C Programming

Lecture Zero

Installing Enverinoment

Tool chain definition

Source file
File.c
Written in C Language

Tool Chain

*Executable file*
File.exe
Written in Machine language
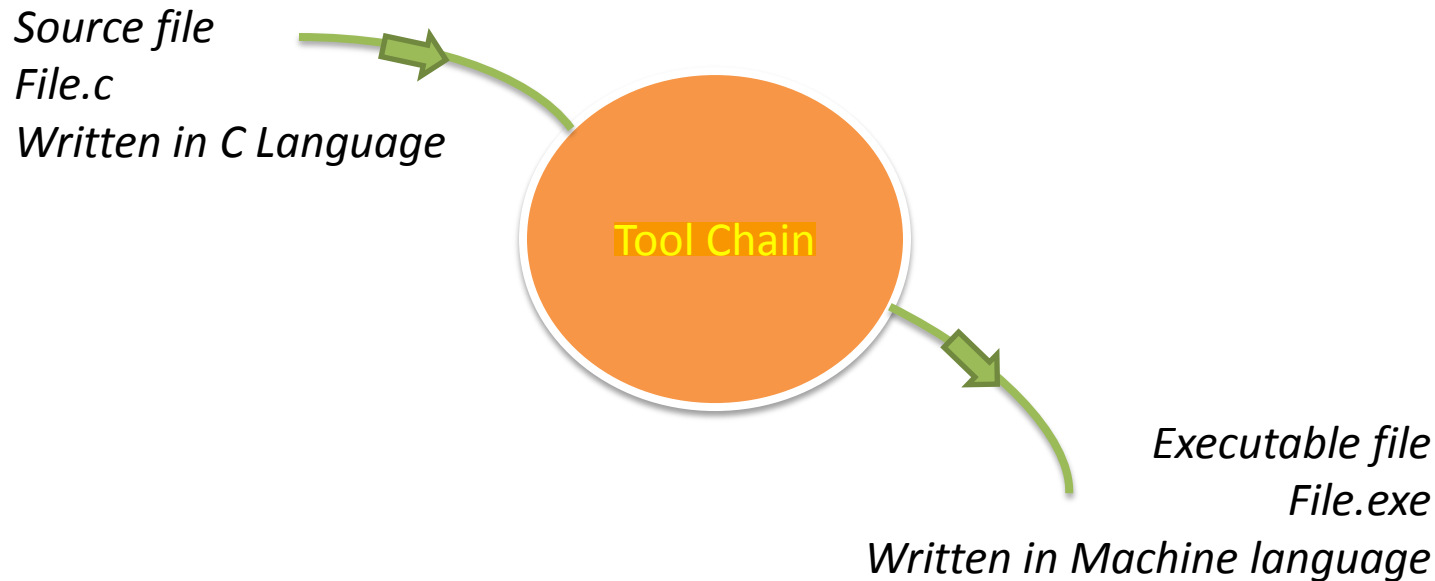
A tool chain **is a set of tools** *(will be discussed in details later on)* **that are used to convert the source file written in C, to the executable file written in machine language (** 0 and 1) to be run on the processor
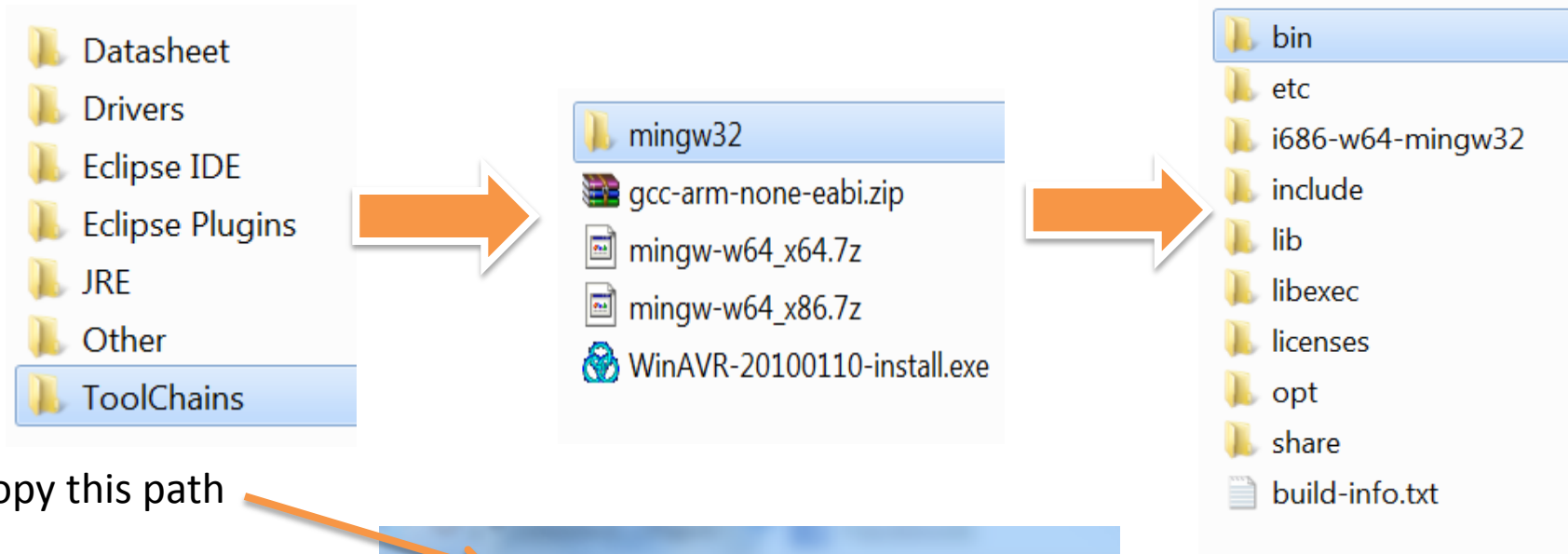
In our course we will use an open source tool chain called GCC

