**Objects and Functions**

Everything is an Object.

There two types of values in JavaScript:

Primitives Types: Numbers, Strings, Boolean, Undefined, Null

Arrays, Functions, Wrapper for Number, String, Booleans and others are an Object

Objects-oriented Programming:

Objects interacting with one another through methods and properties

Used to store data, structure applications into modules and keeping code clean.

One prototype or blueprint like person which have properties and methods which can be used to create as many as person objects (instances) as needed …So in JavaScript this person is considered as Constructor

Constructors are used to create a blueprint and are used to create instances which are also called objects

Inheritance is when one object is based on another object and get access to properties and methods of another object and even their own properties and methods

Every object in JavaScript has a prototype property that makes inheritance possible

Each object which we create is an instance of object constructor which has a bunch of methods in its prototype property.

When we try to access a certain method or property on an object, JavaScript will first try to find that method on that exact object (instance) but if it cannot find that method then it will look it into the object prototype which is the prototype property of its parent so it moves up in the prototype chain, if the method is still no there this continues until there is not more prototype to look at which is null( is the one which has no prototype, this is the final link in the chain so returns undefined)…..this concept is prototype chain which also makes inheritance possible

**Summary:**

Every JavaScript has a prototype property which makes inheritance possible in JavaScript.

The prototype property of an object is where we put methods and properties that we want other objects to inherit

The Constructor’s prototype is not the prototype of the constructor itself; it’s the prototype of all instances that are created through it.

When a certain method is called the search starts in the object itself and if it cannot be found the search moves on to the object’s prototype. This continues until the method is found: **prototype chain**.

**Ways of creating an object:**

Object.create() inherits directly from the one which we pass into the first argument while the function constructor inherits from the prototype property.

**Primitive v/s Objects:**

The variables containing primitives hold that data inside the variable itself while variables associated with objects do not actually contains the object but instead contains a reference in the memory where that object sits or stored.

**Functions:**

Functions are also objects in JavaScript

A function is instance of an Object type so it behaves like any other object

We can store functions in a variable

We can pass a function as an argument to another function and also return a function from a function

So in JavaScript we have First Class Functions