

# Common Mistakes

This lesson discusses some of the common mistakes that programmers make while using loops in their code.

## We'll cover the following ^

- Infinite `while` Loop
- Manipulating a `for` Loop Counter

## Infinite `while` Loop #

The main risk with `while` loops is producing an *infinite loop*, meaning the condition is always true, and the code runs forever. This will crash your program! For example, let's say you forget a code line that increments the `number` variable.

```
1 let number = 1;
2 while (number <= 5) {
3   console.log(number);
4   // The number variable is never incremented
5 }
```



To protect yourself from infinite loops, you have to make sure the loop condition will eventually become false.

## Manipulating a `for` Loop Counter #

Imagine that you accidentally modify the loop counter in the loop body, just like in the following example.

```
1 for (let i = 1; i <= 5; i++) {
2   console.log(i);
3   i++; // The i variable is updated in the loop body
```



```
3 | i++; // The i variable is updated in the loop body  
4 | }
```



Each time the loop runs, the counter variable is incremented twice: once in the body and once in the final expression after the loop runs. When you're using a **for** loop, you'll almost always want to omit anything to do with the counter inside the body of your loop. Just leave it in that first line!