our story.

Our image was created with the intention of creating an atmosphere, rather than a particular story. We provide the setting: you are someone, looking through a keyhole, that stumbles across a grotesque scene. How you choose to interpret the scene from here is up to you. Is the man you see hiding or looking for a fight? Do the undead know that he is there? Do the undead know that you are there? What has caused this scene to happen? Why are you looking through the keyhole? We wanted the image to convey an atmosphere of anxiety, of the fleeting moment before something dire happens.

assets created.

We created the setting for the scene - the multi-hallway apartment with three living areas and four outlookling windows that allow the area lights to funnel through. This was created in Maya. The texture and UV mapping was also created through Maya, with the material being created through an iterative process in photoshop.

downloaded.

We downloaded a number of models from various sources online. The human mesh is a free sample from a website geared towards photorealistic modeling. The zombie meshes were adapted from Unreal engine - in particular, it came from a previously worked on video game made of animated zombies. The frames and decor on the walls, as well as the knife that the human is holding, came from TurboSquid and 3DAssets. Finally, the painting on the back wall is just a google image - a piece by Monet called 'Woman with a Parasol'. The molding on the walls (often on the intersections of the wall to ceiling and wall to floor) are also taken from the internet.

technical contributions.

in modeling.

We rigged the human mesh by adding to the bone structure in order to be able to manipulate finer-tuned aspects, like knuckles. We used the zombie animations to get our desired, initial poses for the meshes. Then, we manipulated the skeleton structures to further tune their orientations. Both the zombies and the human have diffuse texture maps as well as normal bump maps, allowing for finer detail. The zombies also have some specular highlights to augment the skin texture.

in rendering.

In order to speed up the rendering process, we implemented multiprocessing. Each of these processes rendered a vertical slice of the image, and the resulting
Bitmaps would be stitched back together once all the processes were done. We also implemented global illumination, but the resulting image took away from our intended goal, so the final image does not reflect algorithm.

**Augmented raytracer.**

To add to the atmosphere, we decided to frame our image through a keyhole. This is done in the ray tracer code by applying a textured mask that we created in Photoshop at certain coordinates, calculated relative to the resolutions of the image, and the built scene at all others.

**Team contributions.**

We worked in parallel on different aspects of the project. Kim worked more on augmenting the coding framework of the ray tracer and creating models and masks, while Jordan worked on orienting the camera, positioning models and lights, and handling texturing.