1. Implement the Camera class specified in camera.h. You can inline any of the declarations if you prefer. You can use the functions from mat.h, and Jonathan will provide a solution for hw4, problem 2b, which you can incorporate into your Camera implementation.

2. Incorporate the Camera class into the sample project ‘perspective’. Set up controls as follows:

w – move forward
a – move left
s – move backwards
d – move right
right-arrow – head right
left-arrow – head left
up-arrow – pitch up
down-arrow – pitch down
comma – roll ccw
period – roll cw
Shift-right-arrow – orbit left
Shift-left-arrow – orbit right
Shift-up-arrow – orbit down
Shift-down-arrow – orbit up

To determine whether the shift key is depressed, use code such as

```cpp
bool shifted = glutGetModifiers() & GLUT_ACTIVE_SHIFT;
```