Computer Animation

w00t

Early Animation

- 5200 year old bowl found in Iran

- Zoetrope (AD 180)
  - http://www.youtube.com/watch?v=-3yarT_h2ws&t=0m16s

Disney

- Popularizes animated films in 1937
  - http://www.youtube.com/watch?v=hQZ6zzLpoNQ&t=0m43s

CG Animation

- Late 70s Through Early 90s
- CG appears in Hollywood movies
  - Alien
  - Tron
  - Ghost Busters
  - Terminator 2
  - Jurassic Park

Pixar

- First feature length CG film
  - http://www.youtube.com/watch?v=KYz2wyBy3kc&t=0m19s

Basic Animation

- What's the simplest kind of animation you can think of? You probably did this in grade school, but it started in the 1800s
  - http://www.youtube.com/watch?v=UocF4ycBnYE

DrawingPanel with loops

- What can we do with loops?

DrawingPanel with loops

- What can we do with loops?
  - Change location of shapes
  - Change size of shapes
  - Change colors
    - Gradients
  - Change text that's displayed

Gradients

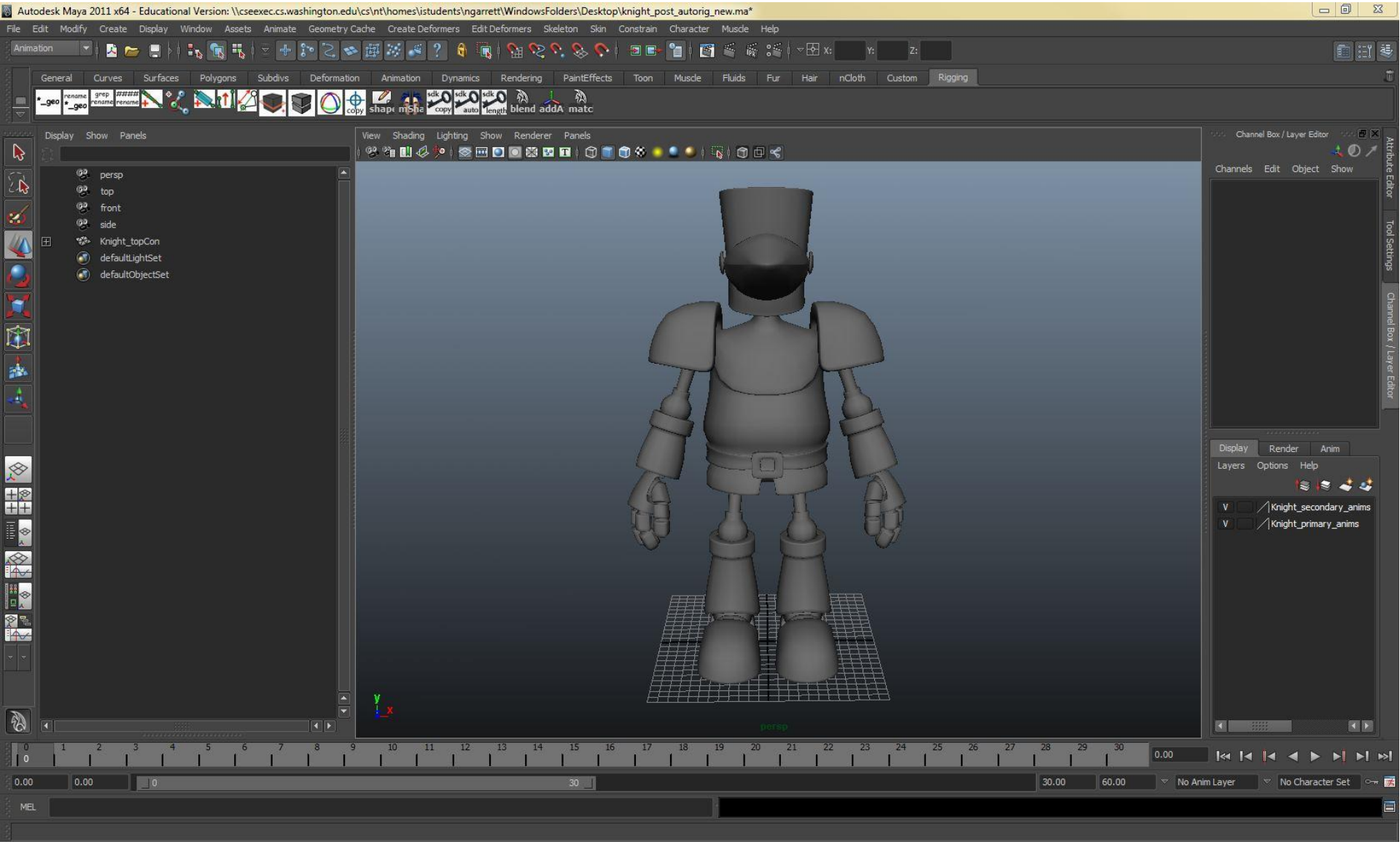
Demo!

