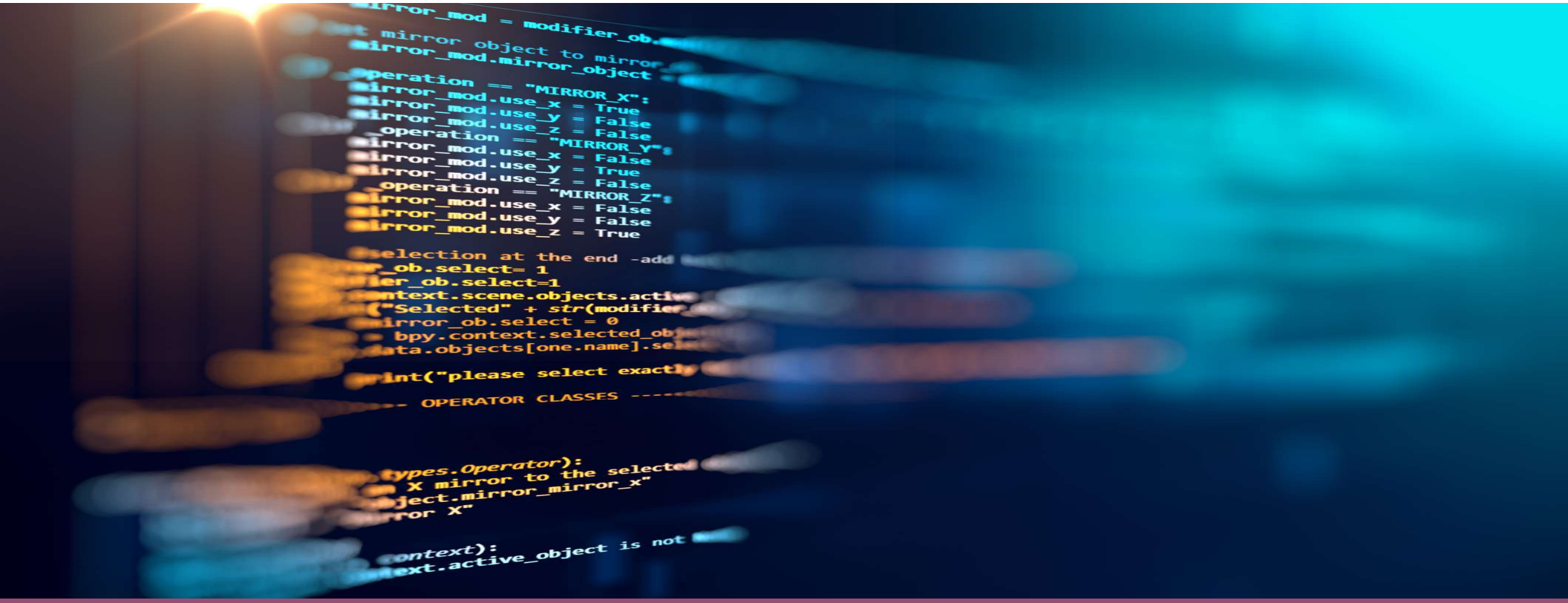


Intro To C#

Mohamed Elshafie

Overview

- Introduction to Software
- Software vs Application vs Program
- SDLC
- Programing language
- C# programing language
- C# complication process
- Create project
- Hello ,World

Program vs Application

- **A program :** is a set of instructions (written in form of human-readable code) that performs a specific task.
- **Application:** A program or group of programs that is designed for the end user. Application software (an application) is a set of computer programs designed to permit the user to perform a group of coordinated functions, tasks, or activities.

What is software?

