



**TRAILHEAD**  
TECHNOLOGY PARTNERS

# .NET and C# Training

Session 4

# Review Assignment 3

# Today's Agenda

1. Review Assignment 3 (45 min)
2. C# Introduction (3 hr)
3. Assignment 4 (15 min)

# Assignment 3

- Write a console application that plays a simple number guessing game
- The game should pick a random number between 1 and 10
- It should then repeatedly prompt the user to guess the number until it is successfully guessed, outputting whether the guess was "too high" or "too low" for wrong guesses
- Sample interaction

```
Guess the number between 1 and 10
5
Too high
3
Too low
4
You win!
```
- Challenge 1: Prompt the user to input the maximum number they want to guess between 1 and X
- Challenge 2: Validate all user input is a valid integer and falls between 1 and X

# C# Introduction

# Demo

Loops: while, for, foreach, do...while, break, continue

# Demo

Enums and Structs

# Demo

Equality Comparisons



# Demo

Arithmetic Operations, Increment, Decrement, Addition/Subtraction Assignment

# Demo

String Operations

# Demo

Casting and Conversion

# Demo

Null, null coalescing

# Demo

Static Members

# Demo

Arrays

# Demo

Collection Types

# Demo

Try...Catch

Try...Catch...Finally



# Demo

Throwing exceptions

# Demo

IDisposable and Using block

# Demo

Visual Studio Panes: Documents, Solution Explorer, Toolbox, Properties, Output, Object Browser

# Assignment 4

- Create a console application that is a text-to-morse-code converter
- See the [Morse Code chart](#) on Wikipedia
- Ignore all non-alphanumeric characters
- Use '.' for dot and '-' for dash and a space between each character
- Sample interaction

Enter your text to convert to Morse code

This is a test

Your Morse code is:

- .... .. ... ..... - ..... - . ... -

- Challenge: Offer the user a menu to select either 1) Text-to-Morse or 2) Morse-to-text and also implement conversions from Morse code to text

<https://github.com/jonathantower/learning-dotnet>