You will find it in the folder you received by your instructor under the director
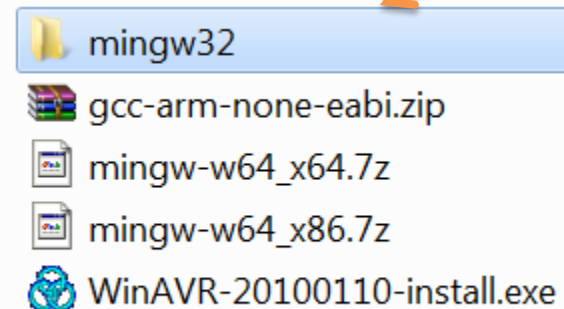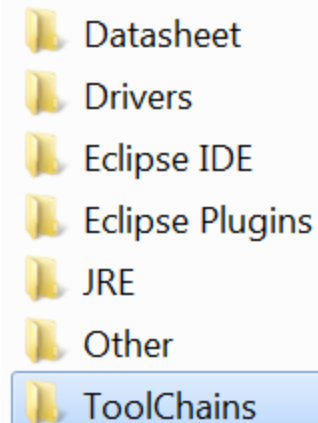
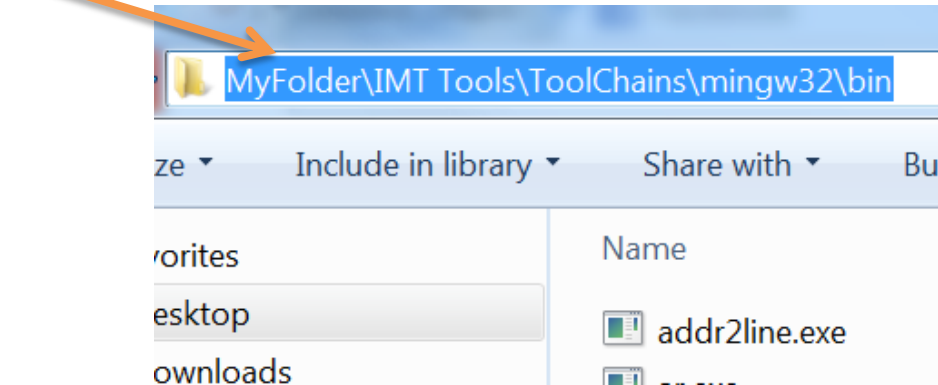*GCC for windows*

