Wk1 Learning Objectives

By the end of this lesson, students will:

1. **Understand Basic Data Types**: Learn about the fundamental data types in C#, such as int, float, double, char, bool, and string.
2. **Variable Declaration and Initialization**: Understand how to declare and initialize variables using different data types.
3. **Type Conversion and Casting**: Learn how to convert between different data types and perform explicit and implicit casting.
4. **Operators and Expressions**: Understand how to use arithmetic, relational, logical, and bitwise operators with various data types.
5. **String Manipulation**: Learn how to work with strings, including concatenation, formatting, and common string methods.
6. **Arrays and Collections**: Understand how to use arrays and collections to store and manipulate groups of data.
7. **Nullable Types**: Learn about nullable types and how to handle null values in C#.
8. **Enumerations**: Understand how to define and use enumerations to represent a set of named constants.
9. **Type Safety and Type Inference**: Learn about type safety and how C# ensures type safety through features like type inference with the var keyword.
10. **Memory Management**: Understand how C# manages memory for different data types, including value types and reference types.