

Day 3: More C# concepts, TDD with xUnit.NET, brief intro to CodedUI

Q&A	15 minutes
----------------	-------------------

C# 5.0 Concepts III: LINQ		120 minutes	
<i>Module</i>	<i>Topics</i>	<i>Duration</i>	<i>Elapsed time</i>
Extension Methods	What is an extension method? Declaring an extension method Using an extension methods	10m	25m
Exercises	<ul style="list-style-type: none"> Create an extension method 	10m	35m
C# and LINQ	Overview and Language Extensions Lambda expressions Expression Trees Query Expressions Type Inference Anonymous Types	10m	45m
Queries and operators	Standard operators Filtering Sorting Ordering Sets Quantifiers Projection Select/SelectMany Partitioning Joins Conversions Concatenation Aggregation Grouping	20m	65m
Demos	Various LINQ concepts and LINQPad	10m	75m
Exercises / break	<ul style="list-style-type: none"> Query list objects for objects with particular values Construct LINQ queries to join and project two sets of data into a result data set 	15m ex 15m br	120m

C# 5.0 Concepts IV: async		90 minutes	
<i>Module</i>	<i>Topics</i>	<i>Duration</i>	<i>Elapsed time</i>
TPL	What are tasks? Implementing a task Waiting for a task to complete Chaining tasks Cancelling a task	15m	135m
Exercise	<ul style="list-style-type: none"> Implementing a task and continuing after completion 	15m	150m

Async/await	What is await / async?	15m	165m
Exercises / break	<ul style="list-style-type: none"> Implementing a task and waiting until completion Create and call a method using async/await 	15m ex 45m br	225m

TDD with xUnit.net		60m minutes	
<i>Module</i>	<i>Topics</i>	<i>Duration</i>	<i>Elapsed time</i>
Overview	What is TDD? Why use TDD? Tools for TDD	15m	240m
Installing xUnit.Net	Where to get it How to install it How to use it in VS.NET	10m	250m
Creating tests	What is a test? What is a good test? Creating tests with xUnit.NET Running tests	15m	280m
Exercise	<ul style="list-style-type: none"> Create and run a test 	15m	295m
Data Driven Testing	Creating data driven tests	10m	305m
Exercise / break	<ul style="list-style-type: none"> Create and run a data driven test 	15m ex 15m br	335m

Intro to CodedUI		60m minutes	
<i>Module</i>	<i>Topics</i>	<i>Duration</i>	<i>Elapsed time</i>
Intro	What is CodedUI? Supported Technologies	5m	340m
Working with CodedUI	Test Builder Hand coding Creating testable UI's	20m	360m