

# Comp380

Programming Assignment #1

Due Feb.-22 (Wed.) (before 11:59pm)

Difficulty: easy

**Rep. TA:** HyoSub Park (cs380ta@gmail.com)

**Objective:** Understand a compilation and basic structure of a simple OpenGL code.

**Developing environment:** Either Visual Studio (2008 or higher) or Dev c++ should be used in environment of Windows OS only

## Requirements:

- 1) Compile and run the sample code of Julia.cpp.
- 2) Understand the basic OpenGL code structures including header files, libraries, main, and various call-back functions.
- 3) Set the reshape function of the Julia.cpp as the following:

```
void reshape( int w, int h)
{
    width = w;
    height = h;
    glViewport(0, 0, w, h );
}
```

(This modification is already made in the Julia\_PA1\_skeleton\_code.cpp.)

- 4) Make the Julia\_PA1\_skeleton\_code to run properly when we resize the window. More specifically speaking, support that you have the original windows shown in Fig.1, when you started the program. Then, make the window to have the half of the original height like the one shown in Fig. 2. As you can see, only the half of the window is filled. But, we would like to utilize all the screen space as shown in Fig. 3. (10 pts)  
(Hint: display () needs be modified accordingly. There is an assumption on using about the variable of “delta”.)



Fig. 1

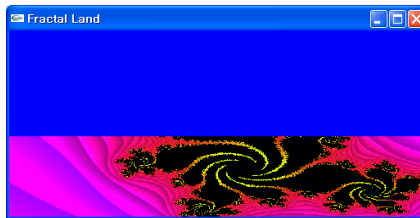


Fig. 2

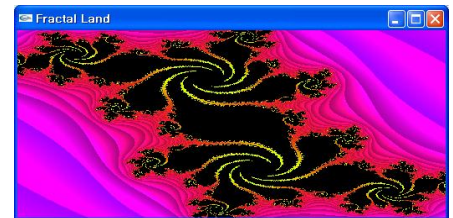


Fig. 3

- 5) What is the main result by modifying the original reshape function of Julia.cpp into the reshape function (Req.3) shown in above? (2.5 pts)
- 6) Between two reshape functions, the original one and the new one (Req.3) shown in above, which one do you prefer? What are reasons for your choices? (2.5 pts)

## Deliveries:

- 1) Binary and source codes of your solutions (Include a README.txt that specifies the files you made/changed)
- 2) A report that has your answers for the Question 5) mentioned in above
- 3) Submit your work to HyoSub Park (cs380ta@gmail.com)

## Policies:

- 1) Everyone must turn in their own assignment. You can collaborate with others, but any work that you turn in should be your own