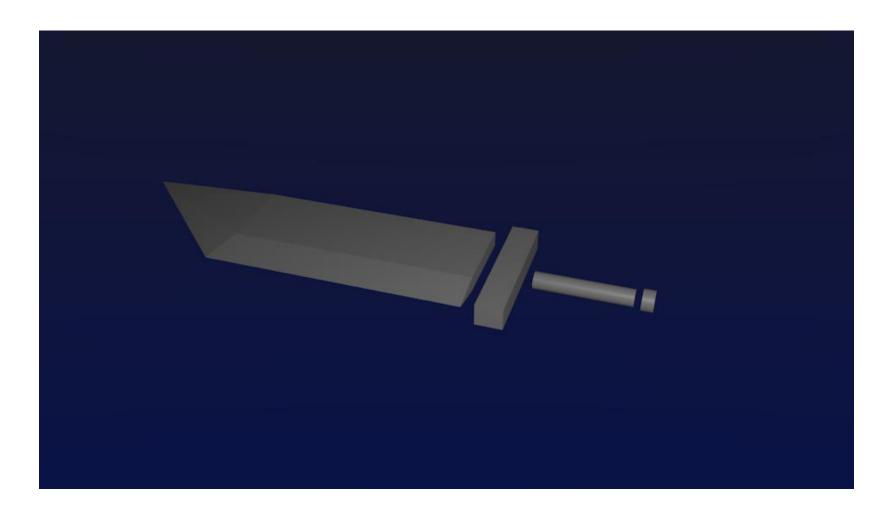
# CS488 – Final Project

Hao Pan

20618961

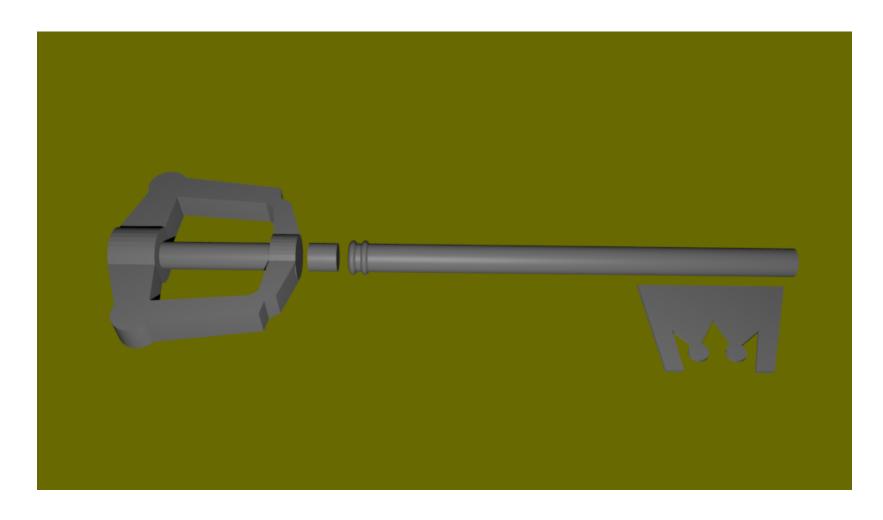
## 1. Modelling



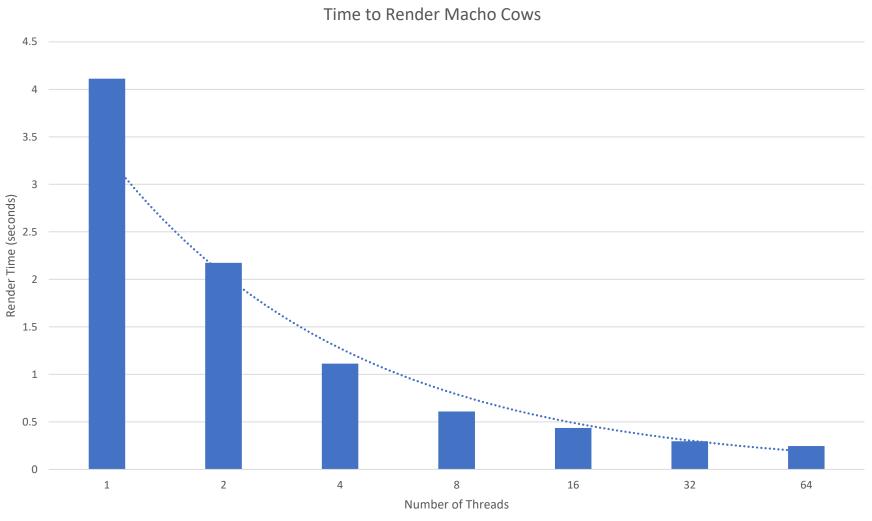


## 1. Modelling





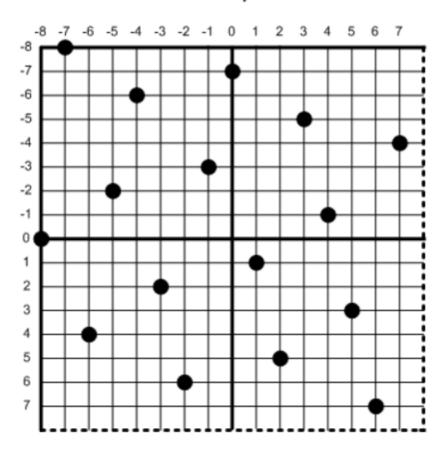
#### 2. Multithreading



Computer used: Intel Xeon E5-2697A v4 (64 threads)