Motion, Size

- Demos

Animation at UW

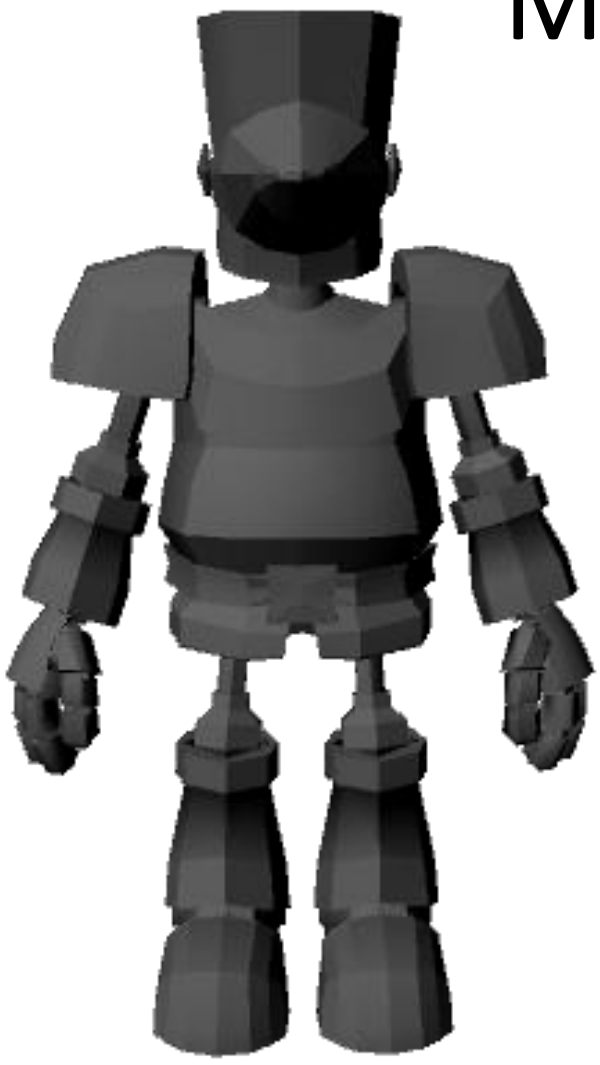
- 3 quarter program through CS
- Learn all parts of animation pipeline
- Collaboratively create an animated film

