

### Topics Completed till 26<sup>th</sup> Part Session

Topics	Subtopics
Node , NPM , ECMA and ES	<p>What is Node and Installation of Node.</p> <p>What is NPM – Node Package Manager?</p> <p>NPM install commands.</p> <p>Understanding JavaScript is a interpreted Language.</p> <p>Importance of Developer Debug tools.</p> <p>Importance of understanding ECMA and ES.</p> <p>Running Javascript using Node.</p> <p>Interpreted vs Compiled</p>
VS code and Basic of JavaScript	<p>Installation of VS code and basic of VS code</p> <p>Basics of JavaScript</p> <p>Variable declaration in JavaScript</p> <p>Dynamic Language vs Typed Language</p> <p>Debugging and Seeing Errors in Developer tools.</p> <p>Understand JavaScript is a dynamic language.</p> <p>Three Data types in JavaScript String, Number and Boolean.</p> <p>Type Of in JavaScript.</p>
Literal objects, Constructor objects and Inheritance in JavaScript.	<p>Understanding JavaScript is a prototypical language.</p> <p>Literal way of creating objects.</p> <p>Constructor way of creating objects.</p> <p>Inheritance in JavaScript using prototype object</p> <p>Demonstration of JavaScript prototype object.</p>
Typescript installation and basic understanding.	<p>Introduction to Typescript</p> <p>Installation of typescript using NPM</p> <p>Understanding typescript is strongly typed.</p> <p>Typescript compiles to JavaScript.</p> <p>Compiling Typescript using TSC.</p>
Creating classes in TS , Inheritance , Import and Export.	<p>Creating class and Data type declaration in Typescript</p> <p>Inheritance in Typescript using extends</p> <p>import and export in typescript</p>
Configuring TS config file	<p>TsConfig file, TSC – init</p> <p>Outdir configuration</p> <p>Changing ECMA ( ES)</p> <p>ES versions.</p>
Hoisting and IIFE	<p>JavaScript hoisting</p> <p>IIFE</p>
Abstract class and Interface in TS	<p>Use of Interfaces in Typescript</p> <p>Understanding :- Interface is a contract</p> <p>Demos of Interface with typescript code</p>

	<p>Fundamental of Abstract class.</p> <p>Revisiting Inheritance</p> <p>Demonstrating :- Abstract class is a half defined base class</p> <p>IS A and HAS A Relationship</p>
SQL Server installation and basics	<p>SQL Server installation</p> <p>Difference between Express and Developer</p> <p>Importance of SQL Server Management studio</p> <p>Creating simple tables using SQL Server management studio</p>
Primary key , foreign key and Candidate keys.	<p>Understand Data integrity and referential integrity.</p> <p>Understanding Primary key , Unique keys and Foreign keys</p> <p>Referential integrity using foreign keys.</p> <p>Constraints in SQL Server</p> <p>Unique keys vs Primary keys</p> <p>Candidate key vs Primary Key</p>
SQL Query writing	<p>SQL Query writing</p> <p>Select All records</p> <p>Select with where clause, Numeric and string, Wild card and aliases</p> <p>Inner join, left join and right joins</p>
Data design, Redundancy and normalization.	<p>Normalization</p> <p>Redundant vs Duplicate</p> <p>First Normal form, Second normal and third normal form.</p> <p>Primary vs Unique</p>
Angular CLI, project structure understanding.	<p>Angular CLI, ng commands ng new , ng serve , ng build</p> <p>Understanding the structure of Angular project</p> <p>Angular routing</p> <p>Camel case vs Pascal case</p> <p>Folder naming conventions of Angular</p> <p>Template URL and selector</p>
Creating a simple UI in Angular and basic binding using ngModel	<p>Creating a simple Angular UI</p> <p>Creating button and handling event in the component.</p> <p>Directives in Angular</p> <p>[(ngModel)] directive, one way, two way binding</p>
Basic of .Net core and understanding .Net core CLI	<p>.NET core vs .NET framework</p> <p>SDK and Runtime</p> <p>Dotnet CLI command Dotnet new new , dotnet run dotnet build</p>

MVC core bootstrap mechanism	Bootstrapping of MVC core. Programs.cs , Startup.cs and Kestrel Web server Configure and Configure Services methods in Startup.cs
Importance of Kestrel web server and reverse proxy concept.	Request response and header Web server and Kestrel
Understanding MVC core project structure	Creating controller Scaffolding template MVC core Folder controllers, views and model Type button vs Submit Passing data to controller
Session and cookies.	Understanding Request , Response , Context and Headers Session variables HTTP is a stateless protocol Making it stateful using session variables Connection of Session variables and Cookies
Creating a simple HTTP POST using MVC	Creating a model Static collection Content result and JsonResult Making post and displaying data in the HTML table. Understanding Full post back Return view vs redirecttoaction.