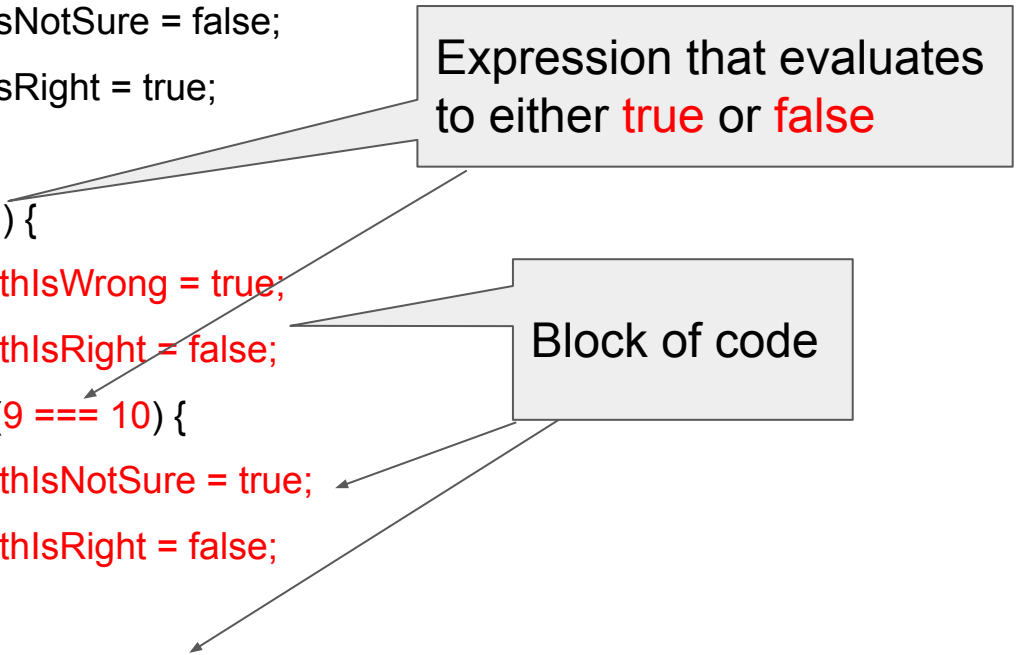
```
// Value: you need to know 3 types of primitive values - string, number, or boolean
let name = "hello"; // "hello" is a value of type string
let phone = 123455; // 123455 is a value of type number
let isBusy = true; // true is a value of type boolean

// Variable: is any word to which a value is assigned
let name = "hello"; // name variable is assigned the value of "hello".  so the type of name is string
name = 12345; // now name has been re-assigned with the value 12345.  so the type of name is now number

// Expression: is any code that has to resolve to a value
let name = "hello";
name = "hello".toUpperCase(); // "hello".toUpperCase() expression resolves to "HELLO" string value
let isItGreater = 9 > 10; // 9 > 10 expression resolves to false boolean value
let sum = 9 + 10; // 9 + 10 expression resolves to 19 number value

// Block of code: any number of lines of code enclosed within {}
if (true) {
        let name = "hello";
        let sayHi = "hi " + name;
}
```

Structure of any code

```
// Code is always executed line by line, starting from top to bottom
// Any line or block of code can be one of 3 things
// 1. Assignment: will have variable on the left of '=' and expression or value on right side
let someName = "Hello there!"; // someName has string value "Hello there!"
someName = someName === "bye"; // someName now has boolean value false

// 2. Keyword, e.g. if, function, for etc.
for(let i=0; i<10; i++){}
// any keyword will always be followed by its own structure and behavior of code

// 3. Just expression; generally a function call, or a method called on a variable
sayHello('TEJ Fellows');
```

Keyword IF

```
let mathIsWrong = false;
let mathIsNotSure = false;
let mathIsRight = true;

if (9 > 10) {
        mathIsWrong = true;
        mathIsRight = false;
} else if (9 === 10) {
        mathIsNotSure = true;
        mathIsRight = false;
} else {
        console.log("the world is saved");
}
```



Keyword FOR - in 4 steps

1. Initial Assignment

   let i = 0;

2. Condition Expression

   i < 3;

3. Code block

   console.log(‘hello world’);

4. Increment Assignment

   i = i + 1;

Loop steps 2->3->4
As long as step 2 is true

```
1 for (let i=0; i < 3; i=i+1) {
2     console.log(‘hello world’);
3 }
```

```
hello world
hello world
hello world
```

Keyword function

```
// function has 3 parts
// 1. input (argument, parameter)
// 2. code block that runs when function is called
// 3. return value or expression


function addTwo (var1, var2) {
        let sum = var1 + var2;
        return sum;
}

let mySum = addTwo (55, 45); //a function has to be called/executed with () for it to do anything
console.log(mySum);
```

1. input variable (argument, parameter)

2. Block of code

3. return statement followed by value or expression