# LOOPS CONSTRUCTS IN JAVASCRIPT

**while loop:**

A **while loop** in JavaScript repeatedly executes a block of code as long as a specified condition remains true. The condition is checked *before* each iteration of the loop.

**Form:**

```
while (condition) {
  // Code to execute as long as the condition is true
}
```

condition: A boolean expression that is evaluated before each pass through the loop.

{ ... }: The block of code (statement) that runs if the condition is true. To execute multiple statements, you must use curly braces.

**example:**

```
let count = 0; // Initialize a variable outside the loop


while (count < 5) { // The condition
  console.log(count); // Code block
  count++;           // Important: ensures the condition eventually becomes
false
}
// Output: 0, 1, 2, 3, 4
```

**The do...while Loop:**

A variation is the **do...while loop**, which guarantees the code block is executed at least once before the condition is checked.

**Form:**
```
do {
     code to run;
} while (condition to meet);
```

**example:**

```
let i = 0;

do {
  console.log(i);
  i++;
} while (i < 3);
```

```
// Output: 0, 1, 2
```

**The For Loop:**

There is a loop type called a For loop which is recommended when the number of iterations is definitely known.

A for loop contains a start value, a stop value, an iteration condition, and code to be run each time.

**Form:**

```
for (initialization; condition; afterthought) {

  // code block to be executed
}
```

**Example:** (as a running program in Node)

```
const BORING_HOTEL = 'All Work and No play makes Jack a dull boy.';
const START_HERE = 'Welcome to the Overlook Hotel Main Lobby.';
const CLOSED_NOW = 'The hotel is closed. Have a slash_tastic day.';

console.log(' ');
console.log(START_HERE);
console.log(' ');

for (let i=0; i < 35; i++) {
     console.log(BORING_HOTEL);
}

console.log(' ');
console.log(CLOSED_NOW);
console.log(' ');
```

There are two further more advanced loops, the for-in loop. And the for-of loop. These will be returned to, after reference datatypes are first discussed.