Step 1 : Copy the bin folder path
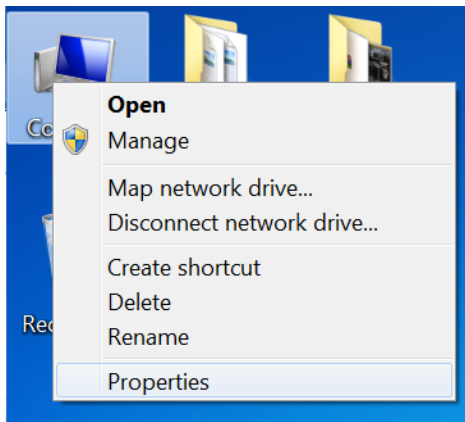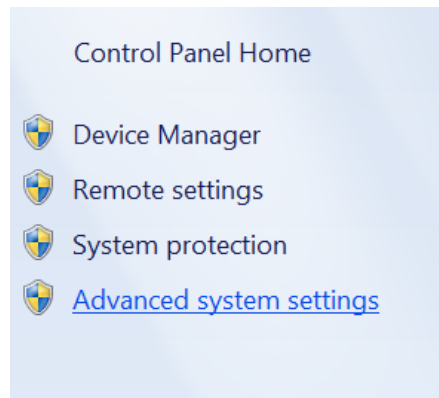

Copy this path

Step 2 : Paste the path of the bin folder in the Path Windows Environmental Variable

*Right click on my Computer
and click Properties*

*From left side, choose
Advanced system Settings*

Open
Manage

Map network drive...
Disconnect network drive...

Create shortcut
Delete
Rename

Properties

Control Panel Home

Device Manager

Remote settings

System protection

Advanced system settings

Choose Environment Variables
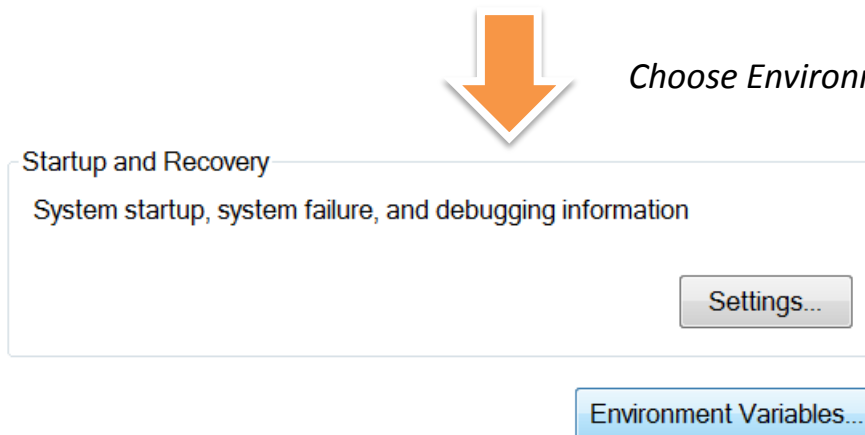
Startup and Recovery

System startup, system failure, and debugging information

Settings...

Environment Variables...

Step 2 : Paste the path of the bin folder in the Path Windows Environmental Variable

