1. **Do & Not do:**

   Do: All the requirements and all extra credit.

   Not do: None.

2. **Environment:**

   Window 8.1

3. **Platform:**

   Chrome

4. **Browser:**

   Chromium 40.0.2177.0 (64-bit)

5. **Instructions:**

   1) **Requirement 1:**

      Done.

   2) **Requirement 2:**

      I use the sphere generator in the book.

   3) **Requirement 3:**

      The normal vectors are different when different shading methods are used.

      The parameter "shadingMethod" is used to distinguish different shading method. "shadingMethod = 0" represents Phong shading. "shadingMethod = 1" represents Gouraud shading. "shadingMethod = 2" represents flat shading.

4) Requirement 4:

I have created the object named "celestialBody" as the model of sun and planets. In this object, it includes the properties of radius, orbitRadius, orbitSpeed, sphereComplexity, shading, mAmbient, mDiffuse, mSpecular, mShininess and position. The function "bufferSetup" in object is used to create different buffers in GPU for sun and planets.

5) Requirement 5:

When the fourth entry of light source is set to be 1, it becomes the point light source. The properties of planets can be set in "celestialBody" object.

6) Requirement 6:

The navigation system is applied in this assignment.

7) Requirement 7:

Done

8) Extra Credit1:

The moon can be still created by the object of "celestialBody". The "drawMoon(moon, planet)" function is used to draw the "moon" orbiting round the planet you want. For instance, when "planet" = "planet3", the moon will orbit around the third planet.

9) **Extra Credit2:**

Keys "1", "2", "3", "4" are used to control the attach to planet1, planet2, planet3 and planet4. Key "D" is used to detach.