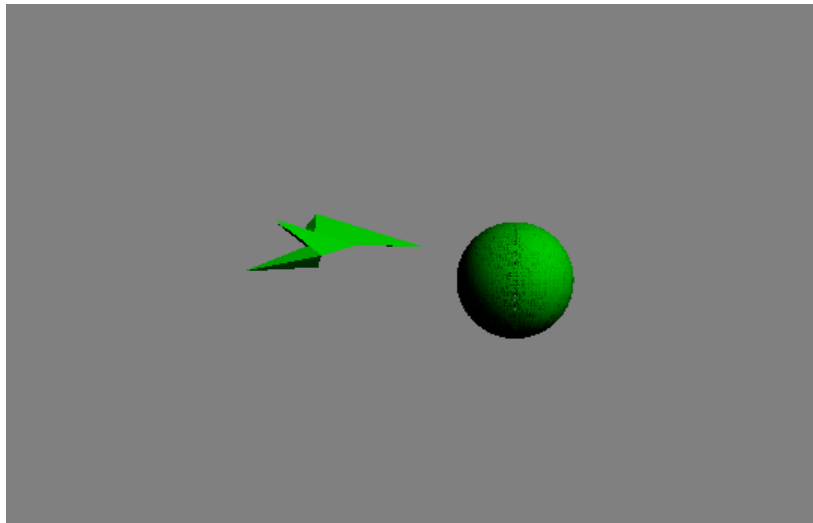


### *Meshes and Scene*

More than one mesh is to be loaded from a file and displayed, and a consistent scene should be created. (~30%)

- a. 1 or more models created by you in a modelling package (3DS Max, Blender, etc.)
- b. Additional models may be downloaded from the web (e.g., Turbosquid, etc.)
- c. Models should demonstrate a consistent theme (e.g., a beach scene with a crab and seaweed, urban scene with buildings and cars, etc.)
- d. Models may be re-drawn in multiple locations



The meshes were constructed using Blender and YouTube tutorials, the scene goal was a space scene this however was found to be difficult as textures proved elusive. Two meshes were loaded using the given the `loadmesh()` function, each mesh was associated with a different VAO object.

## Interactive Walkthrough

Create an interactive walkthrough that allows the user to move around the scene using the keyboard and/or the mouse. At a minimum, implement moving forwards and backwards, turning left and turning right. Extra marks will be given for extra functionality (i.e., additional degrees of freedom of rotation of the camera).

```
// Placeholder code for the keypress
void keypress(unsigned char key, int x, int y) {

    if (key == 'a') {
        cam_pos += left_vec * cam_speed;
        lookat_pos += left_vec * cam_speed;
    } if (key == 'd') {
        cam_pos -= left_vec * cam_speed;
        lookat_pos -= left_vec * cam_speed;
    } if (key == 's') {
        cam_pos -= up * cam_speed;
        lookat_pos -= up * cam_speed;
    } if (key == 'w') {
        cam_pos += up * cam_speed;
        lookat_pos += up * cam_speed;
    } if (key == 'q') {
        cam_pos += left_vec * cam_speed;
    } if (key == 'e') {
        cam_pos -= left_vec * cam_speed;
    } if (key == 'z') {
        cam_pos += forward_vec * cam_speed;
    } if (key == 'x') {
        cam_pos -= forward_vec * cam_speed;
    }
}
```

This walkthrough makes use of the look\_at function in Anton's Maths, the function parameters contain three 3D vectors. And on keypress the camera position is changed.