

# Assignment 3

---

**CEG476/CEG676**

**Computer Graphics I**

## **Assignment 3:**

Design and implement a program that will draw a clock and will allow the user to set the minute and hour hands as desired. The motion of the hour and minute hands should be linked. For example, advancing the hour hand by one hour should make the minute hand to rotate by 360 degrees. In the interface area provide sliders for the hour and minute hands for the user to use. Draw the clock using sphere, torus, and cone primitives provided in the GL utility library. Initially draw the clock in the center of the drawing area. Allow the user to click at a point on the clock and while pressing the mouse button drag the clock anywhere in the drawing area. Independent of the position of the clock in the drawing area, the minute and hour hands should operate correctly.

# Assignment 3

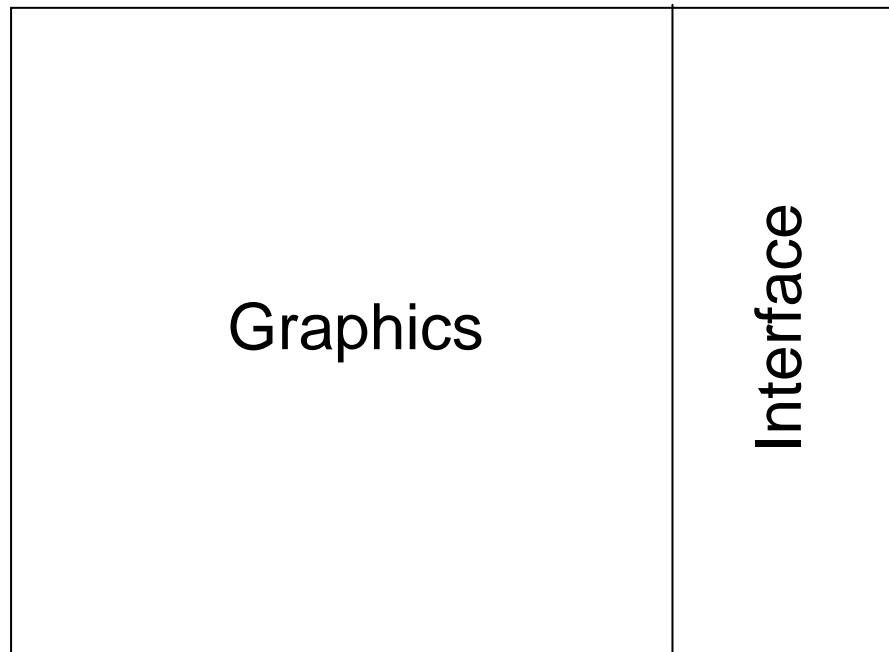
---

**CEG476/CEG676**

**Computer Graphics I**

**Assignment 3:**

Suggested interface layout:



# Assignment 1

---

Useful OpenGL functions:

```
void glutSolidCone (radius, height,  
                   slices, stacks);
```

```
void glutSolidSphere (radius, slices,  
                     stacks);
```

```
void glutSolidTorus (innerRadius,  
                    outerRadius,  
                    nsides, rings);
```

These functions draw a cone, a sphere, or a torus, respectively, located at the origin of the coordinate system. Hence, these need to be relocated using suitable transformations.