In the section System variables, search for Path and click Edit
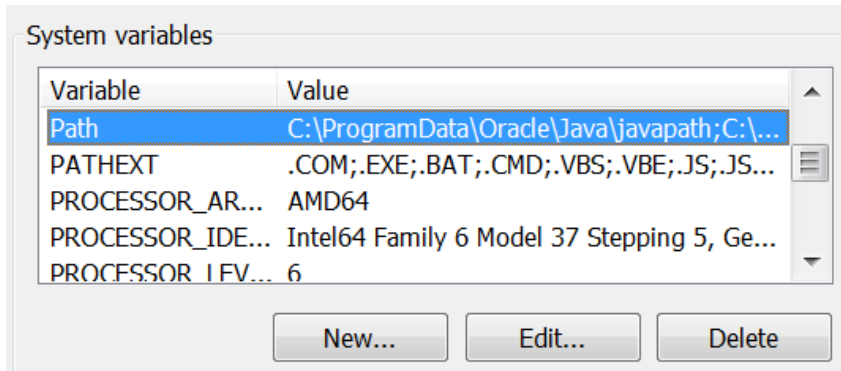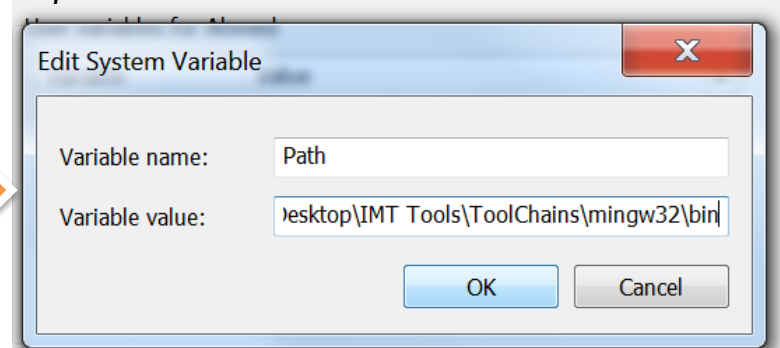
System variables

Variable	Value
Path	C:\ProgramData\Oracle\Java\javapath;C:\...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JS...
PROCESSOR_AR...	AMD64
PROCESSOR_IDE...	Intel64 Family 6 Model 37 Stepping 5, Ge...
PROCESSOR_LEV...	6

[New...] [Edit...] [Delete]

Go to the end of the Variable value and insert ; then paste the path you copied

Edit System Variable

Variable name: Path

Variable value:)esktop\IMT Tools\ToolChains\mingw32\bin
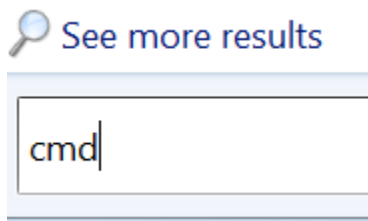
[OK] [Cancel]

Notes:

1- Take care, don't remove any thing from the Variable value, just add ; and then your path and press Ok

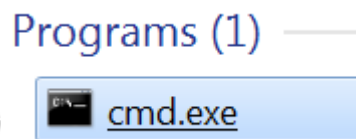2- In windows 10, click Add and then paste your path

Step 3 : Test The GCC instrallation

In the start menu, search for cmd

Open the cmd.exe

Write down gcc and press Enter, if you found this message then the installation is correct

See more results

cmd

Programs (1)

cmd.exe

```
C:\Users\Ahmed>gcc
gcc: fatal error: no input files
compilation terminated.
```

Notes:

