

## Phase 4

Total session 9

**Day 4 : 22 Jan 2024**

### Frontend technologies

To make code as asynchronous java script provided few pre defined function ie  
setTimeout()

setInterval()

clearInterval();

**node js** : Before node js JavaScript known as client side scripting language.  
Which generally run on browser with help of html page.

After node js JavaScript also known as client side as well as server scripting language.

**Node js is known a run time environment** for JavaScript , JavaScript library or framework.

Node JS provided lot of modules with help of those module we can develop server side technologies like Java, spring boot, asp.net , php etc.

Using node js pre defined or external module we can do all task which ever we done using java. Like store data in file, creating server side program, creating rest api, connecting data like mysql or mongo db etc.

Node js doesn't provide BOM and DOM.

If we want to run node js JavaScript program we need to use terminal or command prompt. In node we can't use `document.write("Welcome");`

In place of `document.write()` we need to use `console.log("Welcome to node js");`

Node JS internally provide pre defined tool ie `npm` (node package manager)

This tool is use to download any external node js modules depending upon our requirements.

`npm --version`

using npm we need to download the external modules.

Syntax

`npm install -g modulename`

`npm install -g typescript`

Typescript : type script is also type of scripting language. Which also known as super set of JavaScript.

JavaScript doesn't support data types but TypeScript support data types like number, string , Boolean etc.

We can't include typescript file ie .ts into html web page. After development we need to convert ts to js with help of tsc (typescript compiler or transpiler).

`Tsc`

`tsc demo.ts`

which help to convert ts to js

`node demo.js`

or we can include this file in html web page.

Type script data types.

```
let/var variablename:datatype;
```

In JavaScript whenever we are calling function only function name must be match not mandatory data type as well as type of parameter must be match.

TypeScript array allow to store same types of values with data types.

User defined object creation in class style.

Type script support access specifiers like private and public.

We can use private or public access specifiers with constructor parameter variable to make that local variable as instance variable.