CreateBase

INTRODUCTION TO *JAVASCRIPT* CODE

FUNCTIONS

Generally speaking, a function is a "subprogram" that can be called by code outside of the function. A function is composed of a sequence of statements, just like any other program.

Values can be *passed* to a function as input, while the function can also *return* values as output.

To call a function, simply type the name of the function in your text editor followed by a pair of brackets. The values that we want to pass to the function are listed inside these brackets. A standard function call with two inputs and no output looks like so:
FunctionName(input1, input 2);

If you want to read more about JavaScript functions in more detail, check out this resource created by Mozilla:

- Functions

In this Project, all of the functions that we need to solve our problem have been defined for us. This include a function to make our character jump, Jump(), **and slide,** Slide(), **as well as a set of functions to read sensor data, which are explained in the next document.**

We can call as many functions as we like, and they will run in order from top-to-bottom, but don't forget to add a semicolon (;) at the end of each line.

IF ELSE STATEMENTS

An IF statement is a simple piece of code that checks if a condition is TRUE or FALSE. The code inside the IF statement is only run if the codition is TRUE. This is what a basic IF statement looks like in JavaScript:

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

If you have a particular piece of code that you want to only run if the condition is FALSE, then you can add an ELSE statement onto the end of the IF statement, like so:

```
if (condition) {
  statement1;
} else {
  statement2;
}
```

The condition of an IF ELSE statement is normally comprised of some combination of comparisons (<, >), equalities (==, !=) and logicals (&&, ||). Here are four of the most common comparisons and two of the most common logicals:

Less than
condition = (A < B)
condition **is true if the value of** A **is less than the value of** B, **and false in all other situations.**

Greater than
condition = (A > B)
condition **is true if the value of** A **is greater than the value of** B, **and false in all other situations.**

Equal to
condition = (A == B)
condition **is true if the value of** A **is equal to the value of** B, **and** false **in all other situations.**

Not equal to
condition = (A != B)
condition **is true if the value of** A **is not equal to the value of** B, **and false in all other situations.**

AND
condition1 = (condition2) && (condition3)
condition1 **is true if and only if both** condition2 **and** condition3 **are true. If either of** condition2 **and** condition3 **are false, then** condition1 **will also be false.**

OR

condition1 = (condition2) || (condition3)

condition1 **is true if and only if at least one of** condition2 **and** condition3 **are true. If both** condition2 **and** condition3 **are false, then** condition1 **will also be false.**

If you only want your code to run if variable1 is greater than Variable2, you might use an IF statement like so:

```
if (variable1 > Variable2) {
  statement;
}
```

If you only want your code to run if variable1 is less than Variable2 AND variable2 is not equal to Variable3, you might use an IF statement like so:

```
if ((variable1 < Variable2) && (variable2 != Variable3)) {
  statement;
}
```

If you want to read about JavaScript IF ELSE statements in more detail, check out this resource created by Mozilla:
- [if...else](#)

Or check any of these resources to read more about comparisons, equalities and logicals:
- [Less than](#)
- [Greater than](#)
- [Equality](#)
- [Inequality](#)
- [Logical AND](#)
- [Logical OR](#)