1- If you found a message stating that gcc is not recognized, restart your computer and try again, if the message still existing, then the installation is not correct. Re-install your program or ask your instructor for help.
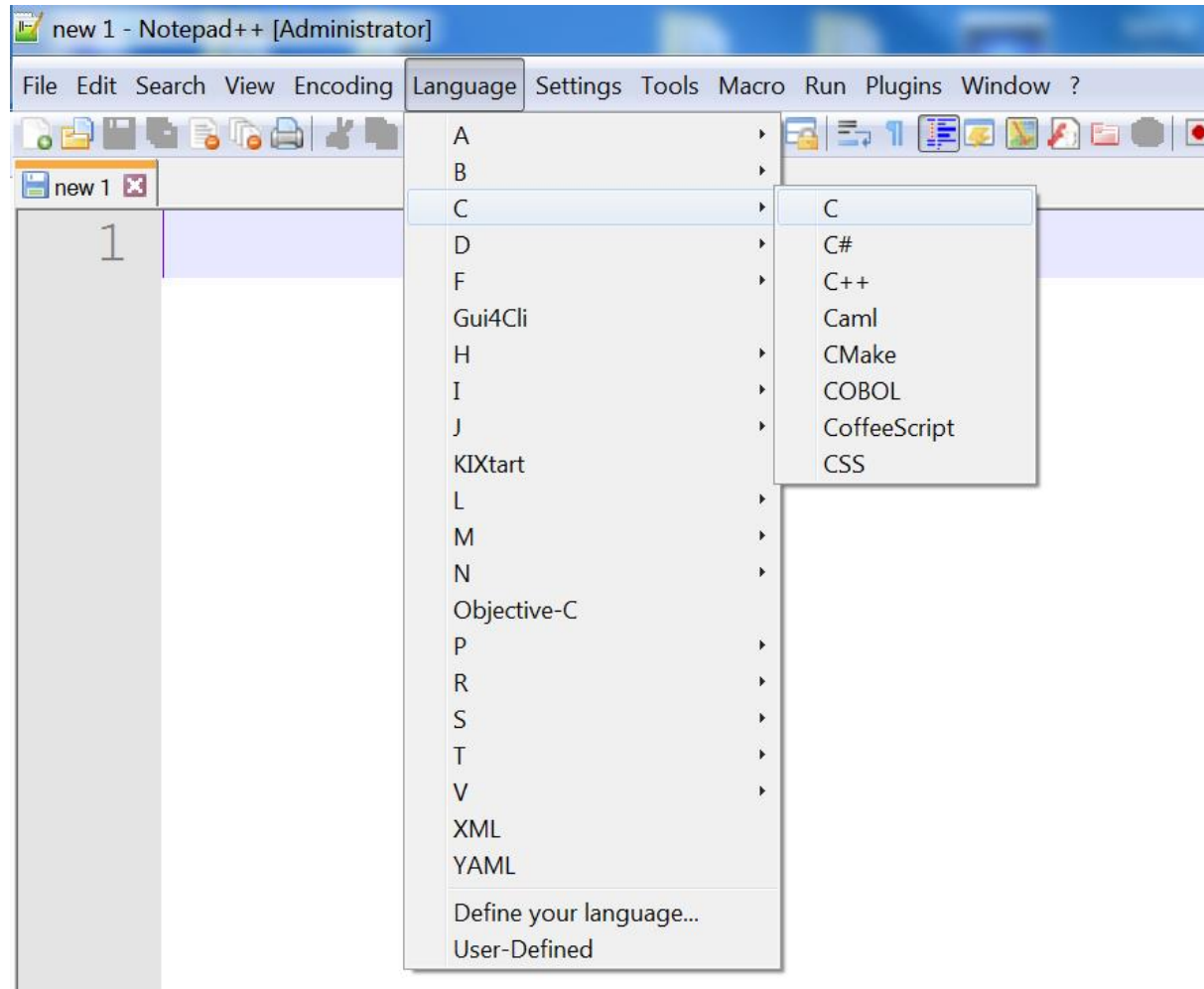
Installing Editor

To write a code you will need an editor, you can use the Notepad installed with the windows, but we recommend using Notepad ++ because it has a better colored interface.

