



Faculty of Engineering and Applied Science

SOFE 3200U Systems Programming

Background

Batch Scripts are stored in simple text files containing lines with commands that get executed in sequence running in DOS and Windows. The text editor can be as simple as note pad. Scripting is a way by which one can alleviate this by automating tasks in order to be more productive.

Microsoft Visual Studio is one of most powerful programming IDEs in the market. It could use to develop programs for Microsoft Windows, web sites, web application and web services. Like any other IDE, it includes a code editor that support syntax highlighting and code hinting that are very useful for developers to keep track of the scope of the programs.

Objectives

The objectives of this experiment are to understand how to generate batch file and program in C using Microsoft Visual Studio.

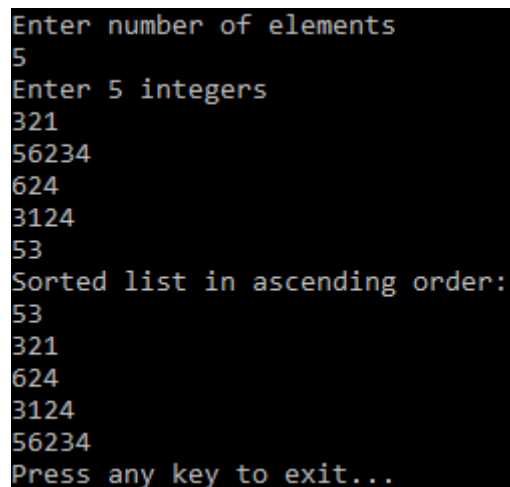
Lab Tasks

Task 1

Write a batch script called micro.bat to open the Microsoft Visual Studio 2014 and DOS command, and comment in the file for each program that you are opening.

Task 2

Write a C program using Microsoft Visual Studio to sort an array of numbers into an ascending order from console input. In order to sort the array, utilize Bubble Sort as it will be the easiest to implement. Here is what the program should do:



```
Enter number of elements
5
Enter 5 integers
321
56234
624
3124
53
Sorted list in ascending order:
53
321
624
3124
56234
Press any key to exit...
```

In order to start programming in Visual Studio, a project must first be started. To do so, select **File > New > Project**. In the “New Project” popup select from the left sidebar **Template > Visual C++ > Win32**, then in the middle window select **Win32 Console Application**. In the bottom you can now choose to name your project and select the location where the project will be stored. Hit **OK** and proceed to the next dialog popup, hit **next** and make sure the settings are like so:

Application Type: Console Application

Additional Options: Empty Project

Click **Finish** to create the project. In the **Solution Explorer** sidebar, right click the **Source Files** folder and click **Add > New Item**. Select the **C++ File** and in the bottom name the file to **sort.c**, make sure you have the c extension instead of cpp so that Visual Studio understands this is C code. Click **Add** and you can now start programming.

Deliverable

Answer all the questions in the lab report template provided, fill in the title page correctly and submit along with your commented code for task 1 and 2. Make sure you submit the whole Visual Studio project.