

## ✓ **Project Intro and Scope**

## ✓ **ASP.NET Core and Microservices**

- Intro to ASP.NET Core
- Configurations
- Middleware
- IActionResult
- Intro to Microservices
- Advantages and disadvantages



## ✓ **Architecture Patterns**

- Intro to SOLID, Clean Code, Domain Driven Design
- Advantages and Disadvantages
- Patterns for Microservices (e.g. Gateway aggregation, DB per service)

## ✓ **Project Architecture Discussion**

## ✓ **Project Architecture Review**

## ✓ **Technical Setup**

## ✓ **New Year Dinner**

## ✓ **Intro to JS**

- Fundamentals (Variables, Data Types, Functions, Loops)
- Basic Objects
- Prototypes
- Inheritance
- Classes
- Event Loop

## ✓ **Generics**

- Covariance
- Contravariance
- Invariance
- Generic constraints

## ✓ **React.js - Part 1**

- Intro to React
- Setup and Tools
- JSX
- Element rendering

## ✓ **React.js - Part 2**

- Components
- Props
- State and Lifecycle

## ✓ **Collections**

- IEnumerable/IEnumerator
- Yield
- ICollection
- IList
- KeyedCollection

## ✓ **React.js - Part 3**

- Events
- Conditional formatting
- Lists and Keys



## ✓ **LINQ**

- Func and Actions
- LINQ to Object
- LINQ to SQL

## ✓ **React.js - Part 4**

- Forms
- Lifting State Up
- Composition vs Inheritance

## ✓ **Expressions - Part 1**

- Interaction

## ✓ **Expressions - Part 2**

- Paradigms

## ✓ **React.js - Part 5**

- Hooks
- Thinking in React
- Intro to React Router

## ✓ **React.js - Part 6**

- Paradigms
- Intro to Redux
- Intro to Bootstrap



## ✓ **Sync/Async Programming - Part 1**

- Threads (Create, Join etc.)

## ✓ **Sync/Async Programming - Part 2**

- ThreadPool
- Tasks
- Parallel

## ✓ **Sync/Async Programming - Part 3**

- async/await

## ✓ **Data Structures (Under the hood) - Part 1**

- Array
- List
- Linked List
- Stack
- Queue

## ✓ **Data Structures (Under the hood) - Part 2**

- HashSet
- Dictionary
- SortedDictionary

## ✓ **Data Structures (Under the hood) - Part 3**

- Read-only and Concurrent Collections



① During the project, you will also gain working experience with the following areas:

- ✓ Docker/kubernetes
- ✓ Azure/AWS
- ✓ Networking, Security
- ✓ .NET Core Applications Under Linux/WSL
- ✓ Enterprise Project Build Tools/Practices