

// **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;
```

Expression that evaluates
to either **true** or **false**

```
if (9 > 10) {
```

```
    mathIsWrong = true;
```

```
    mathIsRight = false;
```

Block of code

```
} 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

1. input
(argument, parameter)

```
function addTwo (var1, var2) {
```

```
    let sum = var1 + var2;
```

2. Block of code

```
    return sum;
```

3. return statement followed
by value or expression

```
}
```

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

console.log(mySum);