



TRAILHEAD
TECHNOLOGY PARTNERS

.NET and C# Training

Session 9

Overall Agenda

~~Session 1 – 6: Basic and Advanced C# and VS~~

~~Session 7: Classes available in .NET BCL~~

~~Session 8: Data Access Basics (ADO.NET)~~

Session 9 - 10: C# Advanced concepts

2 Week Break

Session 11 – 12: Data Access with Entity Framework 6

Session 13 – 14: Version Control with TFVC and Git

Session 15 – 16: ASP.NET (RESTful) Web APIS

Today's Agenda

1. Review last assignment (1 hr 15 min)
2. Advanced C# (2 hr 30 min)
3. New assignment (15 min)

Review Last Assignment

Assignment 8

- Create a console to-do list application that stores its items and their statuses in a SQL Server LocalDB database
- Allow the user to view their to-do list, add items, remove items, and mark items complete

Challenge 1: Create you console as a CLI instead of menu-based. (ex:

```
todo help
todo add "item 1"
todo complete "item 1"
todo list
```

etc.)

Challenge 2: Allow the user to view completed items and mark then as incomplete

Advanced C#

Demo

IComparable and IComparer

Demo

Abstract vs Virtual

Demo

Unsafe code

Demo

Attributes

Demo

EventHandlers, Delegates, Funcs, Actions, Predicates

Demo

LINQ

Demo

Tuples

Demo

Configuration

Assignment 9

- Rewrite your assignment 7 project (or another applicable previous assignment) where you used loops to find items in arrays/collections and use LINQ instead
- Try using both query and methods syntaxes in your code

Challenge 1: Create a WinForms application that uses event handlers from UI components <https://docs.microsoft.com/en-us/dotnet/desktop/winforms/event-handlers-overview-windows-forms?view=netframeworkdesktop-4.8>