



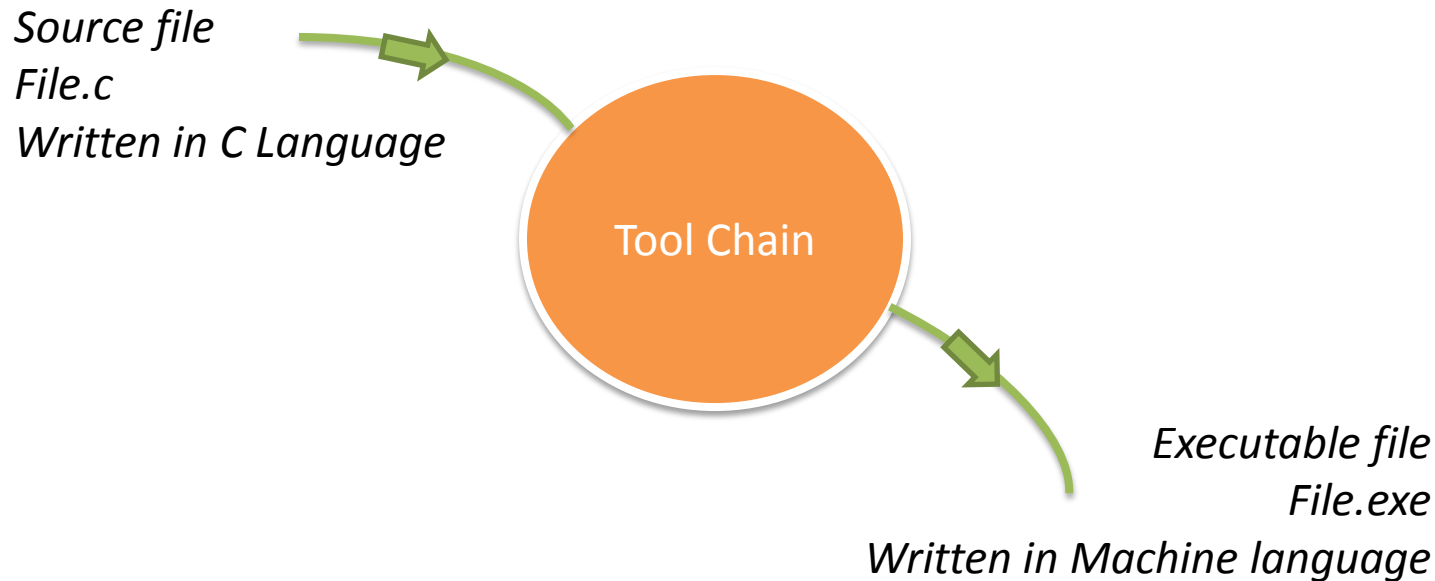
C Programming

Lecture Zero

Installing Environment

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Tool chain definition

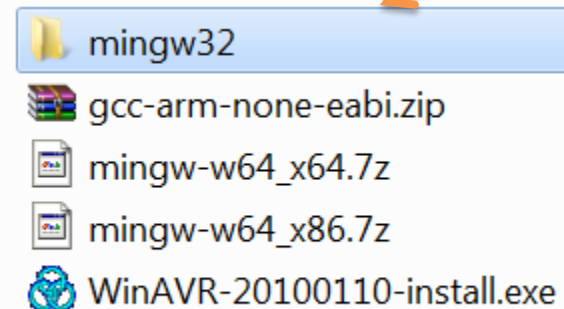
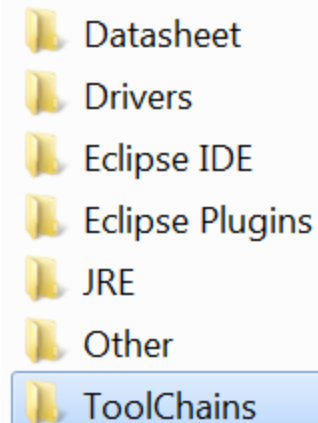


A tool chain is a set of tools *(will be discussed in details later on)* that are used to convert the source file written in C, to the executable file written in machine language (0 and 1) to be run on the processor

