.Net Foundation (week 1 – 5)

Week	Work done
1	-Morning Orientation with management -RDBMS intro
	-Introduction to .Net Introduction to C#
	-OOPS Inheritance, polymorphism, Interface and Abstract classes
	-Strings, StringBuilder, Handling Errors and Exceptions in C#
	-Exceptions, DateTime Enum LinkedIn E-learning
	Weekend Certification : 　　Career Essentials in Generative AI by Microsoft and LinkedIn Top skills covered : Computer Ethics, Artificial Intelligence, Generative AI
2	-Module Test Arrays and Collections
	-Dictionary, Generic Collections, GetHashCode(), Method Parameters, Inner Classes, Assignments, Delegates
	-Lambdas, and Events Introduction to Threading and in C#
	-Tasks, File I/O, Stream Management and Serialization in C#
	-Understanding Memory Management in C# Working with Libraries, Assemblies, NuGet
	Weekend Certification: 　　Foundational C# With Microsoft Developer Certification
3	-Microsoft Certification Test, First test Corrections Introduction to ASP.NET Core, Setting up ASP.NET Core Project
	-ASP.Net MVC, Routing, Controllers, and Actions, Views, Razor page Syntax, Model Binding and Validation
	-SQL Server - TSQL
	-Entity Framework Core- Introduction to Entity Framework Core, Setting up Entity Framework Core
	-Entity Framework Core - Creating Models and Database Context, Querying Data, Relationships and Navigation Properties
	Weekend Certifications: GS Lab	GAVS LMS compliance course
4	-Module Test
	-Introduction to Web API
	-Creating Web API Project HTTP Methods and Controllers Testing Web API with Postman
	-HTML Helper Classes, and Advanced Razor
	-SQL Server - Joins, SP, Views, Functions
	-Assignment - MVC Online Session Create repository For Customer GetAllCustomerID -> List<int> FindCustomerByID -> Customer GetCustomerOrders -> List<Order> Create Customer Controller Show all Customer Name in DropdownList Show the selected Customer in a Detail View with all Orders of the Customer as Partial View Upload RepositoryCustomer.cs, CustomerController.cs and the View as a zip file in folder <CustomerMVC> Add your Name and ID in the zip file

5	**Weekend Certifications:** GS Lab	GAVS LMS compliance course
	-Intro to GIT - Installing Git Configuring Git (username, email) git init, git add, git commit
	-git status, git log git branch, git checkout, git merge git remote, git clone, git pull, git push - -Working with others on GitHub Resolve merge conflicts Commit messages, branching ---- -strategies Case studies of Git in real-world projects
	-Buffer day - Module Test
	Weekend Certifications: GS Lab	GAVS LMS compliance course

Web-Development (Week 5-10)

Week	Topic	Sub Topic
1	Introduction to Web	-What is the web? -Importance of HTML -Introduction to HTML - Basic concepts (tags, elements, attributes) - HTML Document Structure - Basic HTML Tags -HTML Forms
	HTML Tables	-Creating tables with HTML -HTML Semantics -Multimedia in HTML -HTML5 Features -HTML Validation -Responsive Design -Practical Use Cases
	Introduction to CSS5	-Overview of CSS5 and its evolution -Basics of CSS5 -Box Model & Layout -Responsive Design
2	Advanced Layout & Visual Effects	-Grid layout, Shadows, Blending, Filters -Transitions, Animations & Motion Graphics -Cross Browser Compatibility -Practice Work & Review

2		
	Introduction to JavaScript	-Overview of JavaScript, History, and Evolution -Basics of JavaScript -Control Flow
	Functions and Scope	-Declaring Functions, Function Expressions, Scope and Closures -Objects and Arrays -DOM Manipulation
3	Advanced JavaScript Concepts	-Prototypes, Promises, Async/Await -Error Handling -ES6+ Features
	Fetch API, FAST API, Local Storage Introduction to ReactJS	-Web APIs -Project Work & Review -What is ReactJS, Why Use ReactJS, Setting up the Development Environment -React Basics
	State and Lifecycle	-Understanding State, Handling State with use State Hook, Class Component State, Component -Lifecycle Methods
		Handling Events and Forms
		- Understand the role of Express.js in web development. - Learn about the basics of Node.js as a runtime environment. - Set up a basic Express.js application. - Handle routes and requests using Express.js.
	Middleware and Routing in Express.js	- Learn about middleware functions in Express.js. - Implement custom middleware for request handling. - Understand routing and create RESTful APIs with Express.js.
	Templating Engines and Views in Express.js	- Introduce templating engines like EJS or Pug. - Set up views and dynamic rendering in Express.js. - Learn about layout and partials in templating engines.
	Database Integration with Express.js	- Connect and interact with databases (e.g. MySQL) in Express.js. - Implement CRUD operations with database models. - Handle data validation and error handling.
	User Authentication and Authorization	- Implement user authentication using middleware like Passport.js. - Set up role-based access control for routes.

4		- Understand security best practices for user authentication.
	Introduction to Angular 14	-Overview of Angular 16, Setup and Installation -Angular 16 Components -Angular 16 Directives -Angular 16 Services -Routing and Navigation
	Forms	-Template-driven Forms, Reactive Forms
	Internationalization	-Implementing Internationalization
		-Service Workers & PWA
	Web Workers	-Understanding Web Workers, Implementing Web Workers
		-Server-side Rendering
		-Prerendering
5	Final Project & Review	-Building a Simple Angular App using Concepts Learned
	MongoDB	-Installation , setup of MongoDB , Working MongoDB commands , -connecting MongoDB with Express, -access MongoDB through angular.
	Revision Class Styling and CSS & Data Fetching	-Inline Styles, CSS Modules, Styled Components Routing , Advanced Concepts , Hooks
		- Fetch API, Axios, Handling Loading State Deployment -Final Project & Review