Application

+

Associated Documentation

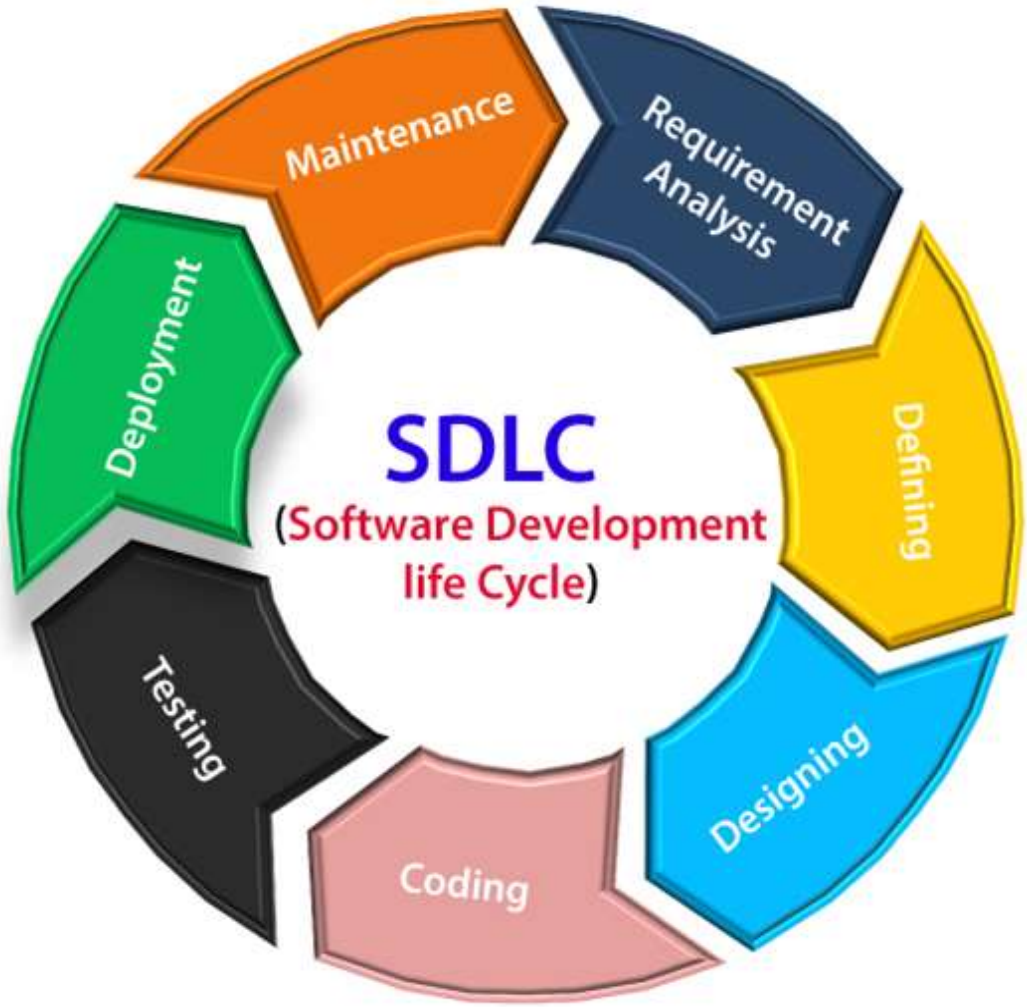
Documentation Types:

- user Documentation
- Technical Documentation
- Marketing Documentation

Introduction To Software

SDLC

Software Development Life Cycle



1. Identify the Current Problems

"What are the current problems?" This stage of the SDLC means getting input from all stakeholders, including customers, salespeople, industry experts, and programmers. Learn the strengths and weaknesses of the current system with improvement as the goal

2. Plan

“What do we want?” In this stage of the SDLC, the team determines the cost and resources required for implementing the analyzed requirements. It also details the risks involved and provides sub-plans for softening those risks.

In other words, the team should determine the feasibility of the project and how they can implement the project successfully with the lowest risk in mind.