GCC Toolchain

In our course we will use an open source tool chain called GCC

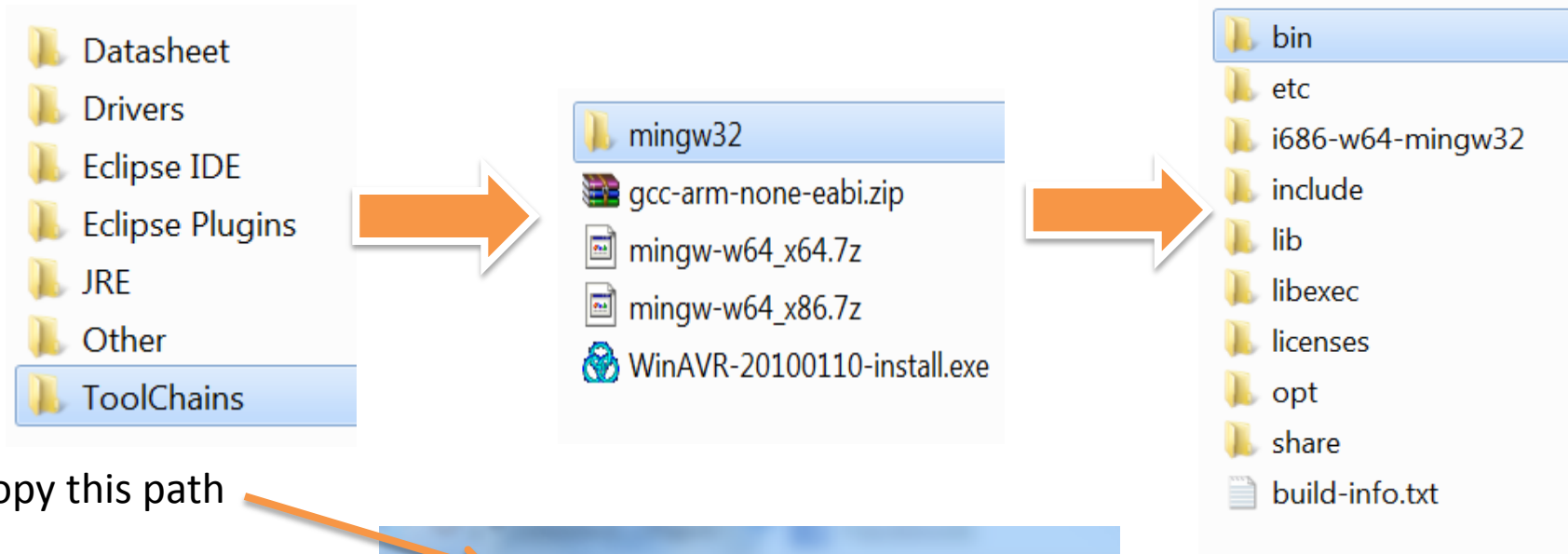
You will find it in the folder you received by your instructor under the director



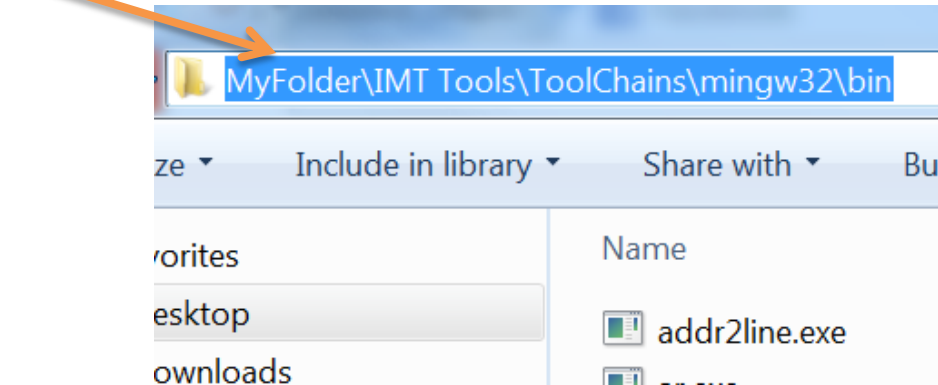
GCC for windows

Installing GCC

Step 1 : Copy the bin folder path



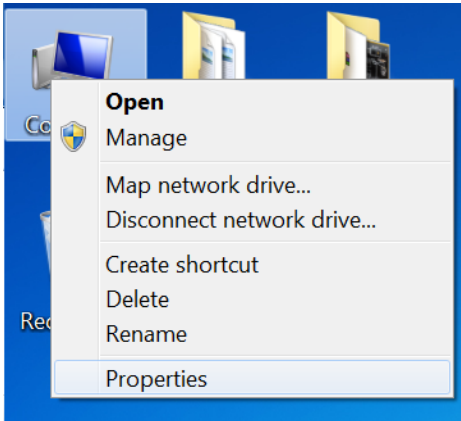
Copy this path



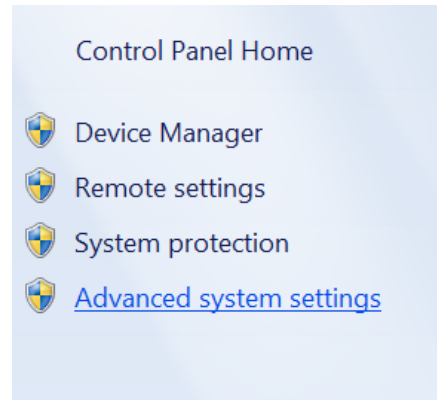
Installing GCC

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

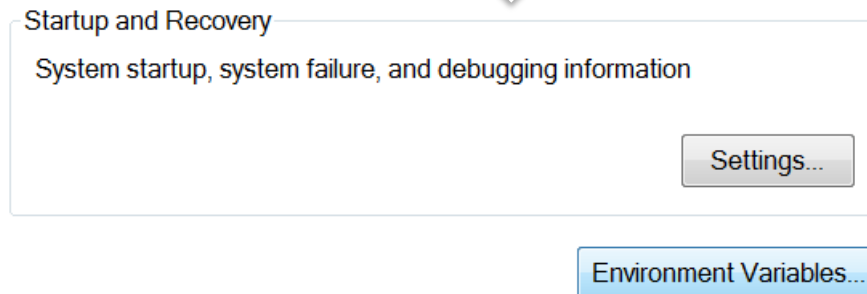
Right click on my Computer and click Properties



From left side, choose Advanced system Settings



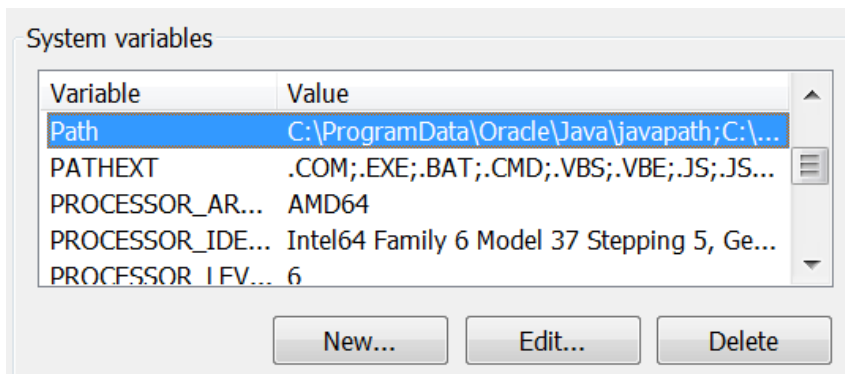
Choose Environment Variables



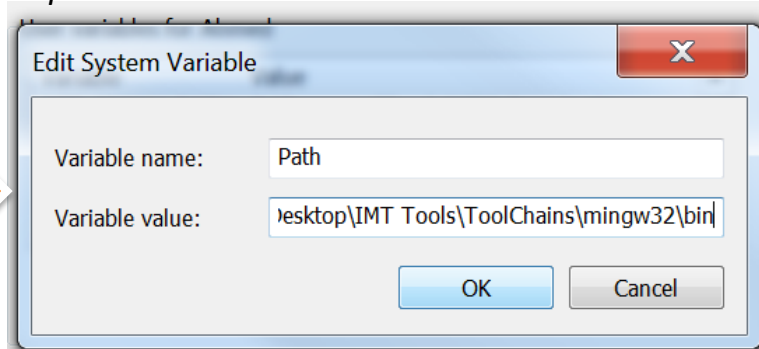
Installing GCC

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



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



Notes:

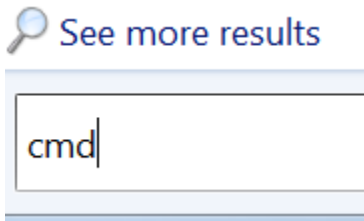
1- Take care, don't remove any thing from the Variable value, just add ; and then your path and press Ok

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

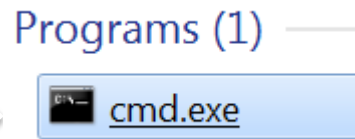
Installing GCC

Step 3 : Test The GCC installation

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

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

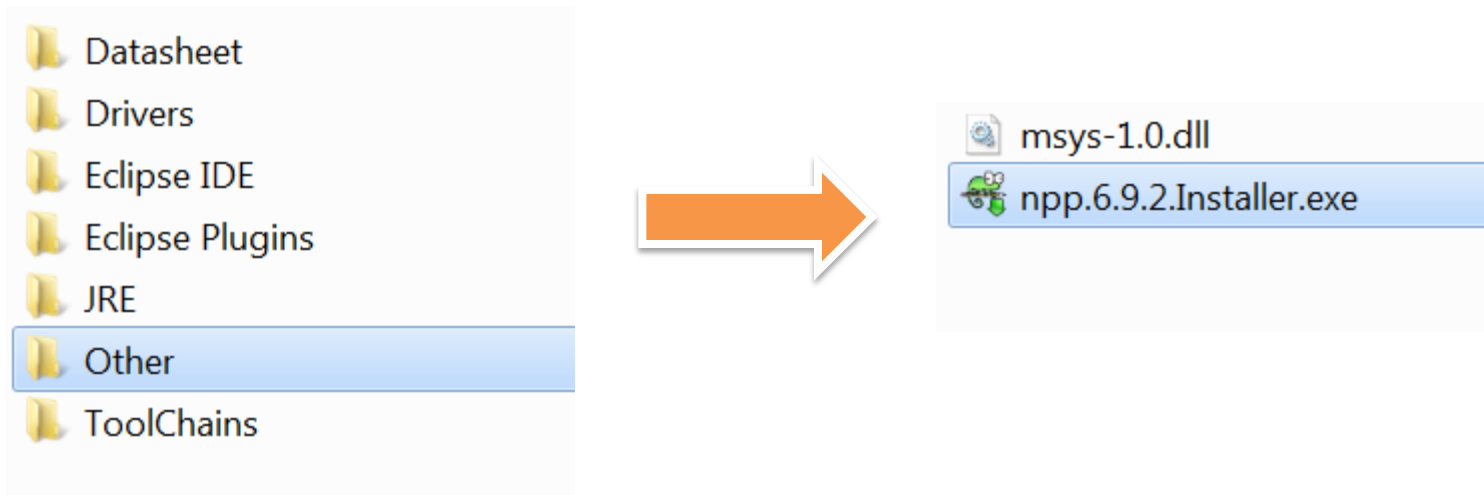
Notes:

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

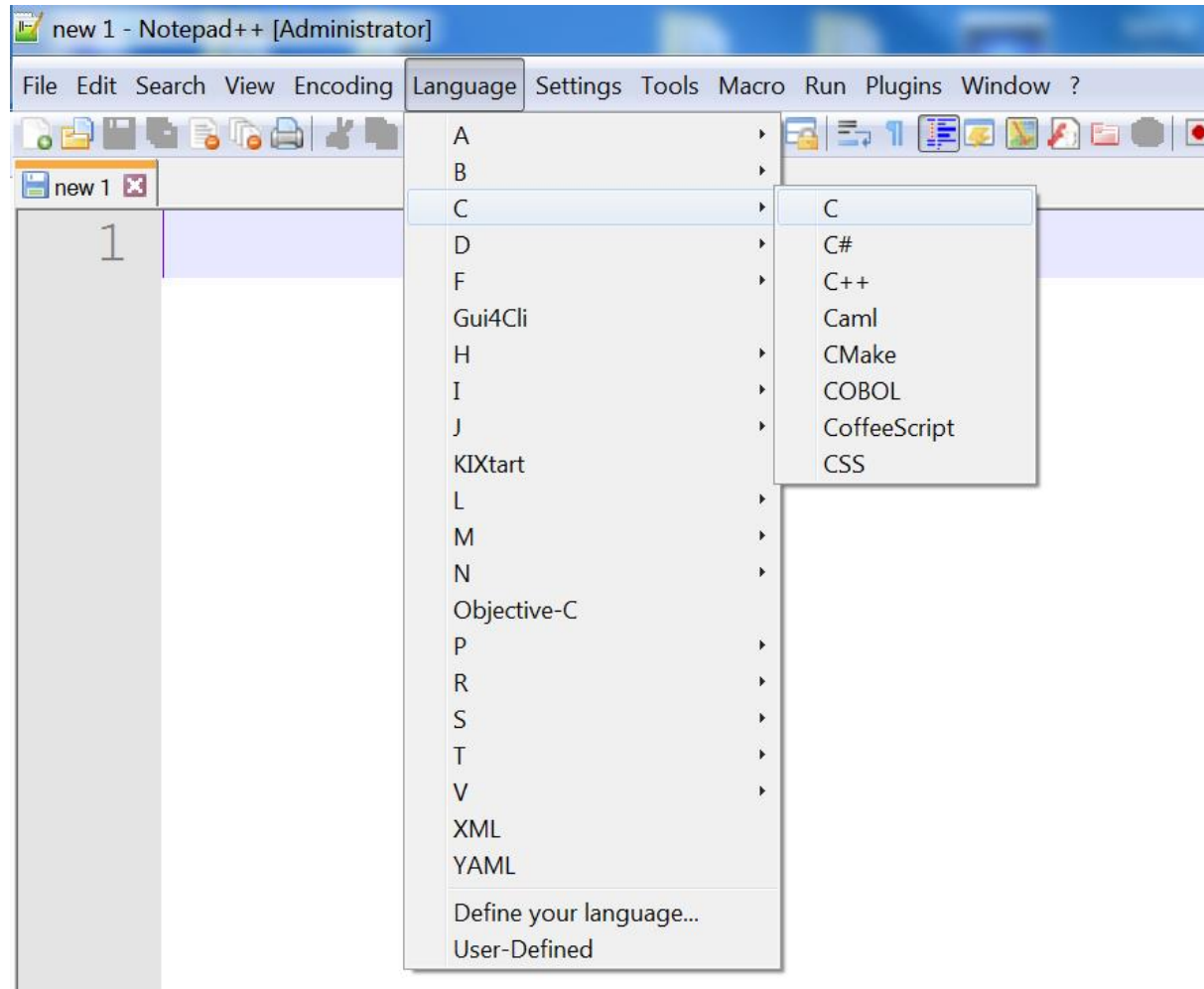
To write a code you will need an editor, you can use the Notepad installed with the windows, but we recommend using Notepad ++ because it has a better colored interface.

You will find Notpad ++ in our tools folder under the following directory:



Creating your first C Program

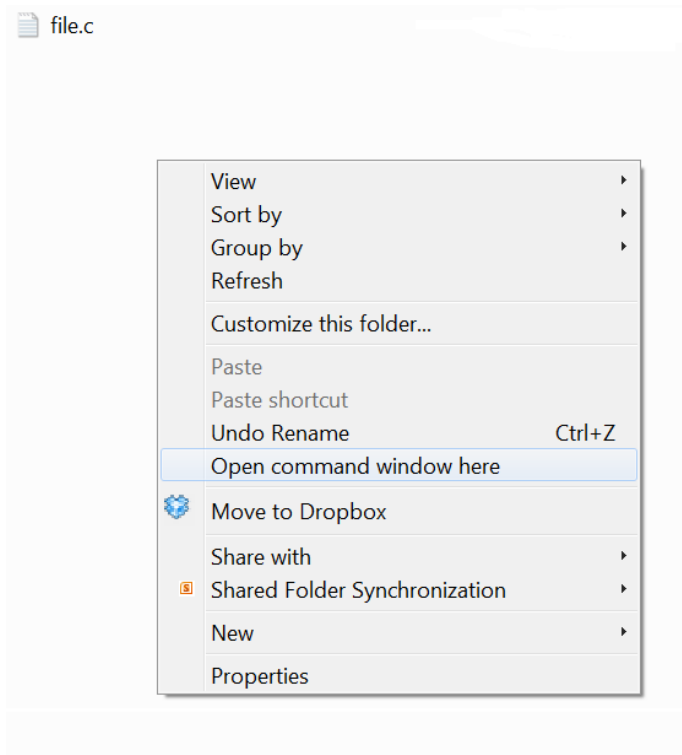
Open notepad ++ , make new file and choose the language to be C



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*



Compiling your code

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



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