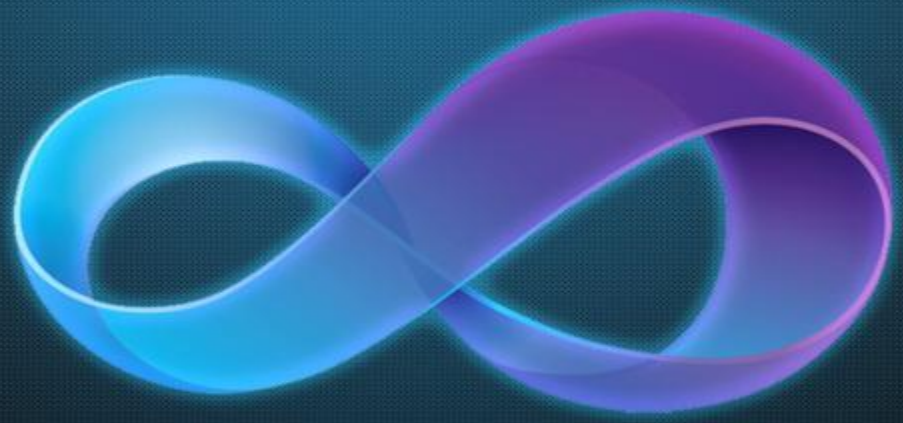
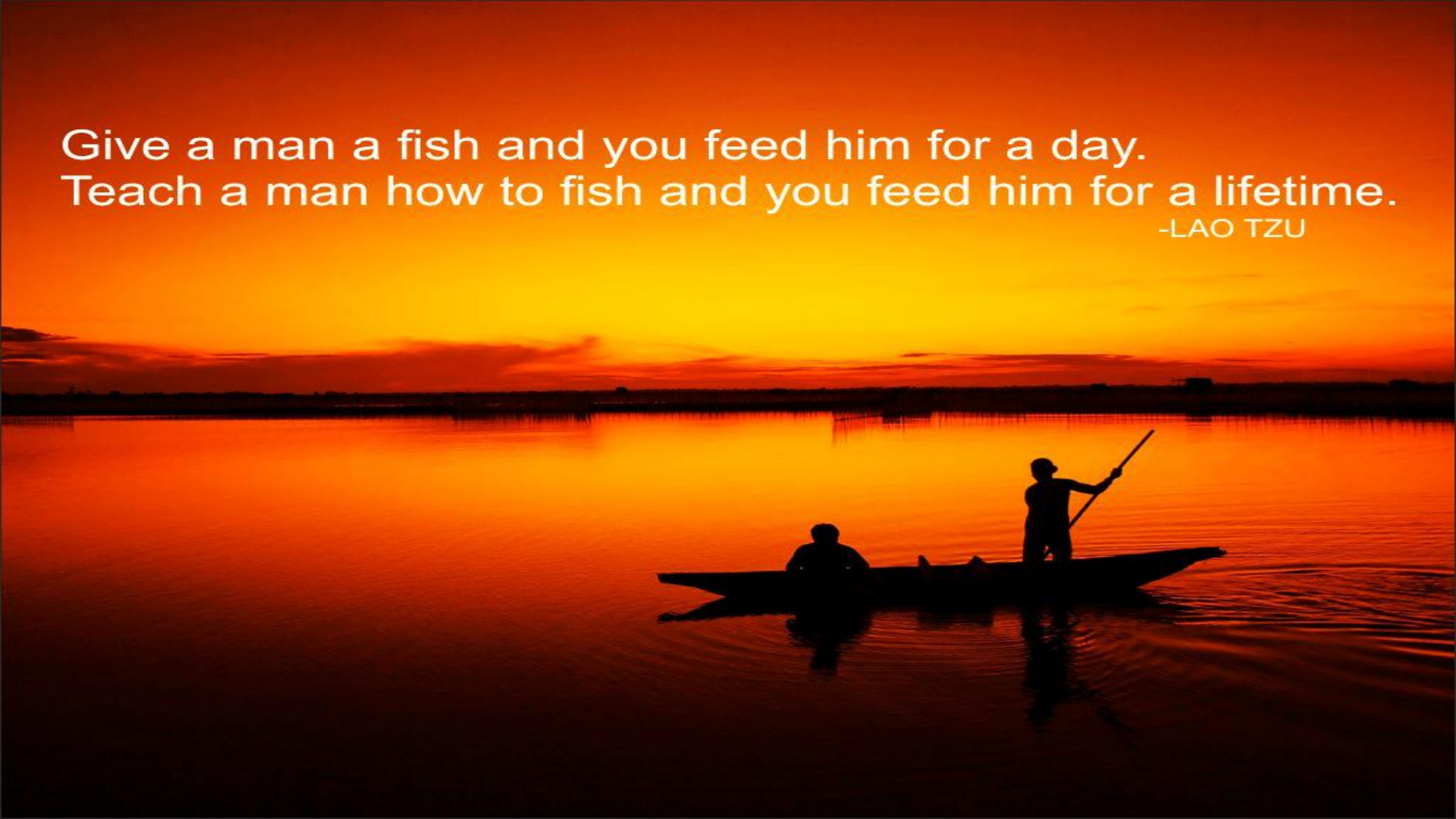


