

Frontend Development with React.js

- React.js Essentials
 - Component architecture
 - JSX
 - virtual DOM
 - state and props management
- Advanced React
 - React hooks (useState, useEffect)
 - routing with React Router
 - state management with Context API
 - basics of Redux

Backend Development with .NET Core (C#)

- C# Programming Fundamentals
 - Object-oriented programming principles
 - classes and objects
 - inheritance
 - polymorphism
 - encapsulation
 - C# syntax essentials
- Building REST APIs with .NET Core
 - Setting up ASP.NET Core Web API project
 - CRUD operations and data validation
 - Entity Framework Core (EF Core) integration
- Security & Authentication
 - JWT authentication
 - ASP.NET Identity
 - role-based access control
 - handling secure APIs

Azure Cloud and Power Platform Overview

- Azure Basics
 - Introduction to Azure services
 - deploying applications with Azure App Services
- PowerApps
 - Building low-code apps
 - connecting to data sources
 - basic CRUD functionalitycmd
- SharePoint Integration
 - setting up SharePoint sites

- managing lists and libraries
- integration with PowerApps

Automation Testing on Microsoft Fullstack

- Testing Types & Automation Overview
 - Software testing principles, types, and levels
 - Differences between functional and non-functional testing
 - Understanding the SDET role and responsibilities

Test Automation with Selenium and C#

- Setting Up Selenium with C#
 - Introduction to Selenium WebDriver
 - Setting up C# test project with NUnit or MSTest
 - Writing basic automated UI tests
- Advanced Selenium Concepts
 - Handling web elements (forms, tables, alerts, etc.)
 - Synchronization (implicit and explicit waits)
 - Page Object Model (POM) pattern for test maintainability
 - Cross-browser testing and managing test suites

API Testing and Backend Automation

- Automating API Tests with RestSharp and Postman
 - Setting up RestSharp for API testing in C#
 - Writing tests for CRUD operations on REST APIs
 - Validating JSON responses, status codes, and headers
- Database Testing with SQL and .NET Core
 - Introduction to SQL for validation and test data management
 - Writing automated tests for database validation
 - Using EF Core for data setup and teardown in tests

Continuous Integration & Test Automation in DevOps

- Continuous Integration with Azure DevOps
 - Introduction to CI/CD and its benefits
 - Setting up automated build pipelines with Azure DevOps
 - Integrating automated tests into CI pipelines
- Reporting and Test Metrics
 - Generating and analyzing test reports
 - Metrics for test coverage and defect tracking
 - Code quality and maintaining test coverage