#### 3. Adaptive Anti-Aliasing

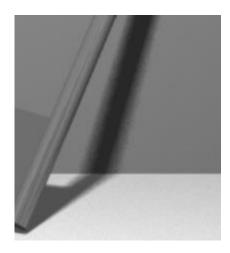
#### Standard 16 Sample Pattern



{ (1,1), (-1,-3), (-3,2), (4,-1), (-5,-2), (2,5), (5,3), (3,-5), (-2,6), (0,-7), (-4,-6), (-6,4), (-8,0), (7,-4), (6,7), (-7,-8) }

https://docs.microsoft.com/en-us/windows/desktop/api/d3d11/ne-d3d11-d3d11\_standard\_multisample\_quality\_levels

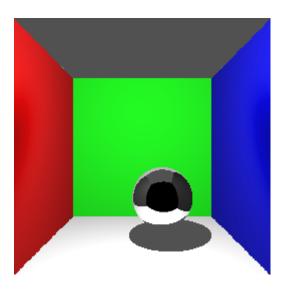
#### 4. Soft Shadows



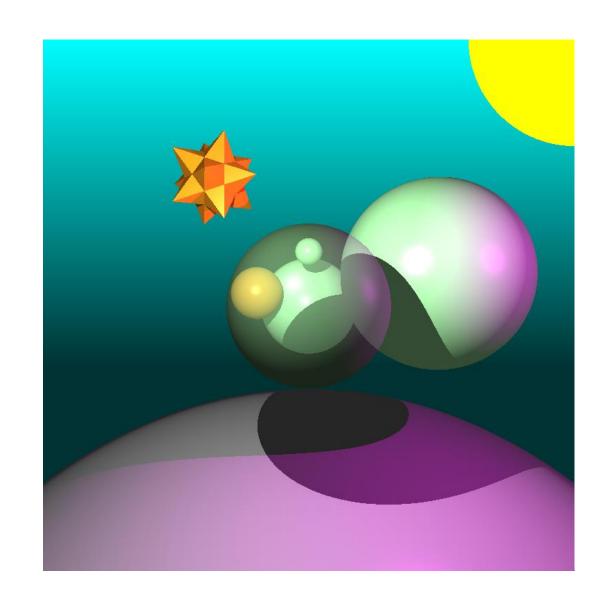


#### 5. Reflection

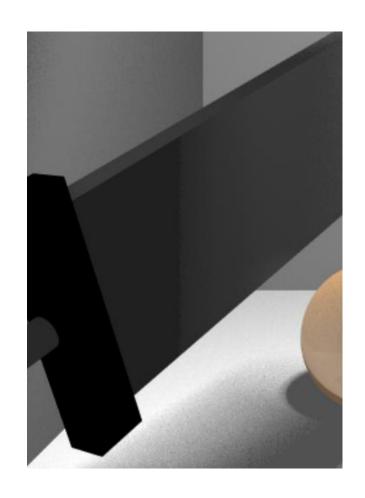


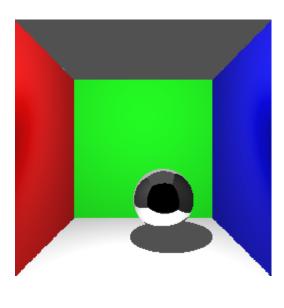


#### 6. Refraction

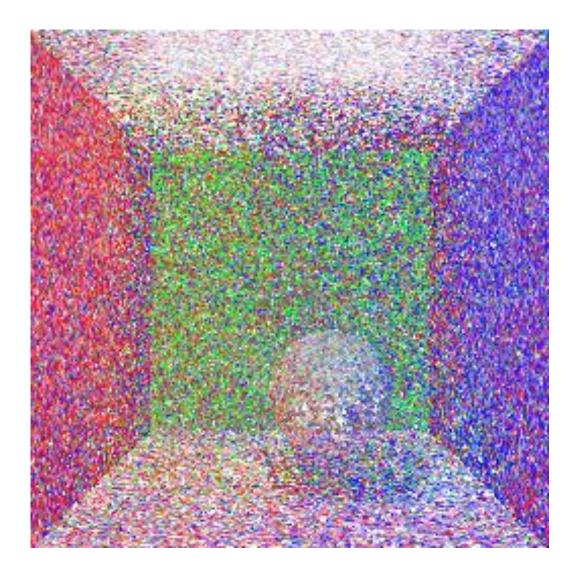


#### 7. Gloss & Metallic Reflection





### 8. Photon Mapping - First Pass



#### 10. Final Scene