@* life runs on code *@

Darwin Alvin I. Sunga


Give a man a fish and you feed him for a day.
Teach a man how to fish and you feed him for a lifetime.
-LAO TZU

CHAPTER 01: Lesson 1

Introduction to .Net Framework

Darwin Alvin I. Sunga

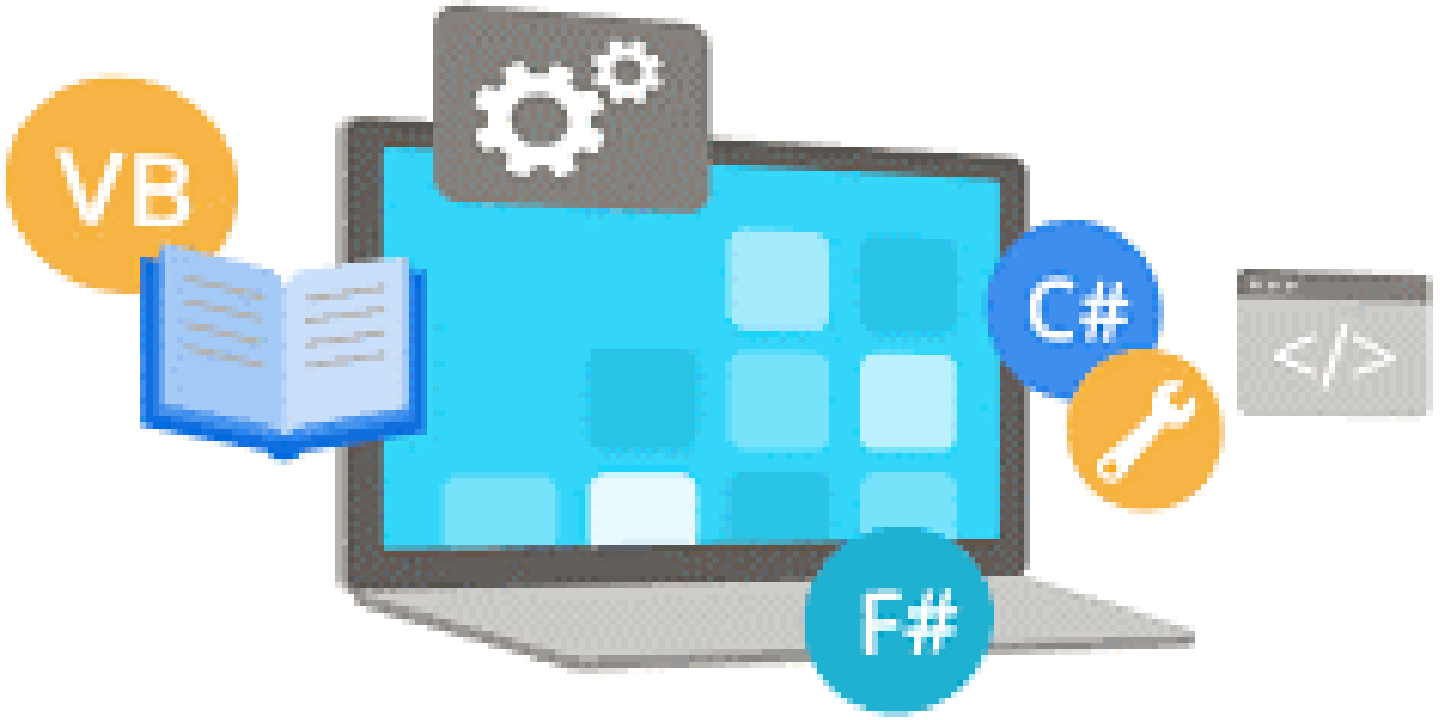
At the end of this chapter, the students should able to :

1. Learn what is

- What is .Net
- .NET Framework
- Architecture of .NET Framework
- .NET Integrated Development Environment (IDE)

1

What is .NET?



