

Wednesday, October 7, 2020

# **Project Intro and Scope**

Thursday, October 8, 2020

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

- Intro to ASP.NET Core
- Configurations
- Middleware
- IActionResult
- Intro to Microservices
- Advantages and disadvantages
- Monday, October 12, 2020

### **Architecture Patterns**

- Intro to SOLID, Clean Code, Domain Driven Design
- Advantages and Disadvantages
- Patterns for Microservices (e.g. Gateway aggregation, DB per service)
- Wednesday, October 14, 2020

# **Project Architecture Discussion**

Thursday, October 15, 2020

### **Project Architecture Review**

Monday, October 19, 2020

#### Intro to JS

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





Wednesday, October 21, 2020

### **Generics**

- Covariance
- Contravariance
- Invariance
- Generic constraints
- Thursday, October 22, 2020

# React.js - Part 1

- Intro to React
- Setup and Tools
- JSX
- Element rendering
- Monday, October 26, 2020

# React.js - Part 2

- Components
- Props
- State and Lifecycle
- (S) Wednesday, October 28, 2020

### **Collections**

- IEnumerable/IEnumerator
- Yield
- ICollection
- IList
- KeyedCollection
- Thursday, October 29, 2020

### React.js - Part 3

- Events





- Conditional formatting
- Lists and Keys
- Monday, November 2, 2020

### LINQ

- Func and Actions
- LINQ to Object
- LINQ to SQL
- Anonymous and dynamic types
- Wednesday, November 4, 2020

# React.js - Part 4

- Forms
- Lifting State Up
- Composition vs Inheritance
- Thursday, November 5, 2020

# **Expressions - Part 1**

- Interaction
- Monday, November 9, 2020

# **Expressions - Part 2**

- Paradigms
- Wednesday, November 11, 2020

### React.js - Part 5

- Hooks
- Thinking in React
- Intro to React Router
- Thursday, November 12, 2020

# React.js - Part 6





- Intro to Redux
- Intro to Bootstrap
- Monday, November 16, 2020

# Sync/Async Programming - Part 1

- Threads (Create, Join etc.)
- Wednesday, November 16, 2020

# Sync/Async Programming - Part 2

- ThreadPool
- Tasks
- Parallel
- Thursday, November 19, 2020

# Sync/Async Programming - Part 3

- async/await
- Monday, November 23, 2020

# Data Structures (Under the hood) - Part 1

- Array
- List
- Linked List
- Stack
- Queue
- Wednesday, November 25, 2020

# Data Structures (Under the hood) - Part 2

- HashSet
- Dictionary
- SortedDictionary





Thursday, November 26, 2020

# Data Structures (Under the hood) - Part 3

- Read-only and Concurrent Collections
- i 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