**Java Script**

Java Script was invented by Brendan Eich. In 1995

**Runtime Environment:**

Run time environment is a software system that allows a program to run on a computer, even it was’nt designed to run on that computer.

Java Script can be executed in two different environments. They are:

1. Browser’s runtime environment
2. Node runtime environment

Browser has a separate environment to run the java script.

V8 Javascript engine is used in chrome browser. It is the thing that takes the js and executes it.

It was written in C++.

Spider monkey is used in Mozilla firefox.

Javascript core is used in Safari.

Couple of components that control the flow of execution are:

1 . **The heap:** It is a pool of memory where variables , objects and references are stored.

2 . **Call stack:** It is a data structure that keeps the track of what the program is doing at any particular time.

**Define Js:**

JavaScript is a lightweight, cross-platform, single-threaded, and interpreted compiled programming language

**Features:**

**Light Weight :** Simple syntax

**Cross Platform:** It can be executed in different operating systems and different devices.

**Single Threaded:** Processing one command or Executing one task at a time.

**Interpreted:** Translates and executes instructions line by line . without the need for the separate compilation step.

**Compiled:**  Code is translated into machine Language for execution.

**Synchronous:** Executes in a sequential order.

High Level Languages are highly abstracted language designed to simplify computer programming.

Low Level Language provide little or no abstraction from computer’s instructions set architecture.

**Java Script Engine:**

Js engine have the control on your js code

The console object is a web API provided by the browser to the JSE , much like DOM , fetch , history , service workers and web storage APIs.

Java Script Engine execute js code with the help of Call stack.

Call stack is a place where all js code gets executed.

Anonymous in call stack:

This will push the code into two phases

This is called Global Execution Context(GEC).

Call stack execute the code in two phases

1.Memory allocation

2.Code execution