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What is .NET?

.NET is a free, cross-platform, open source developer platform, created by Microsoft, for building many different types of applications.

Note : You can write .NET apps in C#, F#, or Visual Basic.

- C# - a simple, modern, object-oriented, and type-safe programming language.
- F# - a programming language that makes it easy to write succinct, robust, and performant code.
- Visual Basic - an approachable language with a simple syntax for building type-safe, object-oriented apps.

https://dotnet.microsoft.com/en-us/learn/dotnet/what-is-dotnet

You can build many types of apps with .NET. Some are cross-platform, and some target a specific OS or .NET implementation.

Web

Build web apps and services for Windows, Linux, macOS, and Docker.

Mobile

Use a single codebase to build native mobile apps for iOS, Android, and Windows.

Desktop

Create beautiful and compelling desktop apps for Windows and macOS.

Microservices

Create independently deployable microservices that run on Docker containers.

Cloud

Consume existing cloud services, or create and deploy your own.

Machine Learning

Add vision algorithms, speech processing, predictive models, and more to your apps.

Game Development

Develop 2D and 3D games for the most popular desktops, phones, and consoles.

Internet of Things

Make IoT apps, with native support for the Raspberry Pi and other single-board computers.

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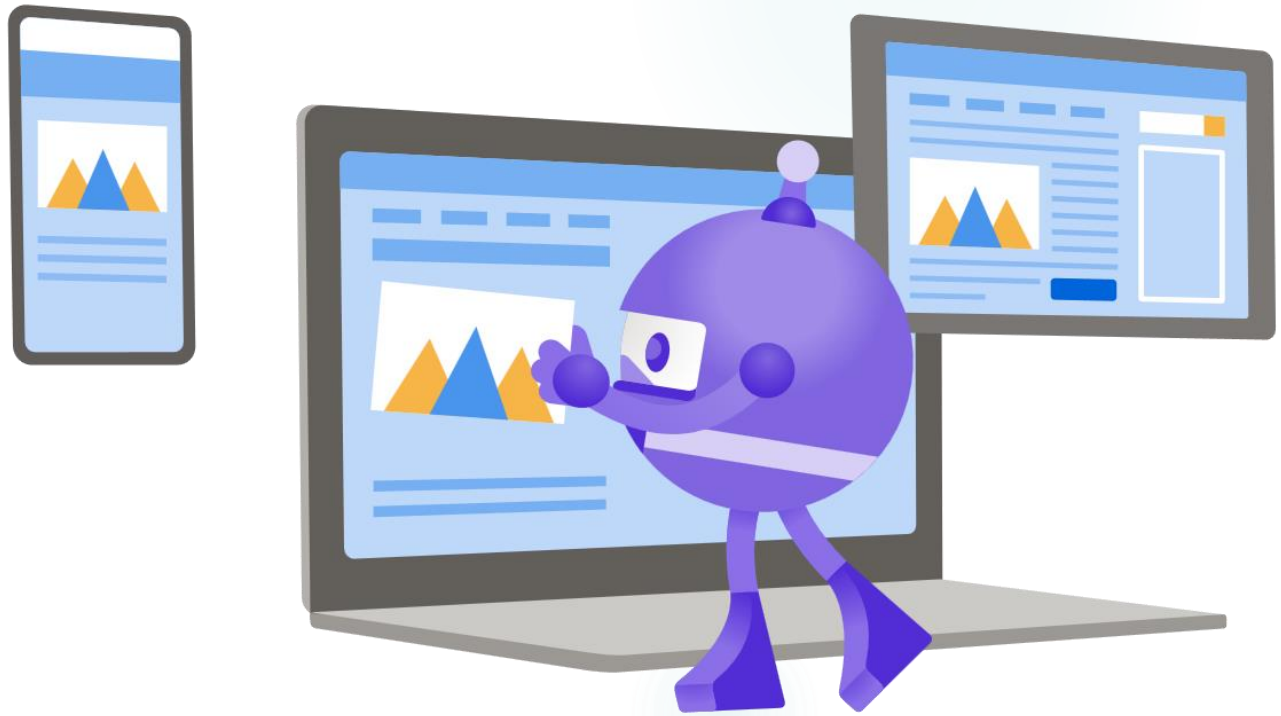
2

What is a Framework?

