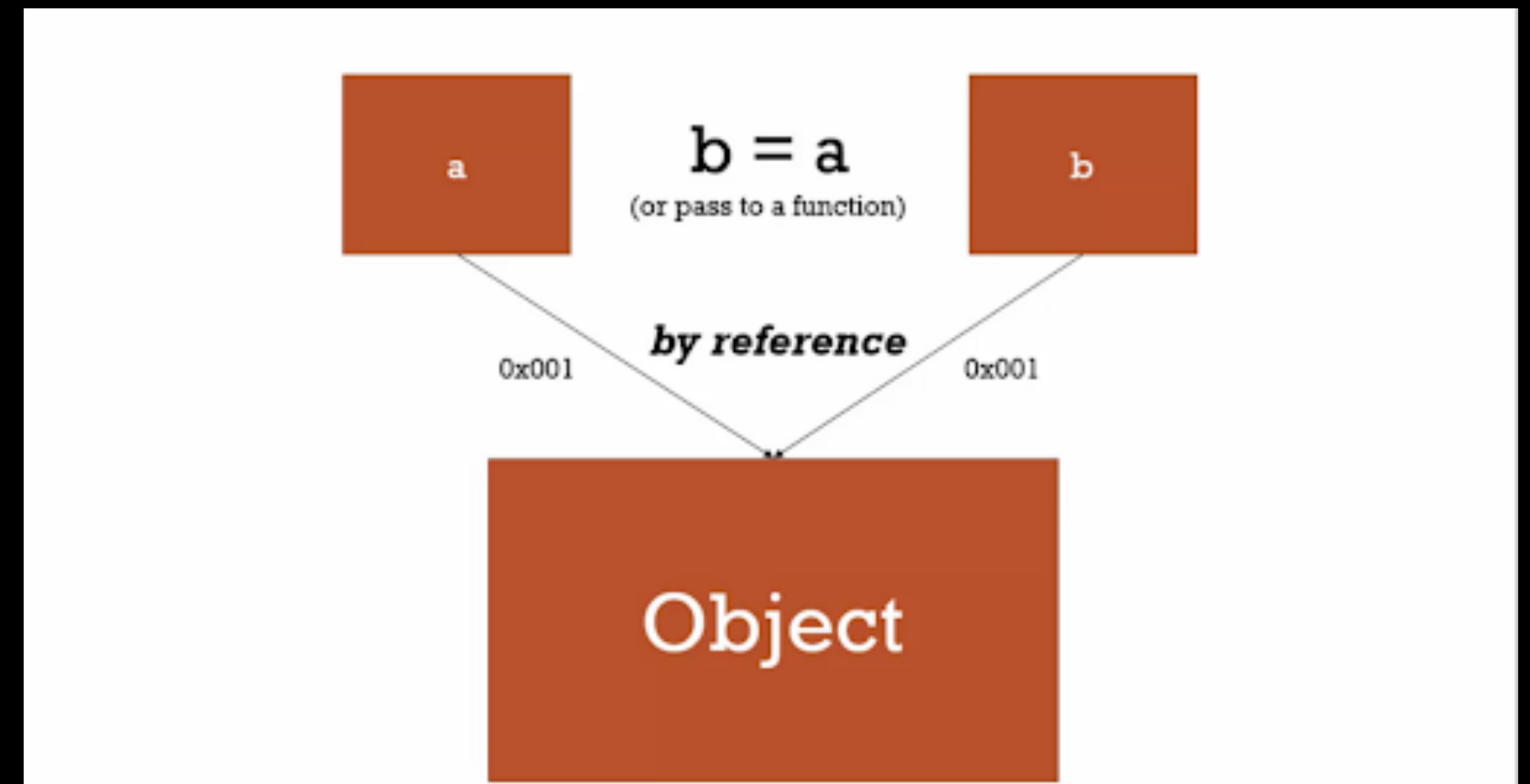
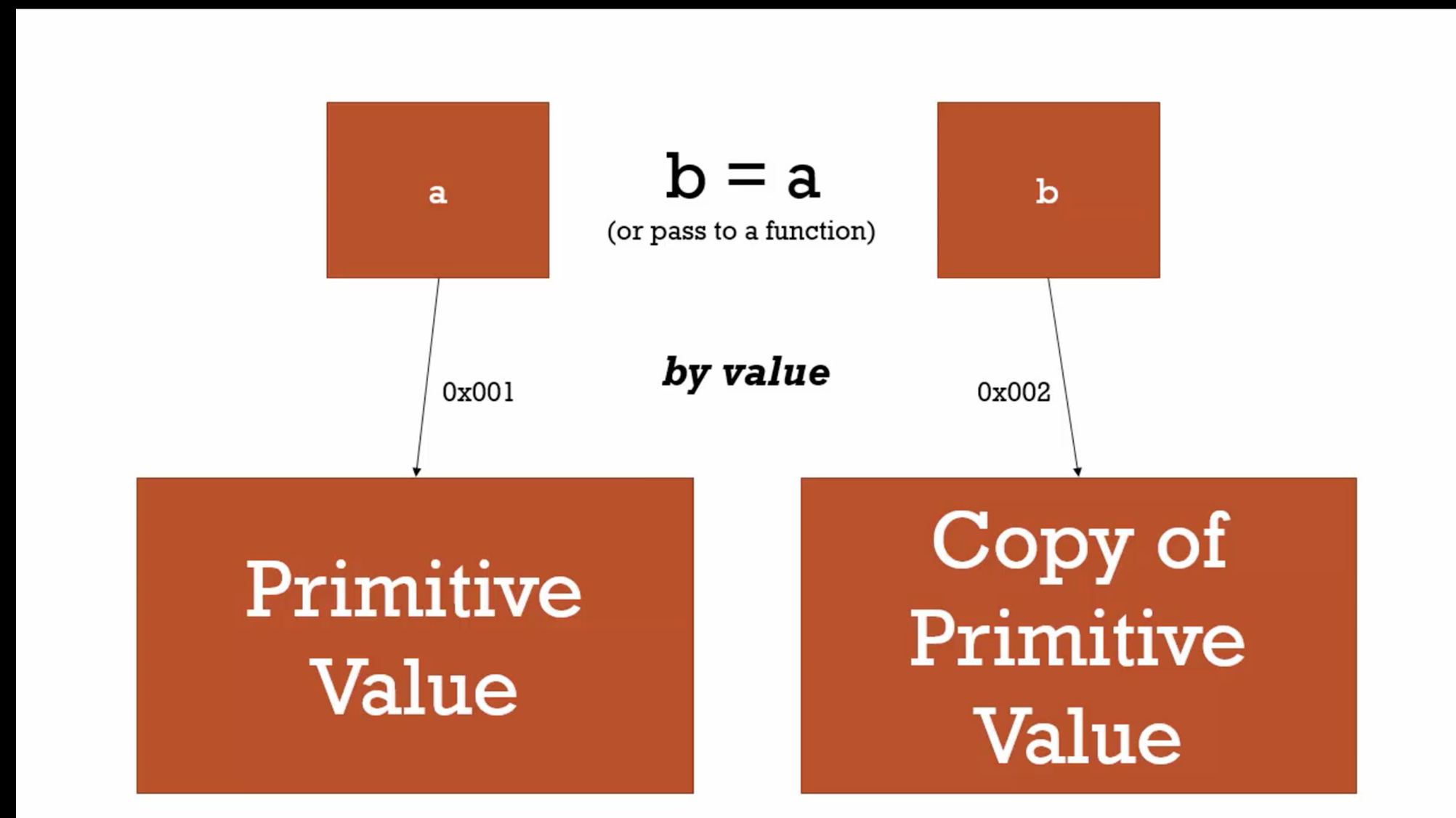


