

Day 18 : 21 Nov 2024 CB FSD - Planning and UI Design

constructor :

constructor is a type of special function part of class which help to create the memory. If we not write any constructor inside a class. By default. Default constructor present. If we want to write explicitly empty or parameter constructor then we need to write the function and that function name must be **constructor** in TS or JS. Constructor doesn't contain return type not even void also. Constructor get call automatically whenever we create the object of that class. Constructor mainly use to do initialization.

Inheritance :

Inheritance is use to inherits property and behaviour of old class to new class.

```
class Employee {  
    id:number;  
    fname:string;  
    salary:number;  
}  
class Manager extends Employee{  
    numberOfEmp:number;  
}  
class Developer extends Employee{  
    projectName:string;  
}
```

interface : It is a type of reference data type.

Interface with variable: it is use to create object literal type of object with specific property with proper data types.

```
interface EmployeeType{  
    id:number;  
    fname:string;  
    salary:number;  
    age?:number;        optional  
}
```

```
let emp1: EmployeeType = {id:100,fname:"Ravi",salary:56000,age:21}
```

```
let emp2:EmployeeType={id:101,fname:"Lex",salary:67000}
```

interface with functions: which help to provide specification. Means with contains function without body.

```
interface Bank {  
    withdraw():void;  
    deposit(): void;  
}  
class HSBC implements Bank {  
    withdraw():void{  
  
    }  
    deposit(): void{  
  
    }  
}
```

Modules : module is a collection of variable, function, class and interface.

When we break the code in different file which contains more than one variable, function, classes or interfaces. Those file in typescript is known as module. Using **import and export** we connect both files variables, function, classes and interfaces.

Angular Framework:

Framework : Framework provide set of API(Application programming interface) which connected to each other to perform particular task. If we develop any application using any framework. By default we are following standard. Framework internally follow design pattern. Design pattern is best practise or solution of repeating problem. If we develop any application using framework 60 to 70% task taken care by framework. Framework it not a final product. It is template or protocol.

Angular framework.

Spring framework

Django framework

Asp.net framework

Angular Framework : Angular is an open source web framework provided by google company. Angular is use to develop SPA (Single Page application). Angular internally use MVC design pattern. Model View Controller or Components.

Model -→ Business logic

View -→ Presentation logic

Controller or Component -→ intermediate between view and model layer.

MPA (multi page application)

Index.html

welcome.html

Hyper link

Submit button

Using JS

In multi page application when we move from one page to another page whole dom or page loaded in browser memory.

In SPA we load only part of the web page rather than whole dom or web page.

Angular CLI (Command Line interface) which help to create angular project template.

```
npm install -g @angular/cli@16.0.1
```

```
ng version
```

create separate folder as **angular programs**

syntax to create the angular project

ng new project-name

ng new welcome-app

routing ->N

styling ->css

after project creation done. We need to move inside a project folder using cd command.

cd welcome-app

to run the angular project we need to run the command as

ng serve -open

or

ng serve -o

then it will compile the project and after compile it will open in your machine default browser with URL as

<http://localhost:4200>

open the project in VS code

then

src -> app

app.component.html

(in angular html file is known as template file. Inside this file we can do some dynamic coding).

open terminal or command prompt