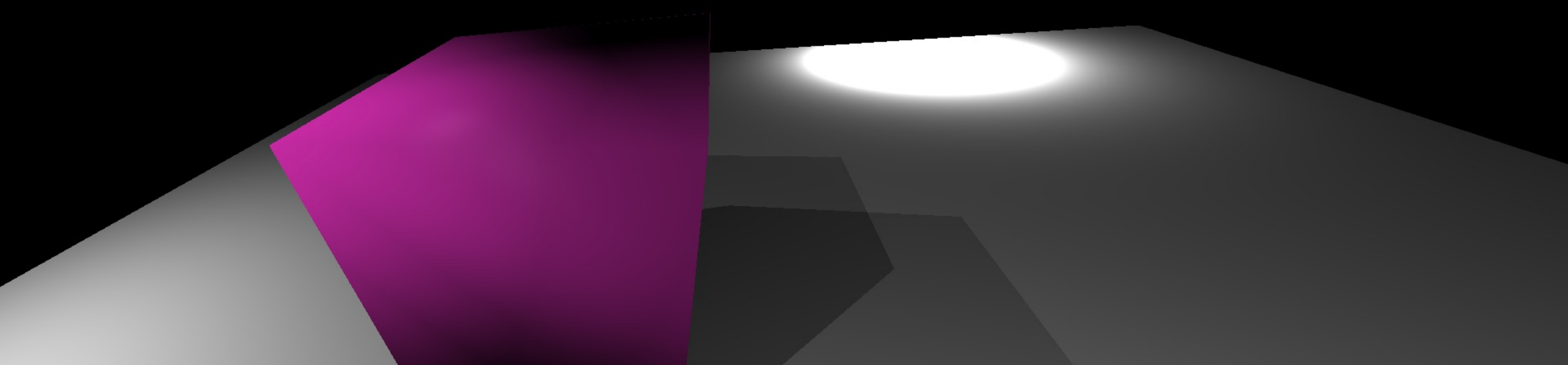
COMPUTER GRAPHICS PROJECT

RAY TRACING

Hung Nguyen (4232410)
Ruben Wiersma (4214250)
Christian aan de Wiel (4396286)
Hugo Kooijman (4126890)
Daniël van den Berg (4361997)
Jasper Hu (4356241)
Mark Wijkhuizen (4372948)
Björn Ho (4320867)
Ralph van Gurp (4271742)



THIS PRESENTATION

- Objectives
- What we've done
- Results
- Conclusions

OBJECTIVES

- Apply raytracing principles
  - Intersection, shading, shadows, reflections, refractions
- Efficiency
- Working together
- Have fun!