Lesson19

Javascript Basics

Reference and value types

- Number, string, boolean, undefined, null - we call **Data types** also known as “**Value Types**” / primitives
- Object, Function, Array - is called **Data Structures** and also known as “**Reference Types**”



Iterating Arrays and Objects

- Good old for loop **for** (var i= 0; i < 10 ; i ++) { // code }
- Iterating Arrays : Array.**forEach**(function(value, index) { // code });
- Iterating Objects **for** (var key **in** object) { //code }

forEach()

- Always runs from start to end of array (we can't stop and return value)
- We can't use break; and continue; in forEach loop
- Performance: slower than for loop (about 95% as internet says)
- Used only for Arrays, Maps and Sets data structures

What is AJAX

- AJAX - **A**ynchronous **J**avaScript **A**nd **X**ML
- This technology uses javascript XMLHttpRequest to communicate with servers
- It can send and receive information in various formats: Text Files, JSON, XML, HTML
- AJAX is “**asynchronous**” - it can communicate with the server(other computer), exchange data, update the page without having to refresh the page
- Feature 1: Make requests to the server without reloading the page
- Feature 2: Receive and work with data from the server

HTTP requests

The GET method (request)

- GET is used for viewing something, without changing it
- Example: GET: <https://www.themealdb.com/api/json/v1/1/random.php>
- If you send some information with GET request it is appended to the request URL after **?** Mark sign:
- GET: <https://www.example.com/login.php?user=myuser> (dont put passwords in get request!)
- GET: <https://www.themealdb.com/api/json/v1/1/lookup.php?i=52772>

HTTP requests

The POST method (request)

- POST request used to change data on server (created, update)
- The data in POST request is not in url but in special “Body” part of request



JSON

JavaScript Object Notation (JSON)

- JSON is a standard text-based format for representing structured data based on JavaScript object syntax
- JSON is purely a data format — it contains only properties, no methods.
- JSON requires double quotes to be used around strings and property names. Single quotes are not valid.
- `JSON.parse(jsonString)` - convert **JSON string** to javascript JSON object
- `JSON.stringify(jsonObject)` - convert **JSON object** to string

Fetch API

Getting data from remote servers

- Fetch API is a new standard to make server requests
- Fetch API works with Request and Response objects, along with javascript Promises
- Promise is an object that represents the eventual completion (or failure) of an asynchronous operation and its resulting value