

# A4 Full Solar System Report

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## 1. Make and animate dwarf planets of each planet.

First, I made moon rotating around Earth, and four dwarf planets around Jupiter and Uranus

## 2. Apply a point light on Sun.

By using Blinn-Phong model, make the point  $\text{vec3}(0,0,0)$  as point light. By setting light position as  $\text{vec4}(0,0,0,1)$  it becomes point light which is the center of Sun. And make Sun not affected by light, so there is no shade on Sun.

## 3. Apply texture of planets.

Using texture downloaded from link, first save on GLuint texture variables and apply them to frag shader.

## 4. Make a textured ring system of the Saturn.

Make a ring by ring-vertex of circle and apply texture of the ring.

## 5. Apply alpha blending.

Setting `glBlend` as `Enable` and apply alpha values from the alpha texture it becomes blending. First save alpha texture to frag shader and make `fragcolor.a = alpha.r`.