3. Design

“How will we get what we want?”
This phase of the SDLC starts by turning the software specifications into a design plan called the Design Specification.
All stakeholders then review this plan and offer feedback and suggestions.
It’s crucial to have a plan for collecting and incorporating stakeholder input into this document.
Failure at this stage will almost certainly result in cost overruns at best and the total collapse of the project at worst.

4. Build

“Let’s create what we want.”
At this stage, the actual development starts. It’s important that every developer sticks to the agreed blueprint. Also, make sure you have proper guidelines in place about the code style and practices.
For example, define a nomenclature for files or define a variable naming style such as camelCase. This will help your team to produce organized and consistent code that is easier to understand but also to test during the next phase.

5. Code Test

“Did we get what we want?”
In this stage, we test for defects and deficiencies. We fix those issues until the product meets the original specifications.

In short, we want to verify if the code meets the defined requirements.

6. Software Deployment

“Let’s start using what we got.”

At this stage, the goal is to deploy the software to the production environment so users can start using the product. However, many organizations choose to move the product through different deployment environments such as a testing or staging environment.

7.Software Maintenance

After the deployment of a product on the production environment, maintenance of the product i.e. if any issue comes up and needs to be fixed or any enhancement is to be done is taken care by the developers.

SDLC Models & Methodologies

1) Waterfall Model
2) V-Shaped Model
3) Prototype Model
4) Spiral Model
5) Iterative Incremental Model
6) Big Bang Model
7) Agile Model

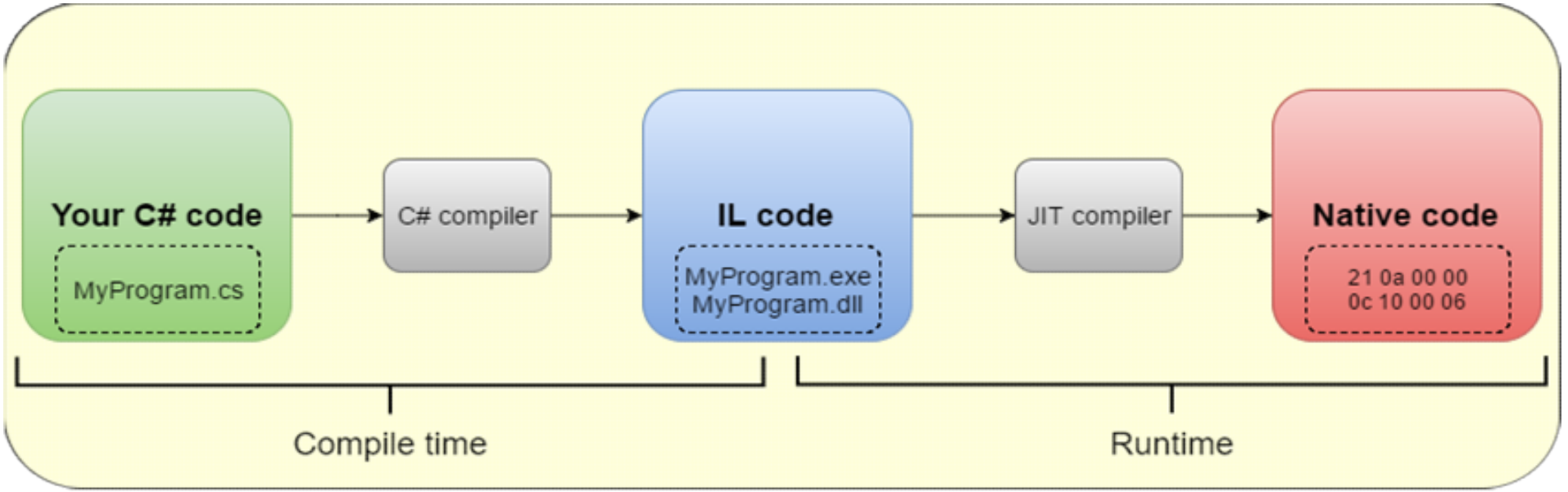
C Sharp (programming language)

C# is a modern, object-oriented, and type-safe programming language. C# enables developers to build many types of secure and robust applications that run in .NET. C# has its roots in the C family of languages and will be immediately familiar to C, C++, Java, and JavaScript programmers.

