POWERING POTENTIAL

Flow of Control

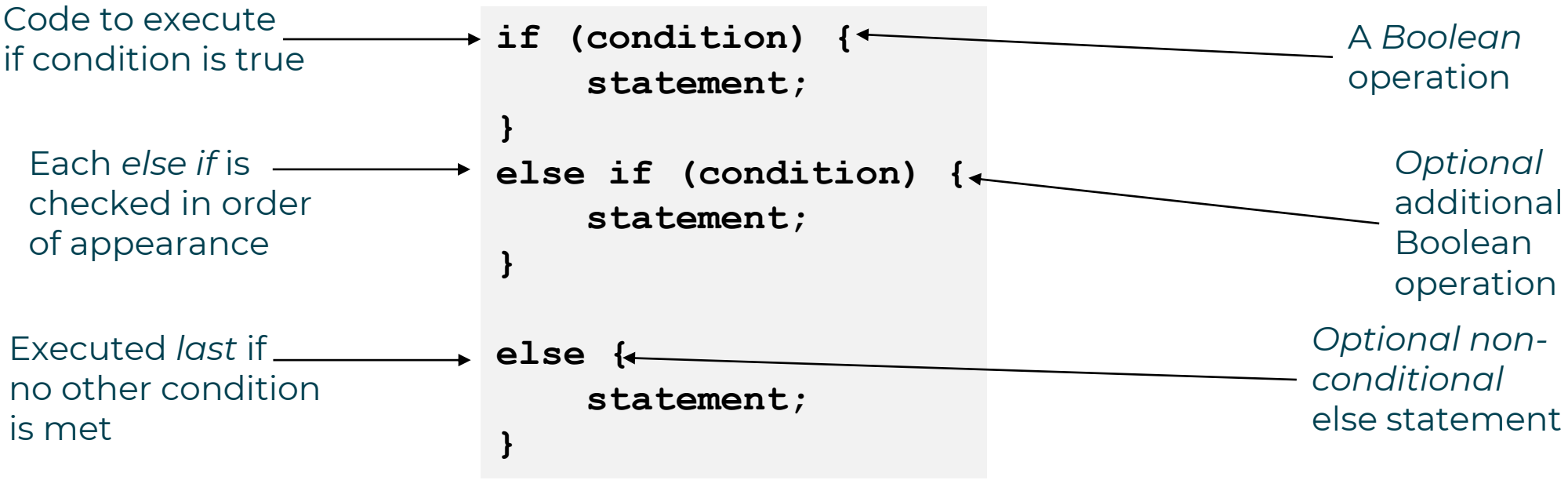
→ JavaScript Fundamentals

INTRODUCTION

- Understanding conditional statements
  - The if statement
  - The switch statement
- Understanding loops
  - The while and do while loops
  - for loops

If statements

- The if statement conditionally executes if a Boolean condition is met



- The if statement has optional else if and else branches
  - Additional Boolean conditions executed in order

The ternary if

- A common pattern with if statements is to assign one of two values to a variable based on a simple condition

```
let now = new Date();
let greeting = "Good";
if (now.getHours() > 17) {
    greeting += " evening.";
}
else {
    greeting += " day.";
}
```

- Use of the ternary operator (?) to create a ternary-if can make this more concise

```
let now = new Date();
let greeting = "Good" + ((now.getHours() > 17) ? " evening." : " day.");
```

The switch statement

- switch statement
- Control passes to the case label that matches the expression
- Carries on until hits a break statement
- If no case labels match, control passes to the default label (if there is one)

```
switch (expression) {
    case label:
        statement;
        break;
    case label:
        statement;
        break;
    default:
        statement;
        break;
}
```

QuickLab Chapter 15a

- Experiment with conditional statements

The while loop

- Loops allow a set of statements to be run more than once
  - Either for a fixed number of iterations or until a condition is met

- The while loop has two varieties, the while and do while
  - The while checks before it executes

```
while (condition){
    statement;
}
```

  - The do while always runs at least once

```
do {
    statement;
} while (condition);
```

The for loop

- The for loop utilises a counter until a condition is met

```
for ([initial-expression]; [condition]; [loop-expression]) {
    statement;
}
```

- In the below example “i” is incremented by 1 after each iteration
    - The loop expression can be any arithmetic operation

```
for (let i = 0; i < 10; i++) {
    i += i;
    console.log(i);
}
```

Review

- Flow of control and loops are the basis of programming
  - Along with operators
- If statements allow conditional logic
- Loops allow reuse of code without repetition

QuickLab Chapter 15b

- Exploring looping statements

REVIEW

- Flow of control and loops are the basis of programming
  - Along with operators
- If statements allow conditional logic
- Loops allow reuse of code without repetition