.NET

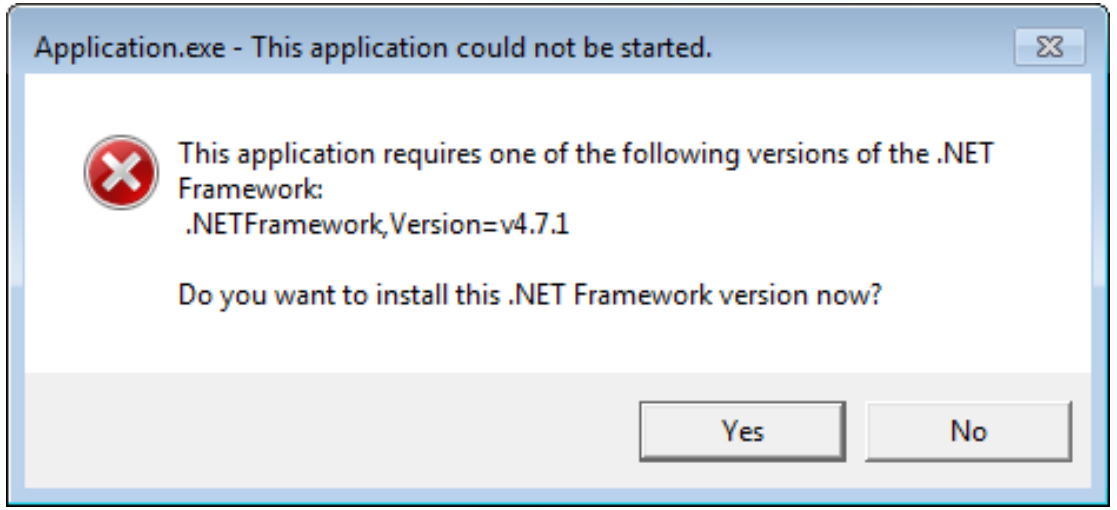


https://dotnet.microsoft.com/en-us/learn/dotnet/what-is-dotnet-framework

What is NET Framework?

.NET Framework is a software development framework for building and running applications on Windows (originally).

.NET Framework is part of the .NET platform (a collection of technologies for building apps for Linux, macOS, Windows, iOS, Android, and more)



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3

.NET

Understanding .NET FRAMEWORK Architecture

https://dotnet.microsoft.com/en-us/learn/dotnet/what-is-dotnet-framework

Two major components of .NET Framework

- Common Language Runtime
- .NET Framework Class Library.

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Two major components of .NET Framework

Common Language Runtime (CLR)

is the execution engine that handles running applications. It provides services like thread management, garbage collection, type-safety, exception handling, and more.

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Two major components of .NET Framework

Class Library

provides a set of APIs and types for common functionality. It provides types for strings, dates, numbers, etc. The Class Library includes APIs for reading and writing files, connecting to databases, drawing, and more.

