**Java script**

1. Java script is backend and frontend language.
2. **What is ECMAScript?**

ECMAScript is a standard on which JavaScript is based! It was created to ensure that different documents on JavaScript are actually talking about the same language.

1. **Rule for choosing variable name:**
2. Letter, digits underscore and $ sign allow.
3. Must begin with a $, \_ or a letter.
4. JavaScript reserved word cannot be used as a variable name.
5. Anu and anu are different variable in JavaScript (case sensitive).
6. **Variable declaration:**

In JavaScript we can declare a variable in 3 ways

1. Var
2. Let
3. Const

But here we are using only **let** and **const**. let is used for any variable declaration (in c like int float double etc) and const is used for any constant variable deflation. (\*pdf chapter 1)

Ex: let a = 45;

Const b = 45;

Let c;

\*\*\*var and let variable are initialize with undefined whereas const are cannot initialize with undefined.

1. **Primitive Data type:**

There are 7 primitive data type in JavaScript

1. Null Ex: let a = null;
2. Number Ex: let b = 455;
3. String Ex: let c = “Hello world”;
4. Symbol Ex: let d = Symbol (“This is symbol”);
5. Undefined Ex: let e
6. Boolean Ex: let f = true;
7. BigInt Ex: let g = BigInt ("45555");
8. **Non-Primitive Data type:**

There are 1 non-primitive data type in JavaScript. That is object.

Ex: const student {

Name: “ANUPAM”,

Roll: 58,

Class: 12,

}

\*\*\* we can add new member in const object. Ex: student[“no”] = 90;

We can access this object by

1. console.log(student);
2. console.log(student[“Name”]);
3. console.log (student. Name);
4. In JavaScript have
5. Arithmetic operator (+, -, \*, \*\*, /, %, ++, --)
6. Assignment operator (=, +=, -=, \*=, \*\*=, /=, %=)
7. Comparison operator (==,!=,===,!==,<,>,<=,>=,?)
8. Logical operator (&&, ||, !)
9. Bitwise operator (like in c language)
10. **Conditional statement:**
11. If statement
12. If-else statement
13. If-else-if statement
14. Switch case statement
15. Ternary operator syntax: condition? “yes”: “no”;
16. **Iteration**
17. For loop

// for loop

let num = 5;

let factorial = 1;

for (let i = 1; i <= num; i++) {

factorial = factorial\*i;

}

console.log(factorial);

// for in loop

const obj = {

Anupam: 78,

Rohit: 55,

Sudip: 79,

Rohan: 90

}

for (const a in obj) {

const val = obj[a];

console.log ("mark of " + a +" is " + val);

}

// for-of loop

for (const i of "Anupam") {

console.log(i);

}

1. While loop / do-while loop

// reverse a number using while loop

let num = 123456;

let revNo = 0;

while (num > 0) {

let rem = num%10;

revNo = revNo\*10+rem;

num = (num-rem)/10;

}

console.log(revNo);

// print n Number using do-while loop

let n = 0;

let i = 0;

do {

console.log (i+ " ");

i++;

} while (i < n);

1. **Function:**

// function in JavaScript

function add (a, b, c) {

return a+b+c;

}

console.log (add (1,2,3));

// function with arrow function

const sum = (a,b) => {

return a+b;

}

let y = sum (2,3);

console.log(y);

1. **Introduction string:**

String is a collection of a character.