

## Challenges Faced & Scope for Improvement

### CHALLENGES FACED:

1. Setting up compiler paths correctly.
2. Installing and linking the FreeGLUT library.
3. Managing the transformations for rotation and revolution.
4. Tuning the lighting to look realistic.
5. Camera movement bugs during fly mode.
6. Depth issues when Z-buffer was not enabled.
7. FPS drops due to many stars and asteroid objects.

### SCOPE FOR IMPROVEMENT:

1. Add textures for more realistic planets.
2. Add GUI controls to adjust speed and camera.
3. Use shaders (Phong/Blinn-Phong) for better lighting.
4. Add additional planets, moons, or dwarf planets.

- 5. Add background music and sound effects.**
- 6. Add more user interaction such as clicking planets to zoom in.**