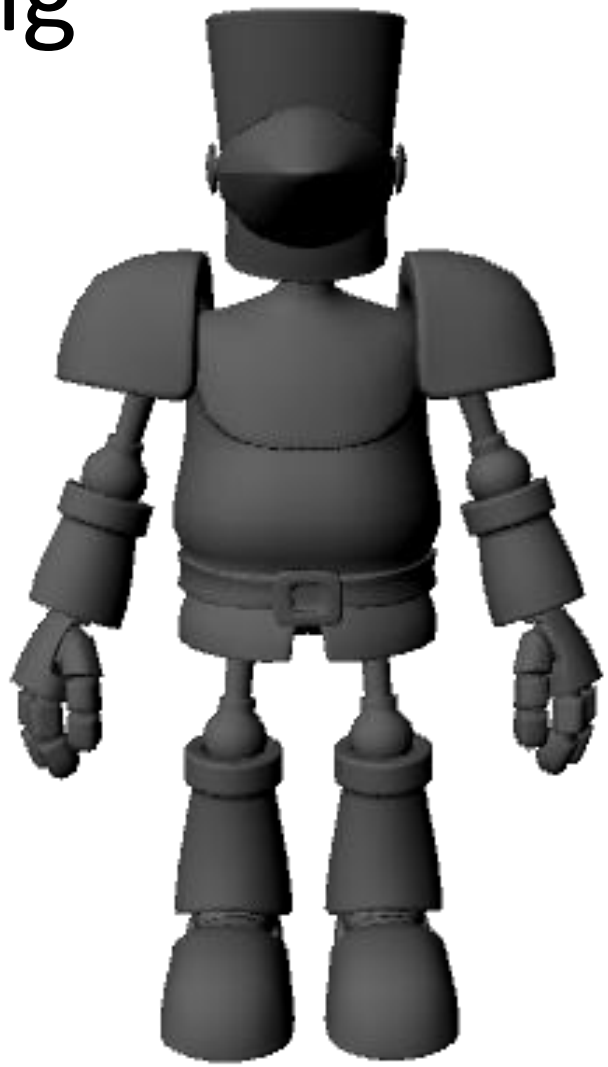

Autodesk Maya 2011 x64 - Educational Version: \\cseexec.cs.washington.edu\cs\nt\homes\istudents\ngarrett\WindowsFolders\Desktop\knight_post_autorig_new.ma*
File Edit Modify Create Display Window Assets Animate Geometry Cache Create Deformers Edit Deformers Skeleton Skin Constrain Character Muscle Help
Animation
General Curves Surfaces Polygons Subdivs Deformation Animation Dynamics Rendering PaintEffects Toon Muscle Fluids Fur Hair nCloth Custom Rigging
Display Show Panels
persp
top
front
side
Knight_topCon
defaultLightSet
defaultObjectSet
View Shading Lighting Show Renderer Panels
persp
Channel Box / Layer Editor
Channels Edit Object Show
Display Render Anim
Layers Options Help
Knight_secondary_anims
Knight_primary_anims
Attribute Editor
Tool Settings
Channel Box / Layer Editor
No Anim Layer
No Character Set
MEL

Production Pipeline

- Story
- Concept Art
- Modeling/Rigging
- Animation/Effects
- Shading/Lighting
- Rendering/Compositing
- Editing

