Object Oriented Programming

In this assignment, you are going to implement some classes which are integrated in a large system. You can see the files in 00\_StudentWork. These classes are:

* GRAPH\_SYSTEM
* MY\_2048
* IMAGE\_SYSTEM and IMAGE\_NODE

Write your program on .NET2010. Need vc100 toolset for compilation.

**We will rebuild your program** in the Release mode and check your program.

**In this assignment, you should add extra member variables and functions when necessary.**

**Submission**:

1. Change the **template folder** name to ID\_Name, where ID is your student ID and Name is your name. Zip and then upload the entire folder of the source code to the E3 platform before the deadline.
2. You must demonstrate your work to our TAs in the lab session.
3. If you cannot demonstrate your programs, your score is zero.

Penalties:

1. Late submission: **40% penalty each day**.
2. Cheating: you will be received a score of zero, e.g., borrowing your source code to others or/and copying others’ source code.

The folder 00\_StudentWork stores the files.

The binary file is SelfMotivatedSystem.exe which is stored in ./bin/release/.

**Requirement Specification**

1. **Basic tasks.**
2. Write your name, student ID and email address in the header file mySystemApp.h
3. Press ‘s’ or ‘S’ to show your student information: **date**, student ID, name and email address. showStudentInfo\_2020( ) in mySystemApp.cpp
4. Set your name and ID for cn\_StudentInfo in mySystemApp\_HandleEvents.cpp
5. Press F5 to show student information at the top bar of the window.

**Items I, II, III and IV must be done. If not, your score is zero.**

Key usages:

F1: perform Graph System

F2: perform My\_2048 with dimension 4x4.

Press the spacebar to toggle the autoplay mode. Obtain at least one game with 512 in THREE attempts. It must take less than 30 seconds for each attempt on a computer with a 2.4GHz CPU.

Press ‘a’ or ‘A’ to perform an action automatically for one step.

F3: perform My\_2048 with dimension 8x8

F4: perform Image System

F5: show your student information. Change **cn\_StudentInfo if necessary.**

i, I: ask for input (to see other key usages in the current system)

s, S: show the student information

1. **System tasks.**

[40%] Implement GRAPH\_SYSTEM. You can see the details in the header and source files (mySystem\_GraphSystem).

[30%] Implement MY\_2048. You can see the details in the header and source files (mySystem\_2048).

[30%] Implement the image system. You can see the details in the header and source files (mySystem\_ImageEditor.h, mySystem\_ImageEditor.cpp, mySystem\_ImageEditor\_draw.cpp).