ECE160: Foundations of Computer Engineering I (Spring 2023)
Instructor: Dr. Liudong Xing

LAB # 1
January 23, 2023 (L1) and January 25, 2023 (L2)

OBJECTIVES

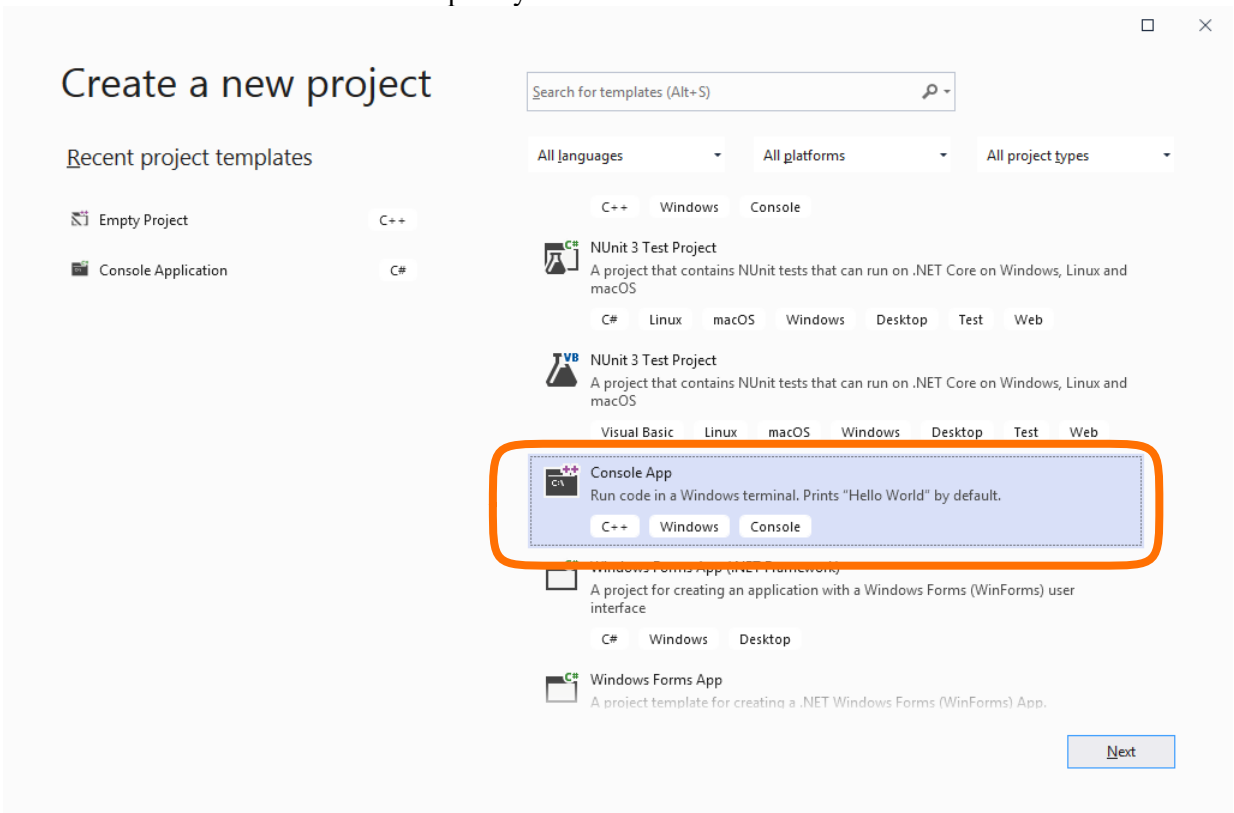
1) To learn how to access Microsoft's Visual Studio.
2) To learn how to enter, compile and run the C programs using Microsoft's Visual Studio.
3) To learn how to submit files to your folder in the class M: drive.

Task 1: (optional) Learn how to access Microsoft's Visual Studio

- If you work on the lab assignments in the classroom SENG 222 or other ECE labs, please skip this task.
- If you need to work on the lab assignments outside the ECE labs, please follow "Instructions of Accessing Microsoft Visual Studio Outside ECE Labs".

