**JavaScript Notes**

***How JavaScript Works*:**

JavaScript is Synchronous Programming Language but by browser we can create it Asynchronous Language.

JavaScript is a Single Threaded it means it will execute code line by line.

How Compilation works:

* **Tokenizing / Lexing:** In this step JS break our code in small Chunks which we call Tokens
* **Parsing:** In this step compiler understand these tokens and create an *Abstract Syntax Tree (AST)*
* **Code Generation:** With help of AST JavaScript generate an executable code which we can execute**.**

In ECMAScript Official Documentation there is **not mentioned** anywhere that we should first compile the code in order to execute our code. But it is mentioned that before execute our code there should be an Early Error Check and Determine Scope for Variable. So, in order to achieve these, we have to compile our code first.

1. ***Compilation Phase:***
   * Early Error Checking.
   * Determining Appropriate Scope for Variable.
2. ***Code Execution Phase:*** In JavaScript code executes in Execution Context and at first the execution context created is known as *Global Execution Context*

At first Global Execution Context will create in two parts:

* Creation Phase (Global Memory)
* Code Execution Phase