# Training

Web development(front end, backend, database)

**Front end**- User Interface

1)**HTML**(Hypertext markup language)

Text= content

Hypertext= a text containing multiple links(hyperlink)

Markup Language= specific set of tags by using which we can create content

2)**CSS**(Cascading Style Sheets)-

--it is used to add styles to the website

--it is used to make website in an attractive and animative way

1. Font
2. Color
3. Position
4. Shape

3)**JavaScript**

--it is used to create dynamic websites

**Static websites**

--remains constant to everyone

**Dynamic websites**

--changes according to everyone

**GIT BASH INSTALLATION**

**Javascript**

* Used to give functionality to the application.
* Back-end of the application.
* JavaScript is a scripting language(not a programming language, it means it doesn’t require a compiler and directly goes to the interpreter) just like python.
* High level programming language.
* Js is a weakly or loosely typed language.
* JS is a lightweight(doesn’t consume a lot of space since it is directly run by the interpreter) and dynamic(re-initialization with other data-types is possible) language used to build user interface/presentation layer.
* Introduced in the year 1995 by ‘Brenden Eich’ while he was working as a Netscape navigator.
* The first program was invented in 7-8 days.
* The first program was named as ‘Mocha’
* The first name of JS was ‘livescript’ later it was renamed as ‘livescript’.

Applications of JS:

* Mobile applications
* Smartwatch
* Gaming
* Web apps
* Server side apps
* Data(mongoDB)

Variables:-

* They are containers/ memory blocks to store the data or values.
* Types of variables in JS:-

1. var(1995-)(used for only old browsers).
2. Const(2015-es6)
3. Let(2015-es6)

* Variables are of two types:-

1. Static typed
2. Dynamically typed

* Case - sensitive
* Start with letters, \_(underscore), $(dollar sign).
* Cant start with numbers
* Allows numbers, letters, \_(underscore), $
* Cannot use reserved words as variable(I.e, keywords like else , if, else if)

Identifiers:

* They are names given for memory(variable).

Q)What is meta-tag?

A) Lines of code that provide information about a web page to search engines and browsers.

* With **var** we can reassign
* With **let**  we can reassign
* With **const**  we cannot reassign

RE-DECLARATION

* Re-declaration is possible with **var.**

    <script>

        var a=1

        var a=5

        document.write(a+a)

        console.log(a+a)

    </script>

**OUTPUT:-10**

* Re-declaration is not possible with **let.**

    <script>

        let a=1

        let a=5

        document.write(a+a)

        console.log(a+a)

    </script>

**OUTPUT:-error**

* Re declaration is not possible with **const.**

    <script>

        const a=1

        const a=5

        document.write(a+a)

        console.log(a+a)

    </script>

**OUTPUT:-error**

**BLOCK SCOPE:-**

* It is not possible for **var**

    <script>

        var a="jayadeep"

        {

            var a="singamsetti"

            console.log(a)

        }

        console.log(a)

    </script>

OUTPUT:-

singamsetti

singamsetti

* It is possible for **let**

    <script>

        let a="jayadeep"

        {

            let a="singamsetti"

            console.log(a)

        }

        console.log(a)

    </script>

OUTPUT:-

singamsetti

jayadeep

* It is possible for **const**

    <script>

        const a="jayadeep"

        {

            const a="singamsetti"

            console.log(a)

        }

        console.log(a)

    </script>

OUTPUT:-

singamsetti

jayadeep

    <script>

        var a=11;

        var a=3;

        {

            var a=5

            console.log(a+a)//10

        }

        console.log(a+a)//10

    </script>

**Dynamic typed language**

**DataTypes:-**

**There are two types of datatypes:-**

1. **primitive data types**
2. **Non primitive data types:- arrays, objects**

**To check the datatype - typeOf**

**Primitive data type:-** predefined, we can store single values

1. Numbers:- integers, floats
2. String:- stream of characters enclosed in quotes
3. --single, double , backtick quotes
4. Boolean:- true or false
5. Null:- empty value or no value
6. Undefined:- declared variable with no value
7. Numbers:- 1,-1, 3.4, 6,4
8. Strings:- Stream of characters enclosed in quotes

--single, double, backtick quotes

Single and double works the same

-- Backticks introduced in ES6 version

--It provides extra functionality, we can insert variables into them

**String Concatenation**:-

a=sai

b=kumar

Reactjs Student-sai kumar

**JavaScript operators**

1. Arithmetic- +,-,\*,/

Multiplication-\*

Division- /

Modulus operator- %

Exponential(raised to the power)- \*\*

1. Logical operators

And- &&

Or -||

Not -!

1. Relational(comparision) values

<,>,>=,<=,==,===,!=,!==

== -equality

Conditional operator, ternary operator

Conditional- first evaluates an expression for a true or false

Syntax:

Condition ? e1: e2

WIndows:

Alert():

Prompt():

Confirm():

**Conditional statements**

--used to decide whether the code has to be executed or skipped based only when the given condition is true

--to make the set of instructions execute only when the condition is true.

--it executes in a sequence I.e, line by line

**Block of code**: set of instructions:

--It will execute only when the specific condition is true.

Condition: An expression that evaluates a result in the form of true or false.

Example:

        let a=4

        let b=5

        if(a<b){

            document.write("hello jayadeep",",<br>")

        }

        document.write("brilliant me!!")

Output:

hello jayadeep

brilliant me!!

Ex: console.log(5>6)

--Methods:

1. If statement
2. If-else
3. Else-if
4. Switch
5. Ternary operator

**If:** Only one possible condition . If the condition is true then it will execute, otherwise it will be skipped.

Syntax:

If(condition){

--block of code //executed only when the condition is satisfied

}