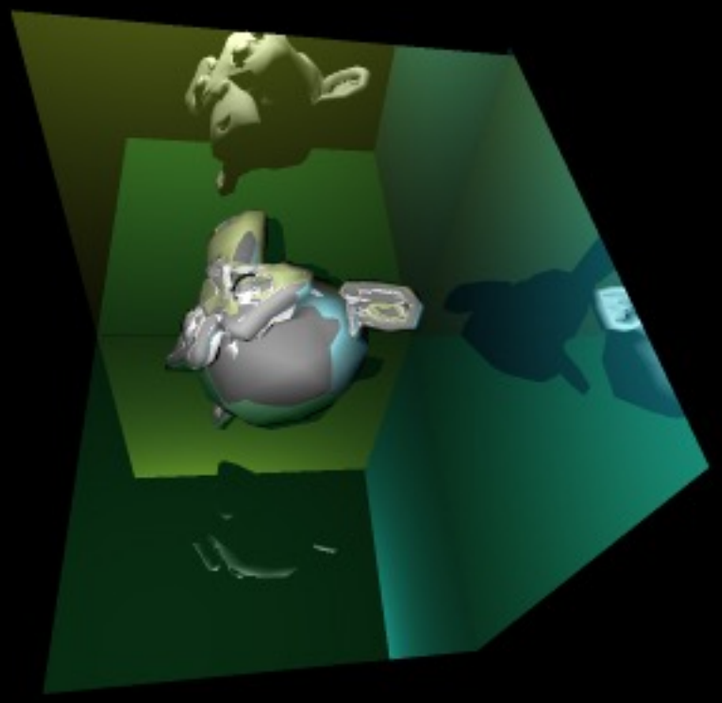
WHAT WE'VE DONE

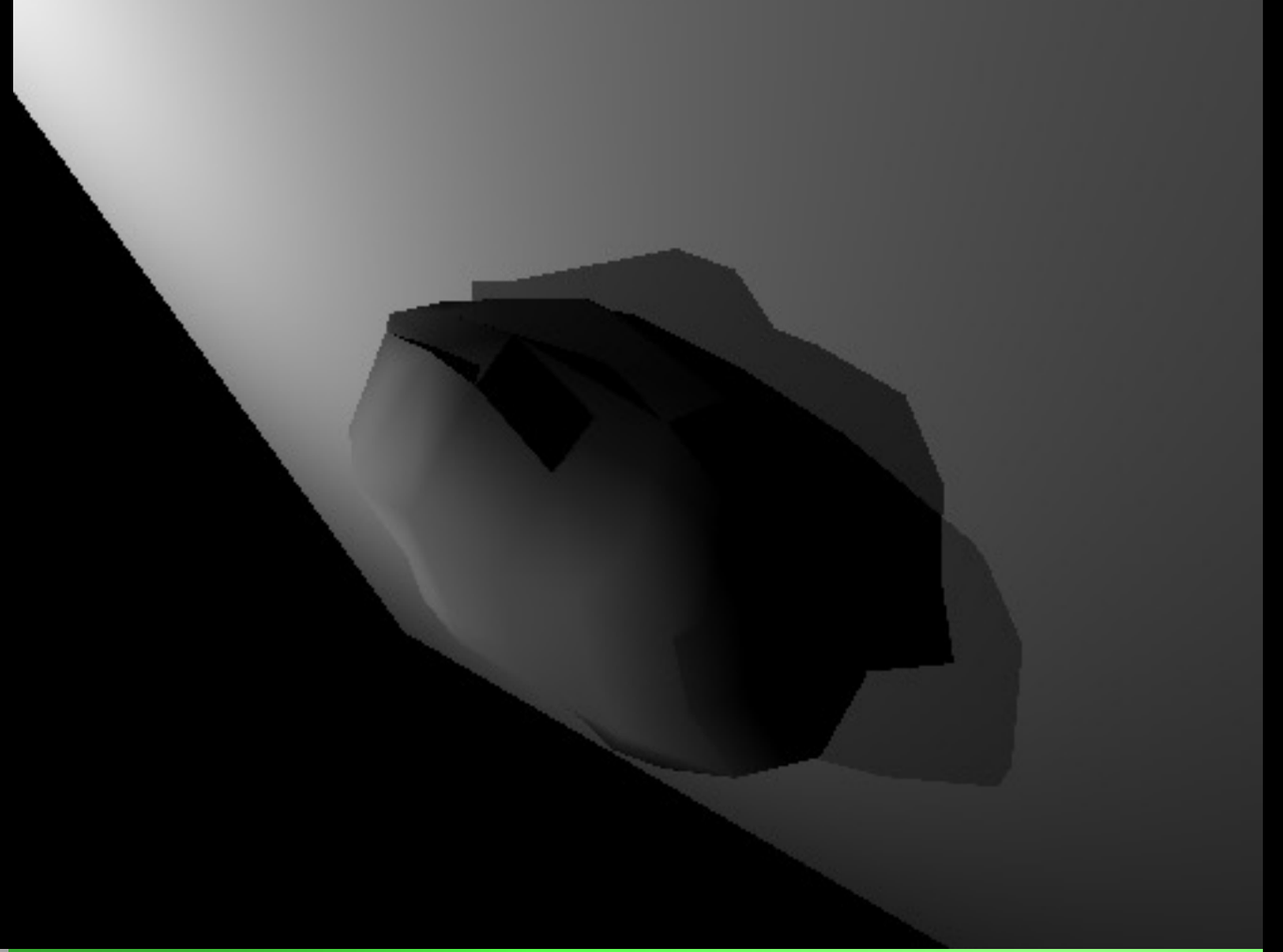
- Intersection
  - Planes, triangles
- Shading
  - Ambient, diffuse, specular, Phong interpolation
- Shadows
- Reflections, refractions
- Supersampling

