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 includes functions to make our character activate their laser, activate rotational motors, and 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:

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.**

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 equal to Variable2, you might use an IF statement like so:

```
if (variable1 == Variable2) {
  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