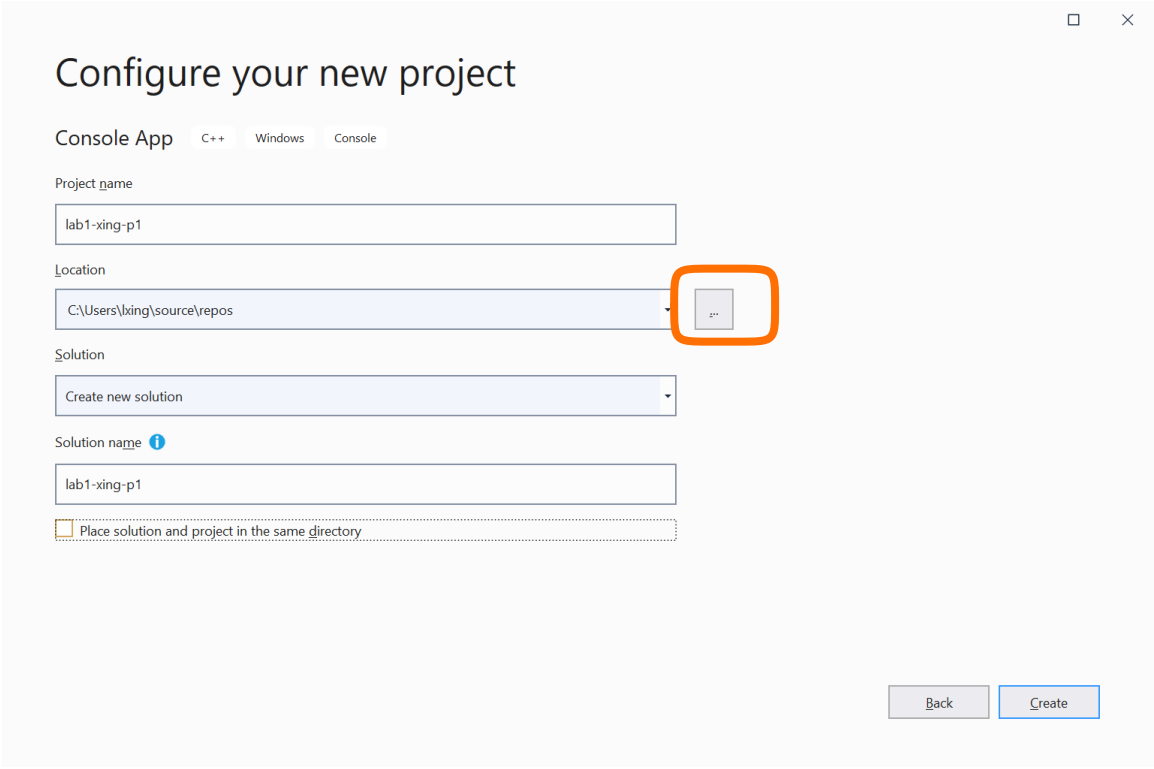
Task 2: Learn how to enter, compile, and run the C programs using Microsoft's Visual Studio.

1. Open to run the Visual Studio 2022 (on your computer desktop).
2. Select Create a new project (Or go to the *File* options and select *New* → *Project* Option)
3. Select Console App (with C++) from the Project Templates. Please refer to the following screenshot for the correct template you should choose.



4. Click Next and Enter the name of the project (e.g., lab1-xing-p1), and then click Create. This will create a new C++ project.

Note: you may change the location to your lab folder under the class M: drive by clicking the small box containing … before Create. If you don't change the location, you will need to follow the path given under "Location" to locate the required cpp files and copy and paste them to the class M: drive for the lab submission.



5. A .cpp file will automatically open in the studio window having the default format of the C++ template.
6. You may remove the content of the template file and then input the C program (source code) below, or directly edit on it. Then save it by going to the *File* option and selecting *Save* option or simply clicking the *Save* icon (the disk icon) on the tool bar.

```
/* The first C program learned in ECE160 */
#include <stdio.h>
void main(void)
{
        printf("Hello world!");
}
```

7. To compile and link the program, go to the *Build* option in the menu and select *Build Solution* option. This compiles the program. The status is shown in the window below the main program. Check if there are compilation errors.
8. To execute the program, go the *Debug* option in the menu and select *Start Without Debugging* option.
9. A prompt window opens displaying the output of the program.

Task 3: Learn how to submit program files to your folder in the class M: drive.

Please follow "**Submission Guidelines**" in the lab section of the course website to practice submitting files to the class M: drive.

Task 4: Review task 2 and task 3.

Modify the first C program in Task 2 - Step 6, then compile and run the program so that the following statement can be output to the screen. Please rename your file using "lab1-your last name-p2" (e.g., lab1-xing-p2).

Have a great semester spring 2023!