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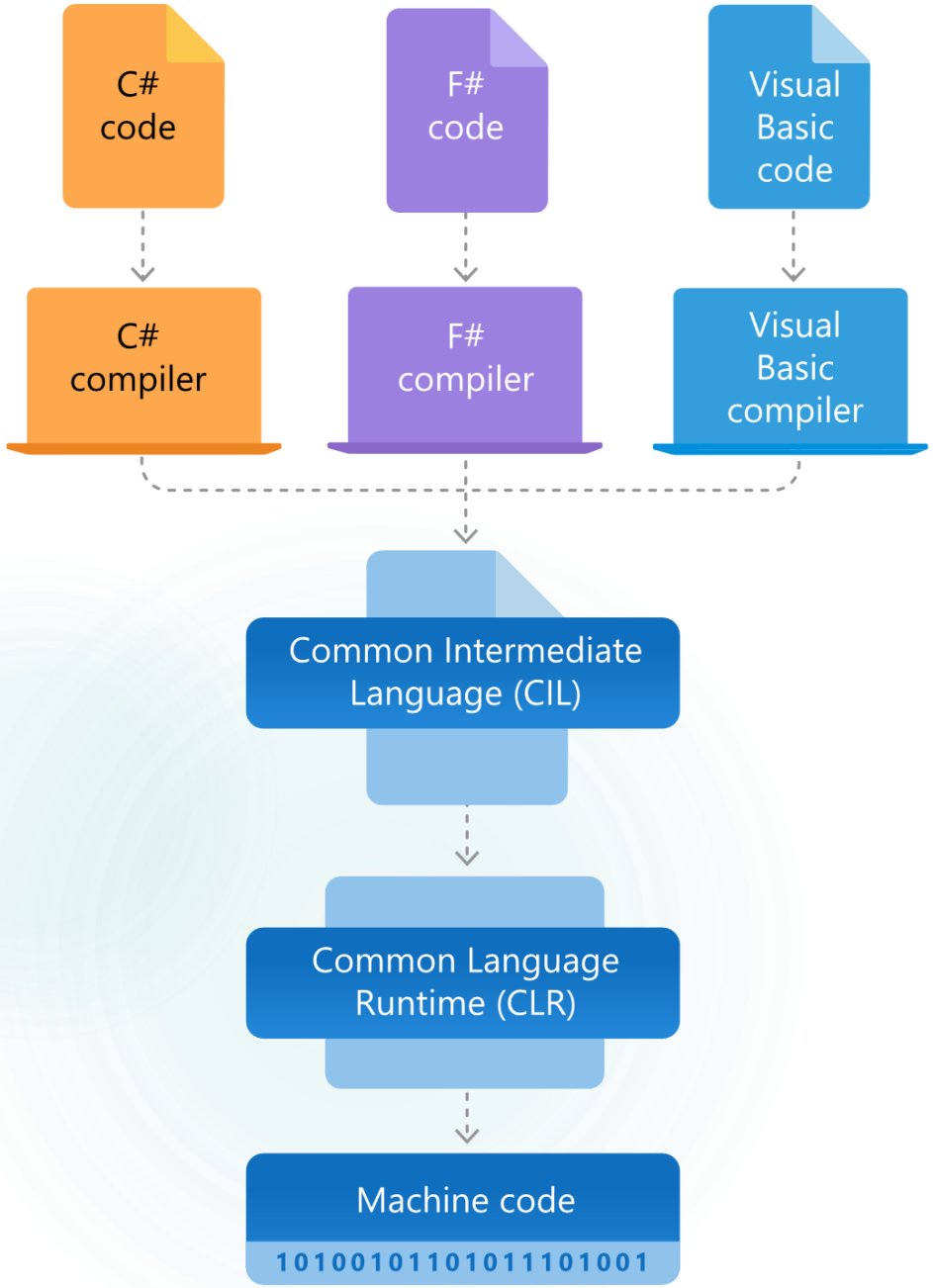

.NET applications are written in the C#, F#, or Visual Basic programming language. Code is compiled into a language-agnostic Common Intermediate Language (CIL). Compiled code is stored in assemblies—files with a .dll or .exe file extension.

When an app runs, the CLR takes the assembly and uses a just-in-time compiler (JIT) to turn it into machine code that can execute on the specific architecture of the computer it is running on.

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What is an

Integrated Development Environment

https://www.redhat.com/en/topics/middleware/what-is-ide

An integrated development environment (IDE) is software for building applications that combines common developer tools into a single graphical user interface (GUI).

https://www.redhat.com/en/topics/middleware/what-is-ide

Microsoft provides the following development tools for VB.NET, C# and F# programming

- Visual Studio (VS)
- Visual Studio Express
- Visual Web Developer

https://www.tutorialspoint.com/csharp/csharp_environment_setup.htm

THANK
YOU

Advance Lesson :

1. C#

- ✓ What is C#?
- ✓ Syntax
- ✓ Comments
- ✓ Variables
- ✓ Data Types
- ✓ Type Casting

THANK
YOU