COMP 8051
Instructor: Borna Noureddin
Assignment #1

All work should be done individually.

Total marks: 80

1. [10 marks] Create an app that runs on both the iPhone and the iPad (you can assume at least iOS 6.x) with a single green cube shown in perspective projection.

2. [10 marks] Modify the app so a double-tap toggles whether the cube continuously rotates about the y-axis.

3. [10 marks] Modify the app so when the cube is not rotating the user can rotate the cube about two axes using the touch interface (single finger drag).

4. [10 marks] Modify the app so when the cube is not rotating a "pinch" (two fingers moving closer or farther away from each other) zooms in and out of the cube.

5. [10 marks] Modify the app so when the cube is not rotating dragging with two fingers moves the cube around.

6. [10 marks] Add to the app a button that, when pressed, resets the cube to a default position of (0,0,0) with a default orientation.

7. [10 marks] Add to the app a label that continuously reports the position (x,y,z) and rotation (3 angles) of the cube.

8. [10 marks] Add to the app a second button and a second label. Include two classes – one written in Objective-C and the other in C++ – each with a single integer variable, as shown in class. Pressing the button should toggle between reporting the value of the integer from each of the two classes in the label text, and increment that integer value.

The code must be written using only Objective-C and C++, and all files required to build and deploy the app must be provided. Submit all your project files and any documentation to the D2L Dropbox folder as a single ZIP file with the filename A00XYZ_Asst1.zip, where XYZ is your A00 number. All required documentation (README file, code comments, etc.) must be included.