You will find Notpad ++ in our tools folder under the following directory:
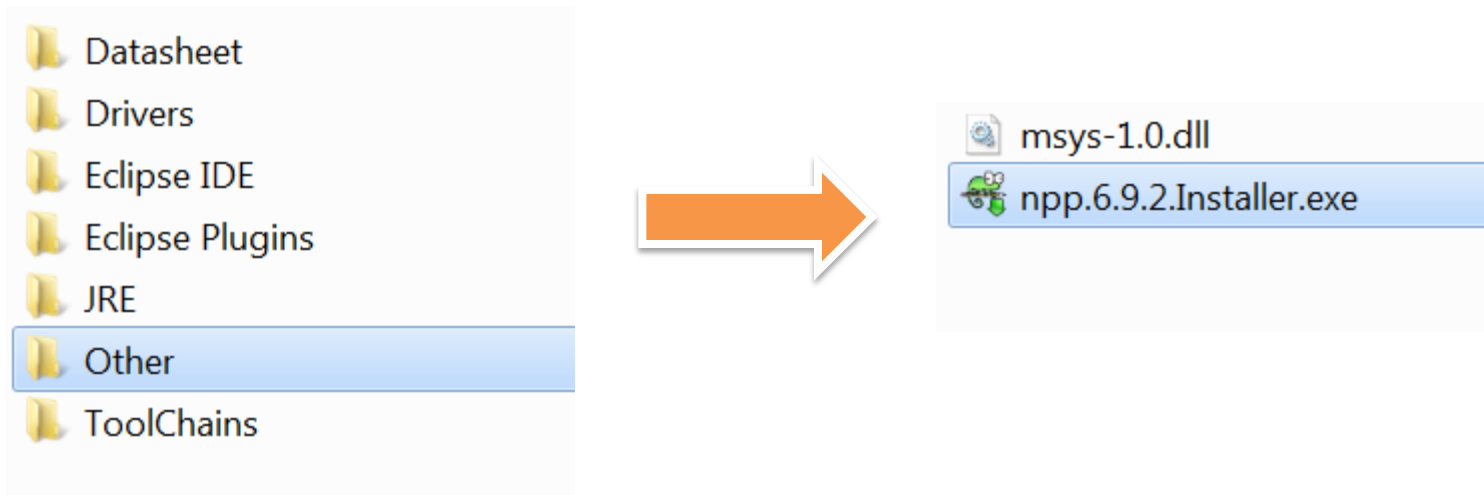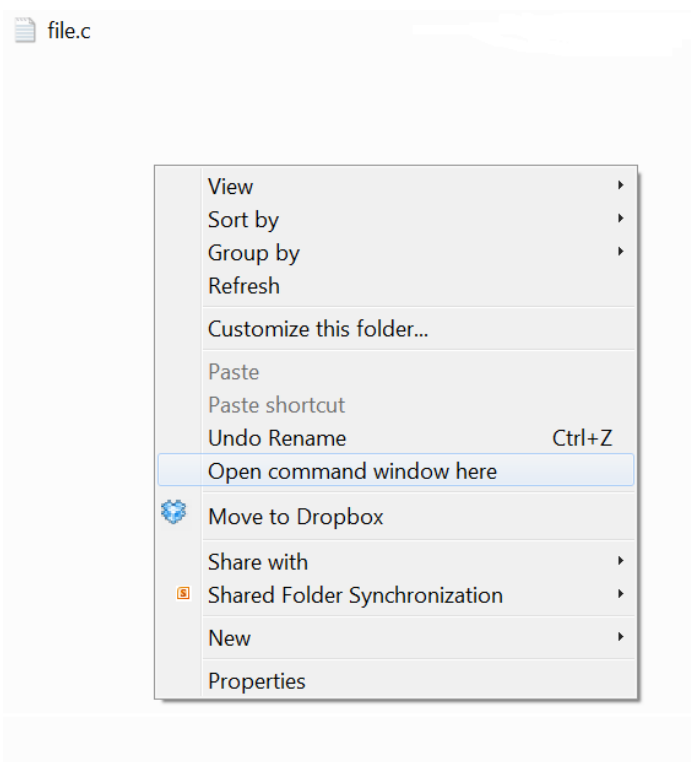
Creating your first C Program

Open notepad ++ , make new file and choose the language to be C

Compiling your code

1- Write your code and save the file in .c extension

2- in the folder that your c file exist, press on the shift button and press right click then choose *Open Command Window here*

3- In the command window type the following command
gcc   file.c

Replace file.c by your file name

The output will be generated with automatic name a.exe

4- If you want to name the output file, type the following command
gcc   file.c   -o   out.exe

Replace file.c by your file name
Replace out.exe by your desired output name

5- To display your output, Just write your output name in the command window

out.exe

Replace out.exe by your output name

www.imtschool.com

ww.facebook.com/imaketechnologyschool/