Why C#?

- Simple
- Modern programming language
- Multi propose
- Object oriented
- Type safe
- Managed code
- Scalable and Updateable
- Rich Library
- Fast speed

C# compilation process

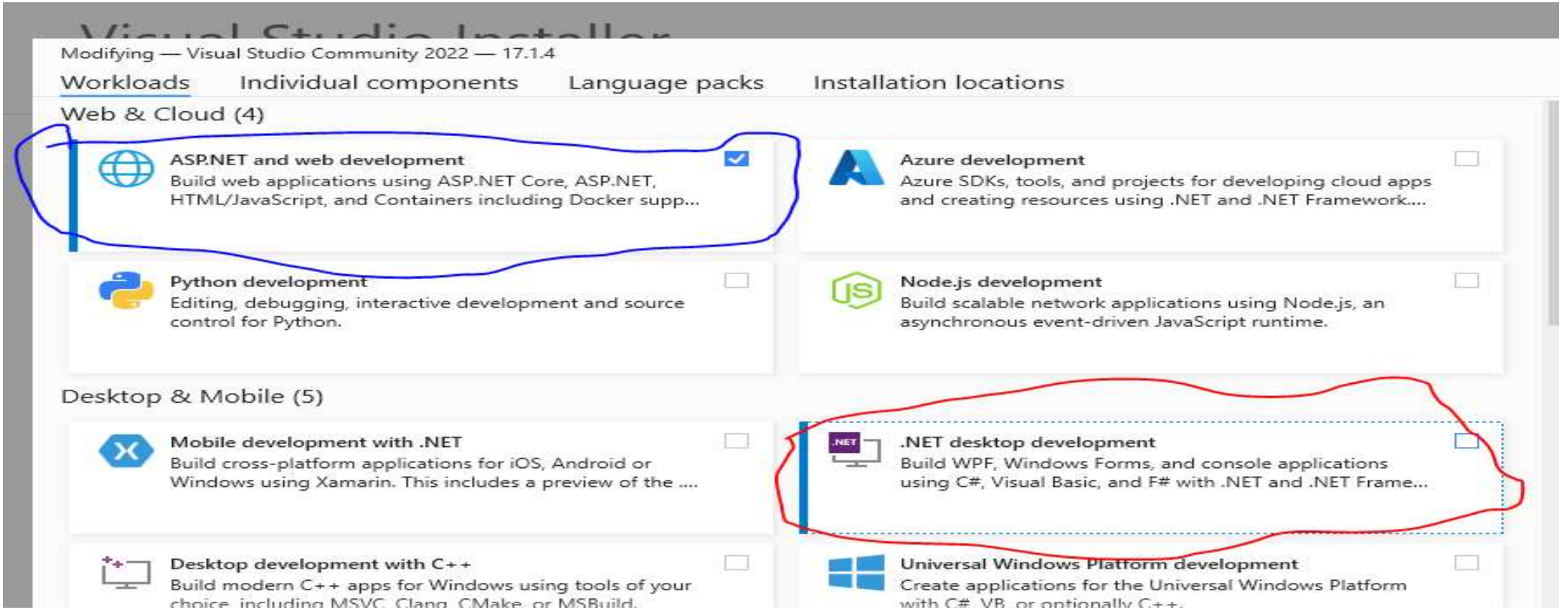


Install Visual Studio

Download Visual studio 2022

- Go to https://visualstudio.microsoft.com/vs/community/
- Click download Visual Studio