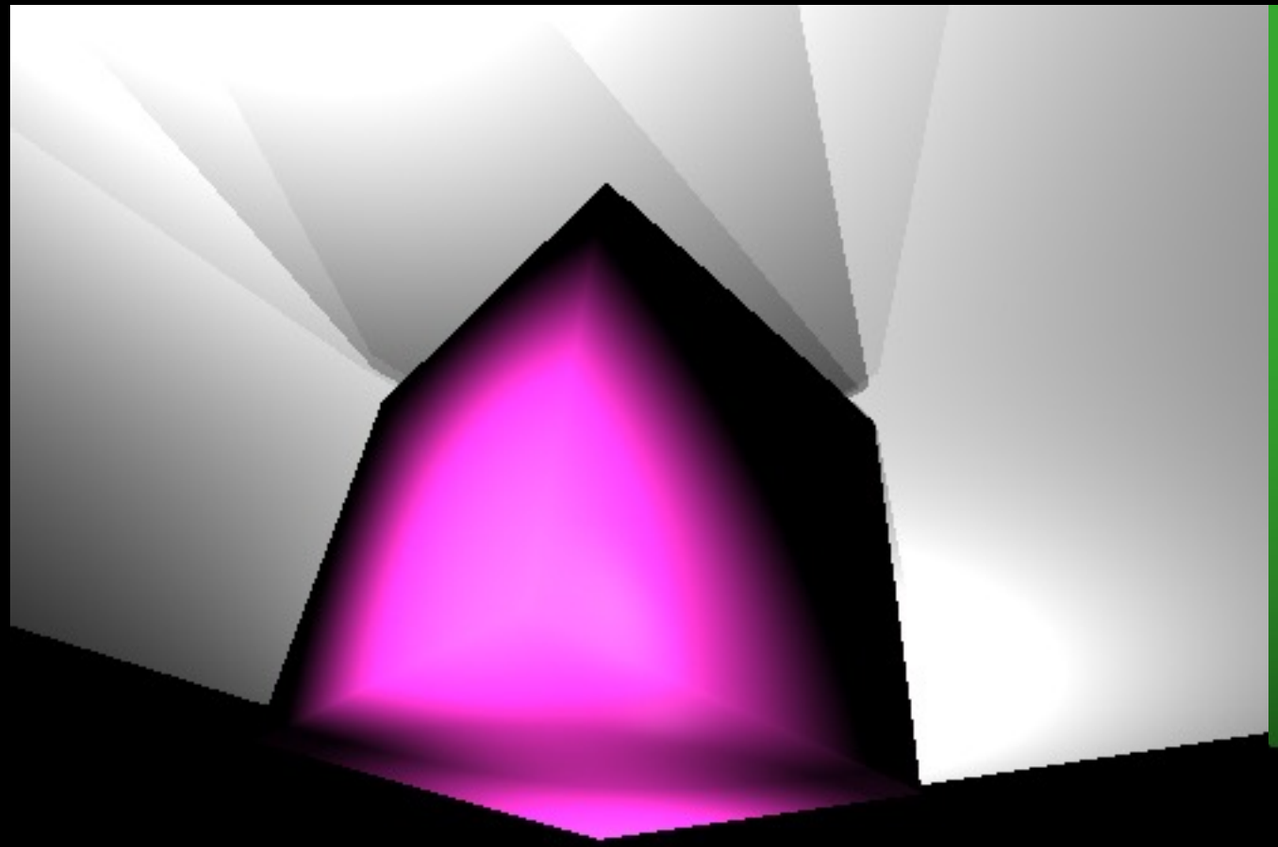
WHAT WE'VE DONE

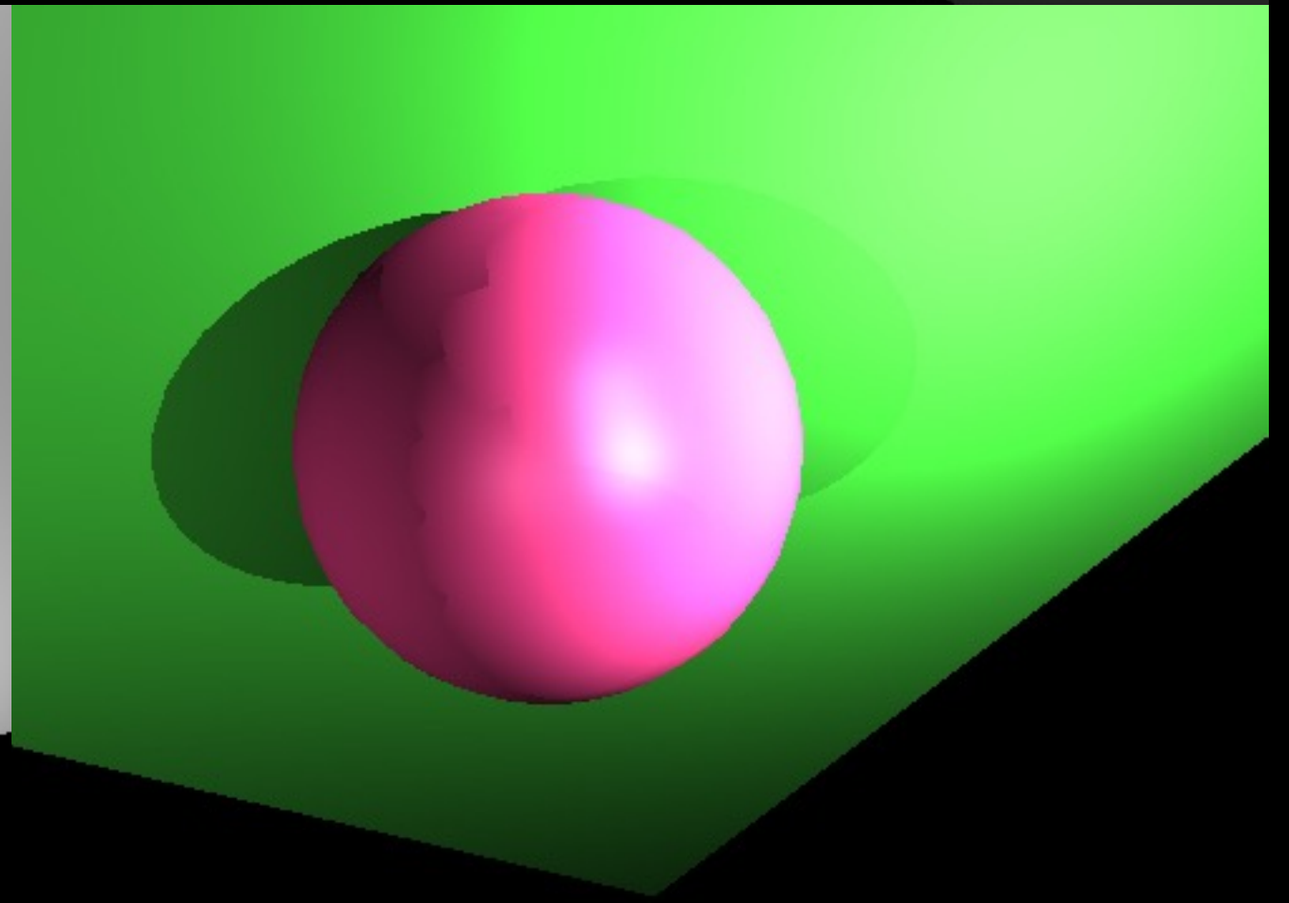
CONTINUED

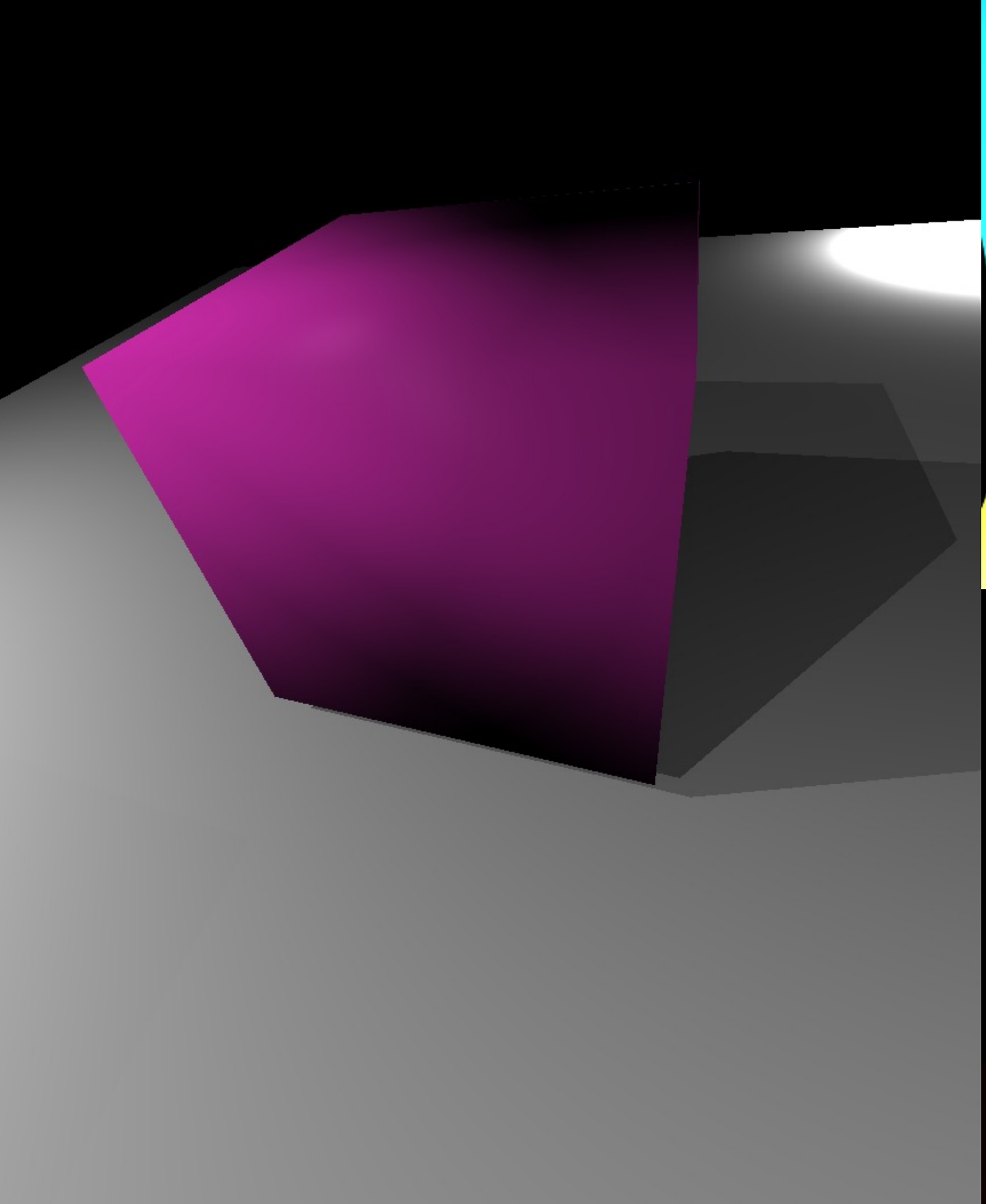
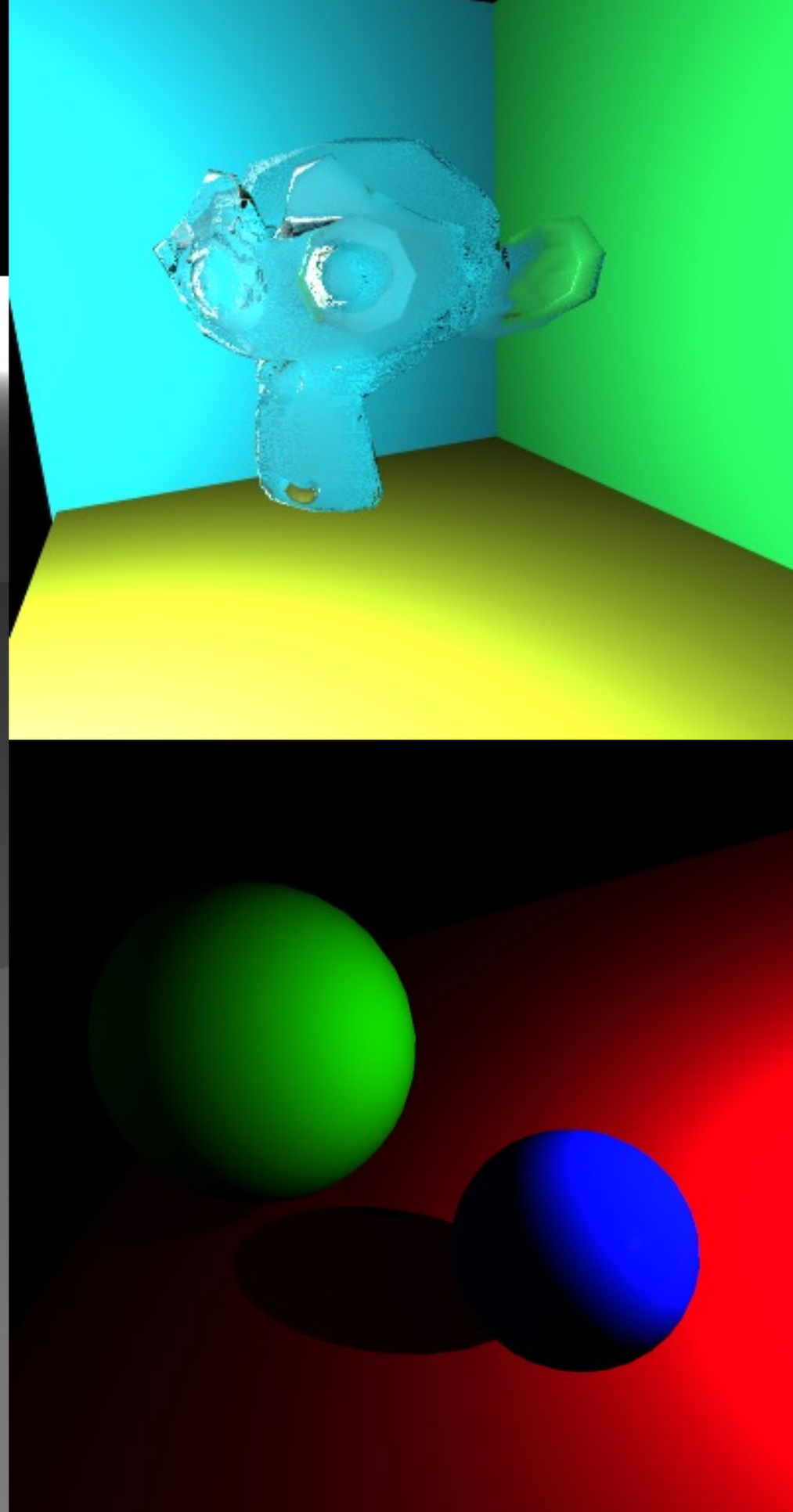
- Acceleration
  - Multithreading, bounding boxes
- Functional features
  - Move lights, zoom with keyboard
  - Shaded display in OpenGL









CONCLUSIONS

- Startup, acceleration hardest part
- Extending and improving is fun and ‘easy'
- Application of maths and computer science

QUESTIONS?