Modeling

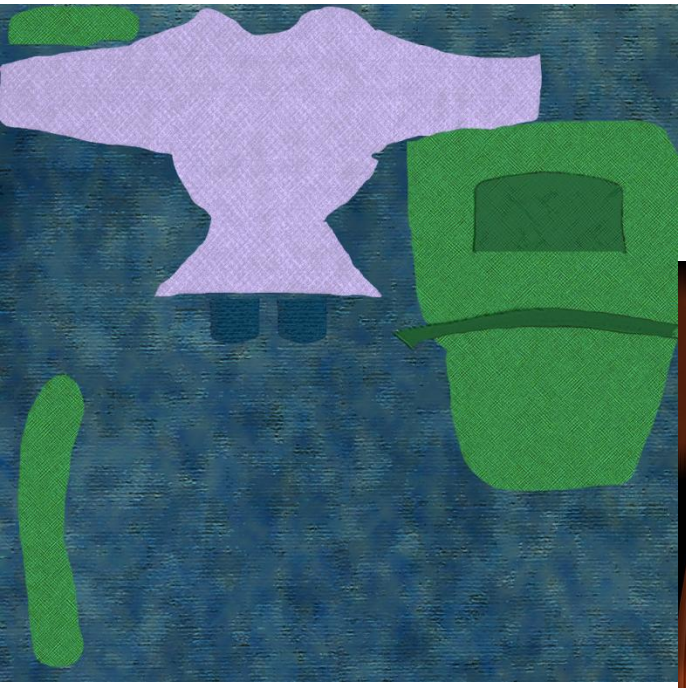


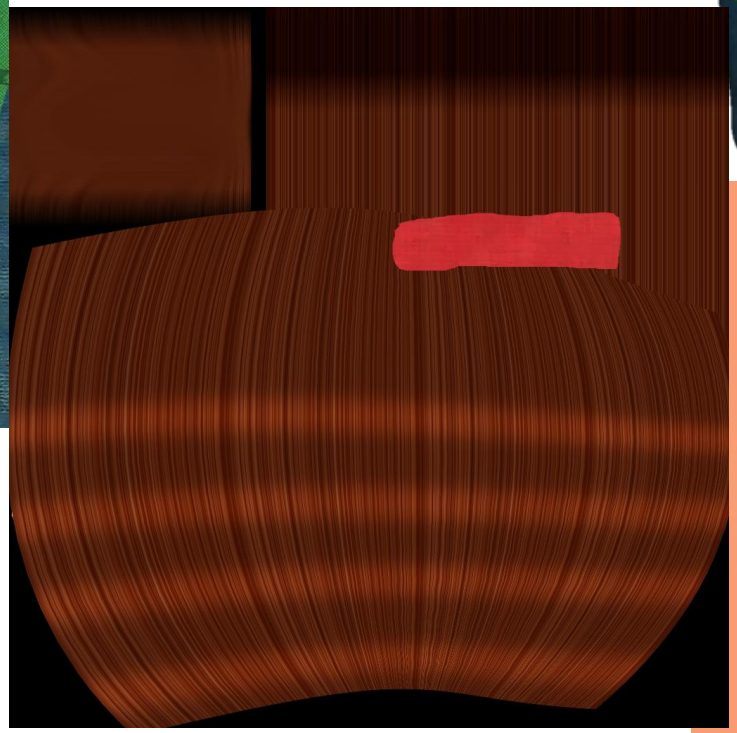


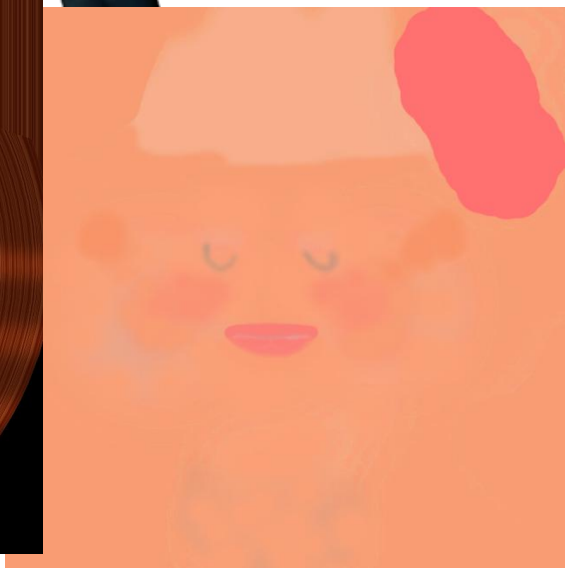
Rigging

- Set up controls for the animator
- http://www.youtube.com/watch?v=tQd-8XEBcnE
- Animator sets the position/rotation of controls at specific frames to create motion

Shading







Effects/Lighting

- http://www.youtube.com/watch?v=7NpAXMdBWTQ&t=0m38s
- http://www.youtube.com/watch?v=oMuWfspj3qo&t=0m30s

Rendering/Compositing

- Rendering
  - Taking the data about objects in space and turning it into a picture
- Compositing
  - Putting video/images together
  - http://www.youtube.com/watch?v=oTUs7hDq2PA

Animatic to Film

- Demos!

How does this all work?

- Graphics
- CSE457
  - http://www.youtube.com/watch?v=AARfZNFdms0&context=C3acb873ADOEgsToPDskI72hJ4NLkOrvPfFelR4VuZ

Let’s just watch some films (: