Department of Statistics & Computer Science, University of Kelaniya

ACADEMIC YEAR – 2022/2023

BECS 11223 – Fundamentals of Programming

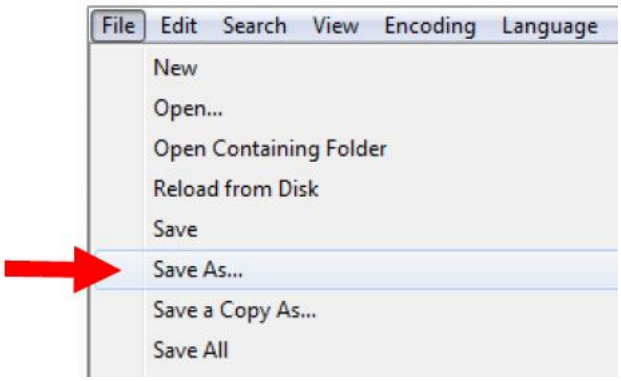
Lab Session 02

Throughout this lab session, you will learn the fundamentals of C language and gain some experience in using gcc compiler.

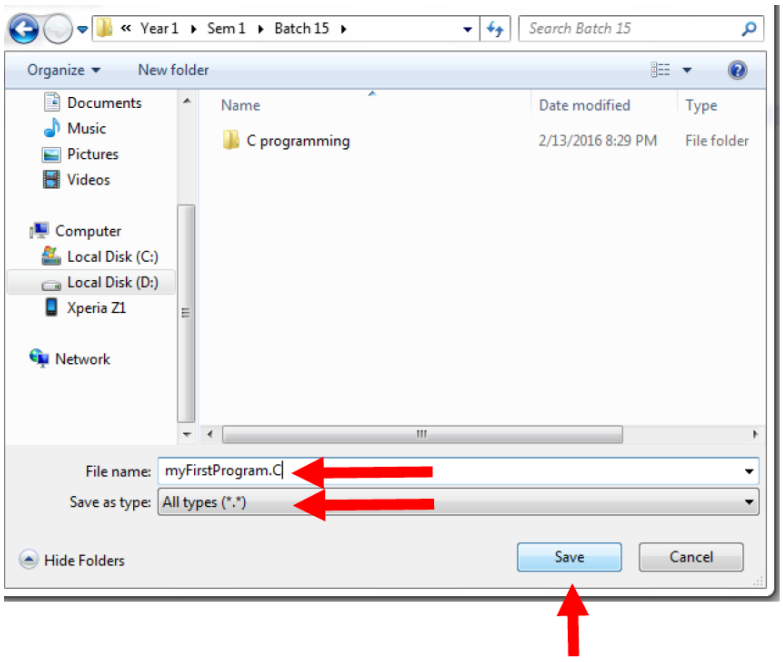
1. Create your first C program:
   - Click on windows start button → Select All programs → Select Notepad Editor.
   - Write your first C program using the editor, as indicated in the figure bellow:

```
#include <stdio.h>

int main()
{
        printf("Hello Kelaniya");
}
```

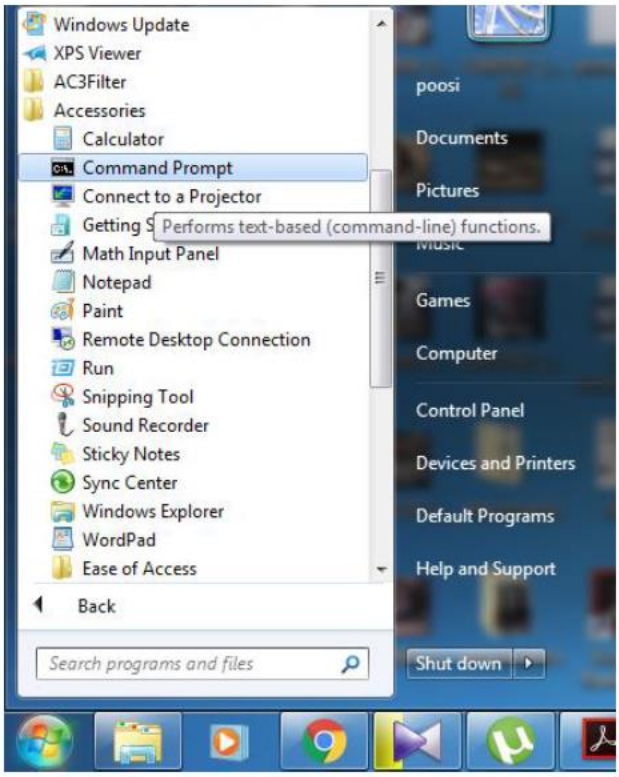
   - Now save your file as a C file. Click on File → Save As:



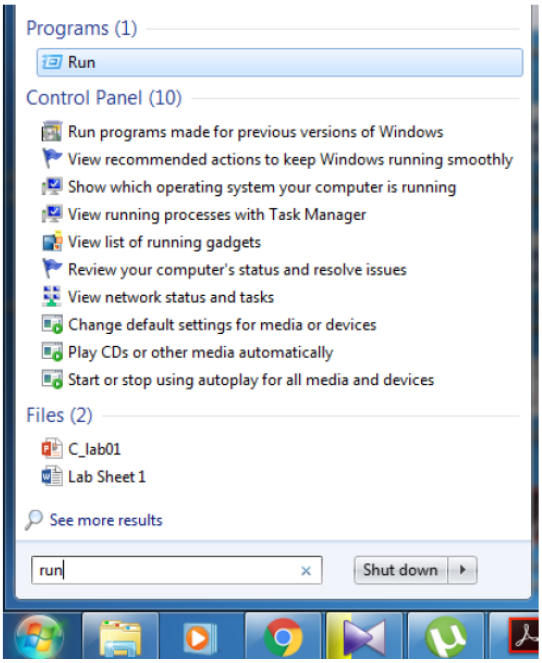
   - Select a location to save: It can be computer hard drive (C: or D: Drive) or your pen drive.
   - Within the selected Hard Drive create a new folder with your student number.
   - Inside your student number folder create a new folder as Week04.
   - Give a File name:
     - Eg: FirstProgram.c (Note: Extension of the file name must be **.c**)
   - Select Save as type: All types (*.*)
   - Then save.



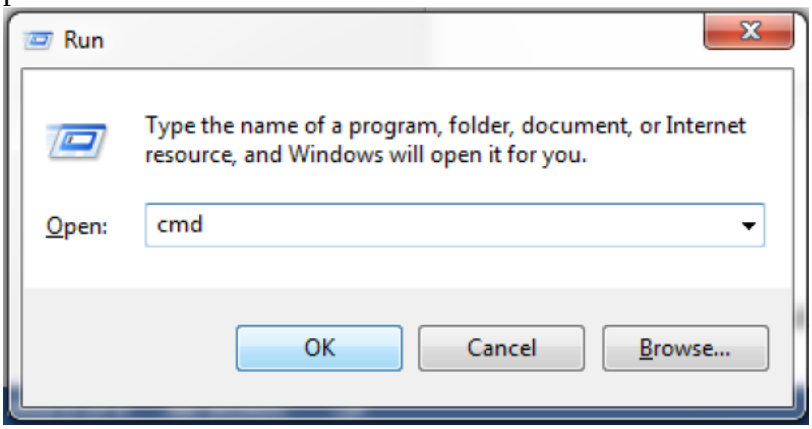
- Now open the command prompt.
  - First Method: Start → Accessories → command prompt



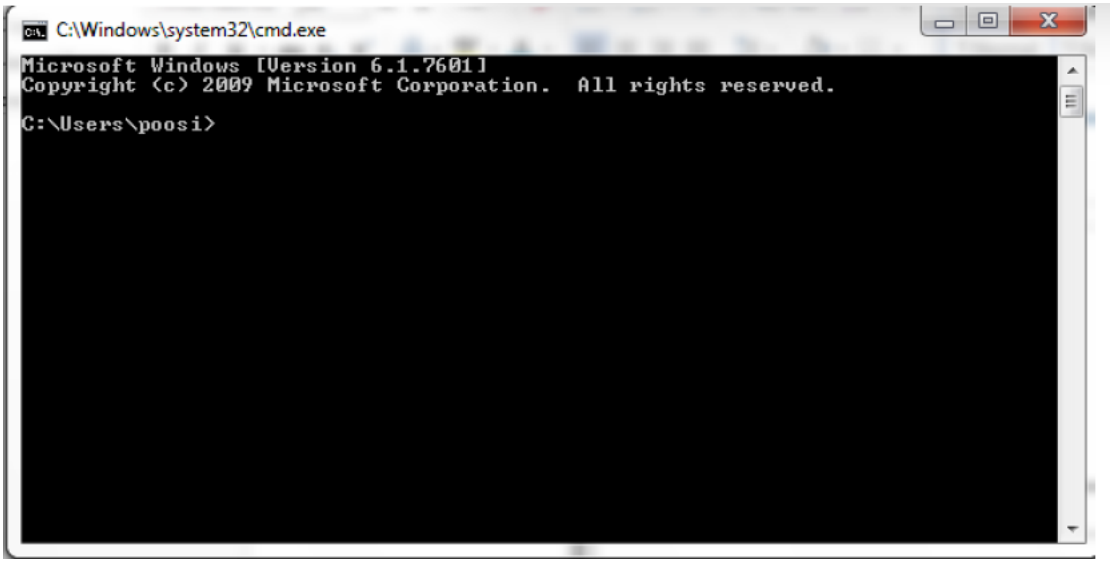
- Second Method: Start → type ‘run’ in the search bar → enter



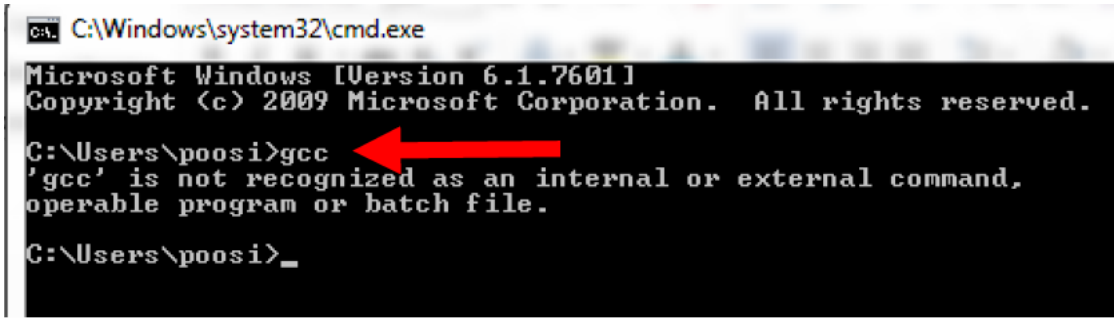
- Then the following dialog box will appear in the screen. Then type ‘**cmd**’ or ‘command’ and press on OK button.



Then you can see the following screen.

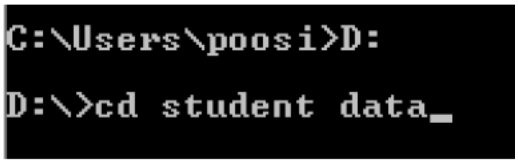


- Check whether the gcc compiler is installed in your computer. Type '**gcc**' and press enter.



- If you get the above message, then you need to set the gcc path on your command prompt.

- You can set the path temporally by typing following command in the command prompt.
  Path = C:\Program Files\CodeBlocks\MinGW\bin
- Now go to the location where you have saved your c file. (Using the command prompt)
  - Eg: If you saved your c file in the student data folder in the D drive, then type following in the command line:



- Once you go to the location where you have saved your file, then compile the c file:
  gcc filename.c –o executableName

  Eg: gcc FirstProgram.c –o firstexe

  If you get any errors, then fix them and compile it again.

- Now run the file:
  executableName

  Eg: firstexe

Now you can see the output of the first c program on the command prompt.

Upload your completed C program into the Lab 02 – Program 01 submission folder.

2. Type the following C program and get the output:

```
#include <stdio.h>

int main()
{
        printf("Hello Kelaniya. \n");
        printf("Welcome to C Programming");
        printf("U\nO\nK");
}
```

Upload your completed C program into the Lab 02 – Program 02 submission folder.

3. Type the following C program and get the output:

```
#include <stdio.h>

int main()
{
        printf("Students Marks. \n");
        printf("Mathematics \t\t90");
        printf("English\t\t80");
}
```

Upload your completed C program into the Lab 02 – Program 03 submission folder.

4. Type the following C program and get the output:

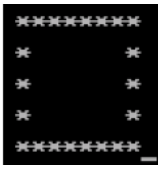
```
#include <stdio.h>

int main()
{
        printf("\”A\””);
        printf(“\”B\””);
        printf(“\”C\””);
}
```

Upload your completed C program into the Lab 02 – Program 04 submission folder.

5. Create a C program to print your name, student number and the address.

Upload your completed C program into the Lab 02 – Program 05 submission folder.

6. Create a C program to print the following star pattern.



Upload your completed C program into the Lab 02 – Program 06 submission folder.

7. Create a C program to print the following output.

The “UOK” is stands for
‘University of Kelaniya’.
-------\\ FOS \\ ----------
Faculty of Science!!!

Upload your completed C program into the Lab 02 – Program 07 submission folder.