Assignment 2
Name conflicts

- Watch out for:
  - Camera
  - Material
  - Primitive
  - Triangle

- Conflicts with simulator’s code
Recommendations

- **LambertianMaterial.h, .cc**
  - Not a class
  - Defines `shade` function
  - Other useful tools in the future
  - Returns pixel color for given camera ray/intersection

```cpp
Color shade(const HitRecord &hr,
    const Ray &ray,
    const Vector &hitPoint,
    const Scene &scene)
```
Recommendations (see lecture 6)

- Improved spheres
  - Constructor needs object ID and material ID
  - Intersect function needs a HitRecord
  - inline Vector Sphere::normal(const Vector &hitPoint) const

- Camera
  - Pinhole
  - Orthographic (optional, very easy to implement)

- HitRecord
  - Or some clean way of keeping intersection info
Recommendations

- **Scene** – Keeps data in one place

```cpp
class Scene{
    public:
        Sphere* spheres;
        Color* materials;
        PointLight* lights;
        Color background;
        Color ambient;
        int numSpheres;
        int numMats;
        int numLights;

    /* Make sure these arrays are statically allocated in main:
    array of objects in scene
    array of materials
    array of lights */
```
Scenes

- We will make our Scene class more general purpose in the future.