Introduction to Web Development: JavaScript

Class 2: Exercises

1. Reflect upon your learning of the different Data Types and computer memory. Think about where, in memory, the different data types (primitive and referenced) are stored and why.

   Why would something be in the heap vs. the stack. Think about if something is used once or if something is used over and over…
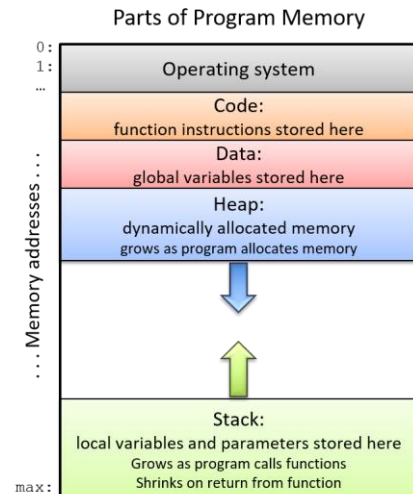
Reminder:

Primitive Data Types – the stack

In computer science, primitive data types are a set of basic data types from which all other data types are constructed.

Referenced Data Types – the heap

A reference type is a code object that is not stored directly where it is created, but that acts as a kind of pointer to a value stored elsewhere.

Parts of Program Memory

2. Be able to implement and use both primitive and reference data types.

Code some **primitive types** and display their respective typeof using the console.log() function.

```javascript
// PRIMATIVE TYPES
// String
const fullName = "Satan Claus";
// Number
const aNumber = 96;
// Boolean
const isTrue = false;
// Null
const isNull = null;
// Undefined
let isUndefined;
// Symbol
const aSymbol = Symbol();

console.log(typeof fullName);
```

Code some **reference types** and display their respective typeof using the console.log() function

```
// REFERENCE TYPES
// Arrays
const instruments = ['bass', 'tenor banjo', 'ukelele', 'guitar'];
// Objects
const person = {
  firstName: 'Bob',
  lastName: 'Bobson',
  city: 'Bobville',
  age: 35
};

console.log(typeof instruments);

// Dates
const today = new Date();
console.log(today)
console.log(typeof today);
```

3. Play around with converting data types into other data types.

```
// Type Coercion
const val1 = String(5);
const val2 = 6;
const sum = Number(val1 + val2);

console.log(sum);
console.log(typeof sum);
```