CSE 410
Computer Graphics Sessional
Offline 2: Mega Structure Modeling
(B1)

Perform following tasks:

1. Implement **Camera** with following 12 movements:
    - Yaw (looking left & right)
    - Pitch (looking up & down)
    - Roll (twisting left and right)
    - Walk (forward and backward)
    - Strafing (left side and right side)
    - Fly (up and down)

    see the provided .ppt and .exe file for clarification
2. Build the **mega structure "Space Needle"** with necessary details according to the provided "SPACE-NEEDLE.skp" file.

3. Apply **Texture**
    - Use the image files exported from .skp file
4. Apply **Lighting**
    - Global Ambient Light (white)
    - One point Diffuse Light
        i. Moving around the mega structure (Key dependent)
        ii. Option of two different colors: White and Blue (Key dependent)
    - One stationary Spot light with cutoff angle 30^{o} (white)

Note: Download Google sketchup from http://google-sketchup.en.softonic.com/. View the corresponding skp file of your assignment using Google sketchup. Also see the slides for reference materials.

<u>Instruction for groups with three members</u>

Groups of two members are supposed to be formed for this assignment. However, due to odd number of students there may be some groups having three members. For such groups following two simple extra tasks are to be performed:

1. Instead of keeping the spot light stationary, also move the light in a circular radius around the structure considering the structure in the center.
2. Keep two modes: day mode and night mode (hints: in night mode the global ambient light will be less brighter than in the day mode)