	Subject	Date	Time
1	**Basics of C# Programming**		
1.1	C# language and .NET platform	3.01.24	18:00
1.2	Variables		
1.3	Data types		
1.4	Static variables and constants		
1.5	Working with the console application		
1.6	Arrays		
1.7	C# arithmetic/comparison operations		
1.8	If else and Switch case constructions		
1.9	Loops (For, Foreach, While, Do-while)	4.01.24	18:00
1.10	Methods		
1.11	Method with params parameter		
1.12	Ref and Out keywords in methods		
1.13	Local and recursive function		
1.14	Tuple and Enum		
2	**Classes, structures and namespaces**		
2.1	Classes and objects	9.01.24	18:00
2.2	Constructors, initializer, and destructors		
2.3	Fields and properties		
2.4	Method and static method in class		
2.5	Structures		
2.6	Record type		
2.7	Namespace and global namespace		
2.8	Partial and extended classes	11.01.24	18:00
2.9	Value types and reference types		
2.10	Nullability in value types and reference types		
2.11	Accessibility of the class and class members		
3	Improve searching and designing knowledges		
3.1	How to search/find what you need?		
3.2	How to use AI chats correctly?		
3.3	Select a project to atomize your organization		

4	**Delegates, Events, and Lambdas**	16.01.24	18:00
4.1	Delegates and using of that		
4.2	Action and Func Delegates		
4.3	Anonymous Methods		
4.4	Lambdas		
4.5	Events		
5	**Object-Oriented Programming (OOP)**		
5.1	What is OOP and its concepts in C#?	18.01.24	18:00
5.2	Inheritance		
5.3	Abstract Classes		
5.4	Read-only Properties in a Class		
5.5	Virtual Methods and Properties		
5.6	Hiding, Overriding, and Abstract Methods		
5.7	Interfaces		
5.8	Interface Inheritance		
5.9	Generic Classes		
5.10	Generic Methods		
5.11	Generic Properties		
6	**Collections and LINQ**		
6.1	List<T>		
6.2	Dictionary<Tkey, Tvalue>		
6.3	ConcurrencyDictionary<Tkey, Tvalue>		
6.4	Span<T>		
6.5	Queue<T>		
6.6	Stack<T>		
6.7	HashSet<T>		
6.8	IEnumerable<T> and IQueryable<T>		
6.9	LINQ-queries		
11	**Multithreading**		
11.1	Introduction		
11.2	Running Code Simultaneously		
11.3	Processes		

11.4	Threads		
8	**Parallelism**		
8.1	Introduction		
8.2	Difference Between Concurrency and Parallelism		
8.3	Launching a New Thread		
9	**Asynchronous and Synchronous**		
9.1	Introduction		
9.2	Difference Between Concurrency, Parallelism, and Asynchrony		
9.3	Async/await methods		
10	**Concurrency**		
10.1	Introduction		
10.2	Difference Between Concurrency and Multithreading		
10.3	Avoid of concurrency issue		
11	**Memory Management in .NET**		
11.1	Value and reference types		
11.2	Stack and Heap		
11.3	Mutable and Immutable classes		
11.4	Boxing and Unboxing		
11.5	Garbage collector		
11.6	Small/Large Object Heap		
11.7	Managed and unmanaged code		
11.8	Dispose Pattern		
11.9	Finalizer		
12	**SOLID**		
12.1	Single Responsibility Principle		
12.2	Open-closed Principle		
12.3	Liskov substitution Principle		
12.4	Interface Segregation Principle		
12.5	Dependency Inversion Principle		

13	**Design patterns**		
13.1	Introduction		
13.2	Pattern Types		
13.3	Creational patterns		
13.4	Structural patterns		
13.5	Behavioral patterns		
13.6	Repository, Strategy, Dependency Injection pattern		
14	**Exam** 1		
15	**ASP.NET Core**		
15.1	Introduction to ASP.NET Core		
15.2	Rules for creating routes		
15.3	Logging in ASP.NET Core		
16	**REST and API**		
16.1	Introduction to REST		
16.2	Basic principles		
16.3	Http methods and responses		
17	**Entity Framework Core (ORM)**		
17.1	Entity Framework Core		
17.2	Using Entity Framework Core in ASP.NET Core		
17.3	Modeling and creating tables		
17.4	Creating relationships between tables		
17.5	CRUD with Entity Framework Core		
17.6	Repository pattern for CRUD operation		
17.7	Approaches for obtaining data: Eager, Lazy loading		
17.8	Migration management		
18	**Dependency injection (DI)**		
18.1	Introduction		
18.2	Dependency Lifecycle		

24.2	TDD principles		
24.3	Practice: Creating a simple calculator using TDD		
25	**Unit testing**		
25.1	Using the NUnit framework		
25.2	Using the xUnit framework		
25.3	Mock testing		
25.4	Mocking using Moq		
25.5	Mocking using NSubstitute		
26	**Integration tests**		
26.1	Working with WebApplicationBuilderFactory		
26.2	Creating an HttpClient from a WebApplicationBuilderFactory		
26.3	EF Core configuration under different test environments		
26.4	Using services from WebApplicationBuilderFactory		
27	**Blazor**		
28.1	Introduction		
28.2	Blazor Web Assembly and Server		
28.3	Razor pages		
28.4	Create your first Blazor Web Assembly project		
29	**Blazor pages and templates**		
29.1	Creating pages and specifying the address		
29.2	Creating and applying a template		
29.3	Writing C# code inside a page		
30	**Blazor Authentication and Authorization**		
30.1	Introduction		
30.2	Creating a CustomAuthStateProvider		
30.3	Saving the token in local storage		
30.4	Authorization in pages		
31	**Blazor CRUD**		