, the output of this program is 1 2.

The continue statement, on the other hand, is used to skip the current iteration of a loop and move on to the next iteration. When a continue statement is encountered inside a loop, the loop skips the rest of the code in the current iteration and immediately moves on to the next iteration. Here is an example of a for loop that prints the even numbers from 1 to 10:

```
#include <stdio.h>
int main() {
    int i;
    for (i = 1; i <= 10; i++) {
        if (i % 2 != 0) {
        }
    }
}</pre>
```

```
continue;
    }
    printf("%d ", i);
}
printf("\n");
return 0;
}
```

In this example, the loop iterates over the numbers from 1 to 10. However, if the value of i is odd (i.e.,  $i \ \% \ 2 \ != 0$ ), the continue statement is executed and the loop skips the rest of the code in the current iteration. Therefore, only the even numbers are printed, and the output of this program is 2 4 6 8 10.

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