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# C While Loop

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## Loops

Loops can execute a block of code as long as a specified condition is reached.

Loops are handy because they save time, reduce errors, and they make code more readable.

## While Loop

The **while** loop loops through a block of code as long as a specified condition is **true** :

### Syntax

```
while (condition) {  
    // code block to be executed  
}
```

In the example below, the code in the loop will run, over and over again, as long as a variable ( **i** ) is less than 5:

## Example

```
int i = 0;

while (i < 5) {
    printf("%d\n", i);
    i++;
}
```

Try it Yourself »

**Note:** Do not forget to increase the variable used in the condition ( `i++` ), otherwise the loop will never end!

## The Do/While Loop

The `do/while` loop is a variant of the `while` loop. This loop will execute the code block once, before checking if the condition is true, then it will repeat the loop as long as the condition is true.

### Syntax

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

The example below uses a `do/while` loop. The loop will always be executed at least once, even if the condition is false, because the code block is executed before the condition is tested:

## Example

```
int i = 0;

do {
    printf("%d\n", i);
    i++;
}
while (i < 5);
```

Try it Yourself »

Do not forget to increase the variable used in the condition, otherwise the loop will never end!

## C Exercises

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#### Exercise:

Print **i** as long as **i** is less than 6:

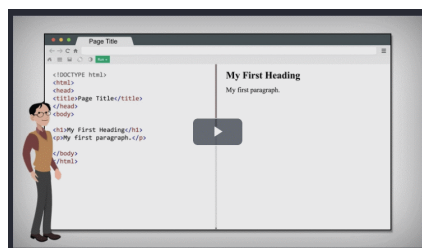
```
int i = 1;
    (i < 6) {
    printf("%d\n", i);
    ;
}
```

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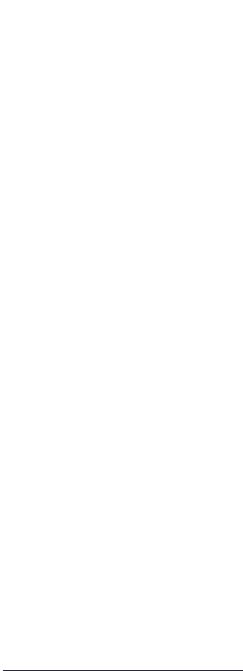
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