Coding and Mechatronics
Integrated Development Environments (IDEs)

U3A Bendigo Short Course, Michael Gallagher, 14th May 2019

Microsoft Visual Studio

An integrated development environment from Microsoft. It is used to develop computer programs, as well as websites, web apps, web services and mobile apps. Visual Studio uses Microsoft software development platforms such as Windows API, Windows Forms, Windows Presentation Foundation, Windows Store and Microsoft Silverlight. It can produce both native code and managed code.

Visual Studio includes a code editor supporting IntelliSense (a code completion component). The integrated debugger works both as a source-level debugger and a machine-level debugger. Visual Studio supports 36 different programming languages and allows the code editor and debugger to support (to varying degrees) nearly any programming language, provided a language-specific service exists. Built-in languages include C, C++, C++/CLI, Visual Basic .NET, C#, F#, JavaScript, TypeScript, XML, XSLT, HTML, and CSS. Support for other languages such as Python, Ruby, Node.js, and M among others is available via plug-ins.

Visual Studio can be installed on Windows or Macintosh PCs. The most basic edition of Visual Studio, the Community edition, is available free of charge and can be downloaded from: https://visualstudio.microsoft.com/downloads/

Xcode

An Integrated Development Environment developed by Apple. The vast majority of iOS developers rely on it for making Macintosh, iPhone or iPad applications. Xcode 10 can only be installed on a Mac running macOS 10.13.4 (High Sierra) or above but ideally you should be running macOS 10.14.0 or above.

https://developer.apple.com/xcode/

X-code is free and can be downloaded from the Apple App Store.

Raspberry Pi IDEs

The Raspbian Operating System (a version of Debian Linux) can be downloaded without charge from the Raspberry PI website and can be installed on the Raspberry Pi boards via an SD card. A comprehensive range of PC software is preinstalled. You can program the Raspberry PI by writing code in Python and other high-level languages via one of several preinstalled Integrated Development Environments (IDEs).

Numerous 3rd party operating systems can also be installed on the Raspberry Pi, each of which includes other IDEs.

https://www.raspberrypi.org/downloads/