



Tutorial 1

Introduction to Assembly

By: Aya Farrag

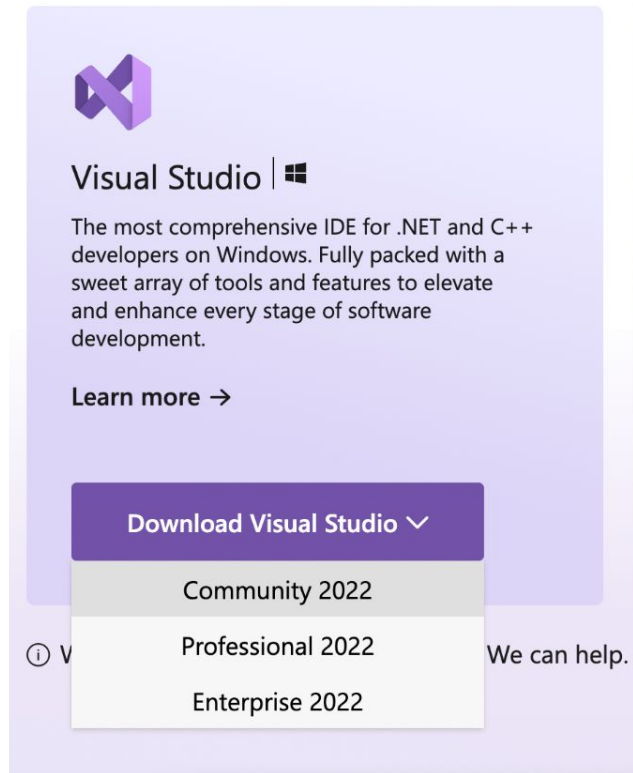


Requirements

- Computer with an x86 processor (M1/M2 chip is not compatible)
 - Check for your system information and make sure it has x86 or x64
- Visual Studio 2022
- Assembler:
 - For Windows: Microsoft Assembler MASM (installed automatically with the Visual Studio)
 - For Linux/Mac: Netwide Assembler NASM (<https://www.nasm.us/>)

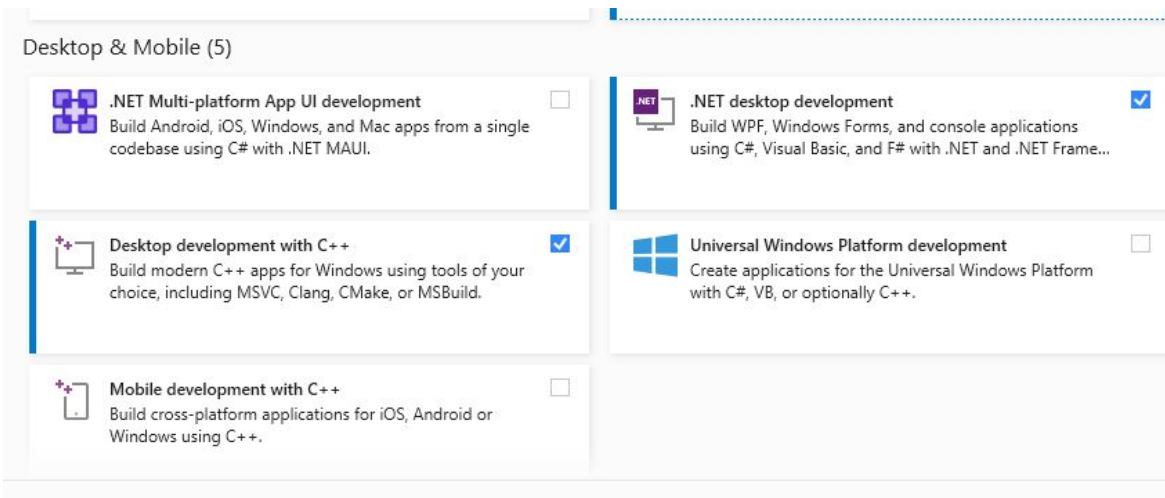
1) Install Visual Studio

- Go to <https://visualstudio.microsoft.com/>
- Click Download Visual Studio
- Choose Community 2022



2) Install necessary components

- Open the installer
- Select the needed development components as shown in this slide
- Click Install





3) Download and run projects

- Download the tutorial files from this [link](#) and extract the zip files
- Copy both projects folders and the Irvine folder to the C:\ directory
- For each of the two projects, follow these steps:
 1. In the project folder, open Project.sln (Visual Studio Solution) using VS2022
 2. Build the solution (Build>Build Solution) and make sure it builds successfully
 3. Add a breakpoint at line number 10 and start debugging (Debug>Start Debugging Or press F5)
 4. After the code starts running in debug mode, view registers (Debug>windows>Registers)
 5. Press F10 to run the next lines and check how the registers change after each line
 6. Take a screenshot showing the registers and the code after running line number 12
- Upload your screenshots to the [tutorial folder](#) on D2L