Learn JavaScript(Abdul Rayan)

What is JavaScript

It is a verb of the web page that defines all the actions to be performed on a webpage

Its an object oriented programming language that uses JIT compiler

It is everywhere and all web browsers are installed with it.

JS application ranges from web development, mobile development etc

JS is easy, simple and very compatible with HTML-CSS

It is must to have skill for any software engineer role

Tools

For working with JavaScript, we just need 2 things

Text editor

For writing and editing of JS code, we need a simple editor which can be notepad too.

But there are other powerful editors which provide additional functionalities like autocomplete, indentation, highlights etc.

■ Example: Visual Studio Code, Sublime text, Atom etc.

Browser

All browsers come with an inbuilt JS engine.

They are used for executing JS code and also for debugging purposes.

JavaScript via console

Either just press Ctrl + Shift + I to open the console or you can right click and then go to inspect

Now since you are in console you can start writing your code

console.log is used to print content on console

console.log("Hello World!");

console.log("This is my first JS Code");

Hello World!

This is my first JS Code

JavaScript via Script Tag

<script> tag is used for writing javascript in HTML directly.

• But every console.log() will print the output in console of browser

<!DOCTYPE html>

<html>

<head>

<title>Home<llle>

</head>

<body>

<h1>My First JS Code</h1>

<script>

console.log("Hello World!");

</script>

</body>

</html>

Operators

Unary

Arithmetic

Shift

Relational

Bitwise

Logical

Assignment

Ternary

Hoisting

JS engine allocates memory to the func and var during the creation phase, before execution

This is also done in global execution context

ofunction is fully hoisted but for var, only left part is hoisted

let, const, (function..) will not gets hoisted as hosting takes place when the 1st word is var or function

var one=1; //here is engine will hoist var one="undefined" var one=1;//for this line,it will ignore one as it is already there

function a(){console.log("hi");} //here hosting occurs function a(){console.log("bye");}//again func will be hoisted

Data Types

.JS is a typed language

• It does not need to specify data type explicitly of the variable at the Sime of declaration.

Data types are divided into 2 broad categories

o Primitive

o Non Primitive

Object can be created in 2 ways in javascript

• Object literal

• New Keyword

Arrays

Array are special type of objects and new keyword can be used also to create array

```
let arr = new Array(23,'cat',new Object());
```

Functions

It is referred to a code snippet that generally perform some operation

It helps in modularization of code

Enables reusability of it as and when required

Make implementation and debugging efficient and easy

Function can be 2 ways in general to define functions

o Using function keyword

o Function expression

OOPS

Stands for Object Oriented Programming

Everything revolves around objects

It's basically the imitation of real world and makes development easy

OOPS 4 main pillars are

• EncapsulatioN

Abstraction

Inheritance

Polymorphism

DOM

Stands for Document Object Model

When browser parses the HTML code, it converts it into a document that will contain objects corresponding to each element in HTML doc known as

DOM provides you with different functionalities which can be used access and manipulate the webpage

DOM is not strictly tied to the browser as there are other tools like nodejs that can parse HTML

There are 2 main objects that we deal with in general: document and window