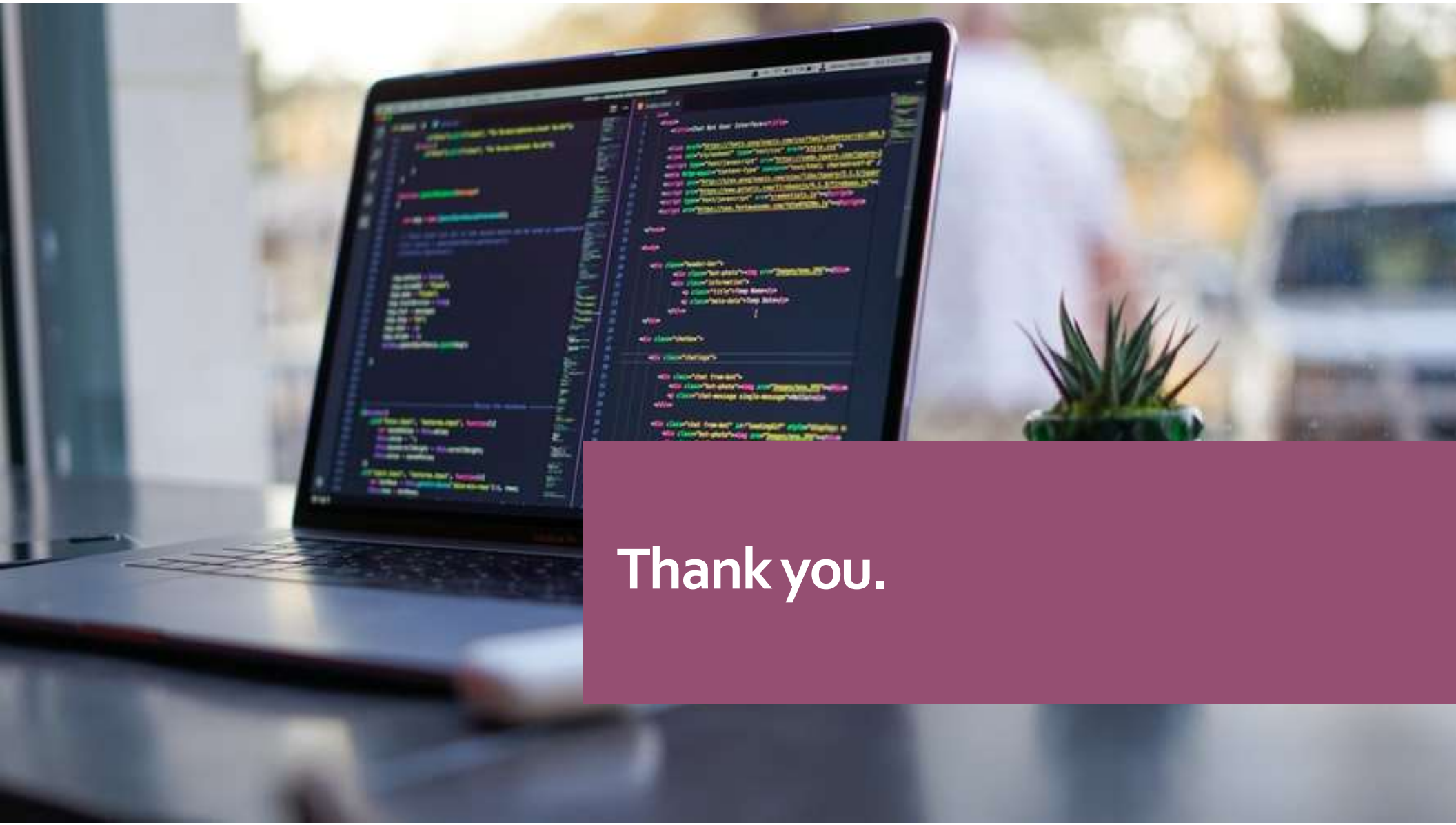
Install Visual Studio



C# First Program

```
using System;

class Hello
{
    static void Main()
    {
        Console.WriteLine("Hello, World");
    }
}
```


Thank you.