Overview of Projects in General

Each project is designed to move your learning experience and skill level forward. Failure to complete or sufficiently explore components of one project will lead to increased difficulty on the succeeding project. Each project is composed of three parts: analysis, interpretation, and demonstration.

Project Description

Search the internet for a free, publicly available, downloadable biped rig that includes articulation, motion, and control features for arms, legs, spine, feet, neck, and head. Fingers and facial control are not necessary. Deformations are not necessary. Then, do the following:

- Project 1a: Expressive Walk Cycle (50%)
  - ✓ Find and study reference of a real person walking.
  - ✓ Using the reference as a guide, create a cycled animation for the character's walking or running action and render as a playable loop.
- Project 1b: 360-degree Action Animation (35%)
  - ✓ Find and study reference of a real person performing an action that includes a 360-degree body rotation.
  - ✓ Create an animated non-looped action for the character than includes a 360-degree body rotation and render as a playable image sequence.

The walk cycle and 360-degree action animations will be presented in class as a combination of the reference clips and renders of the animation. Successful projects will be ready for presentation at the beginning of class, with a clear verbal introduction and explanation of methods used. If copyrighted source material is used the source must be cited.

Technical Specifications

- Both 1a and 1b:
  - ✓ Any 3D animation software may be used.
  - ✓ Rendered images should in the form of a movie file and playback at either 24 or 30 fps.
  - ✓ The image size should have a resolution no smaller than 720 pixels in its smaller dimension and an aspect ratio of 1.66, 16:9, 1.85, or 2.35.
  - ✓ The movie file format should be Quicktime H.264.
  - ✓ Contact shadows on a ground plane.

  Project 1a – Walk Cycle only
  - ✓ Action should cleanly loop during playback
  - ✓ Front or Side views plus 3/4 –angle view composited together
  - ✓ File name: <*LastNameFirstName*>*_Proj1a-WalkCycle_VIZA_615.mov*

  Project 1b – Action Animation only
  - ✓ Action should be no more than 10 seconds in length
  - ✓ Two views that clearly show the action from different angles should be composited together
  - ✓ File name: <*LastNameFirstName*>*_Proj1b-ActionAnim_VIZA_615.mov*

- Reference movies:
  - ✓ The movie files format should be Quicktime H.264.
  - ✓ Should playback at same speed as animation – it is okay to include slow-motion, but not only slow-motion.
  - ✓ Walk Cycle reference file name: <*LastNameFirstName*>*_Ref-WalkCycle_VIZA_615.mov*.
  - ✓ Action Animation file name: <*LastNameFirstName*>*_Ref-ActionAnim_VIZA_615.mov*.

Project Goals

- Recognize features of a body in motion that communicate weight and personality.
- Identify features of motion and control systems that contribute to animation performance creation.

- Create bipedal animation that exhibits weight, timing, and follow-through.
- Create action animation that exhibits weight, timing, anticipation, and leading and trailing actions.
- Evaluate and critique your own work and the work of others.

How Success is Measured

- A successful Walk Cycle Animation will communicate not only the gait of the character but an expression of the character's weight/size and personality.
- A successful 360-degree Action Animation should represent the realistic physical behavior of a body in motion.
- The visual appeal of the rendered presentation is important. This includes visual clarity of the action, contrast, color, lighting, and render quality.
- The presentation should include insightful analysis and clear use of technical terms, grammar, and communication of the relative importance of specific issues.

Resources

Rigs can be found here:

- http://www.11secondclub.com/resources
- The *Eleven*, *Norman*, and *Morpheus* rigs have been proven successful by students in past classes.

Walk cycle information:

- http://blog.11secondclub.com/p/walk-cycles.html
- https://www.lynda.com/Animation-tutorials/2D-Animation-Character-Attitude-Walk-Cycles/434465-2.html?srchtrk=index%3a3%0alinktypeid%3a2%0aq%3a3d+walk+cycle%0apage%3a1%0as%3arelevance%0asa%3atrue%0aproducttypeid%3a2

Books about the principles of animation:

- *The Animator's Survival Kit, 2nd Edition* by Richard Williams. Published by Faber and Faber. (2009). https://www.barnesandnoble.com/p/the-animators-survival-kit-revised-edition-richard-williams/1111014634/2677844364407
- *The Illusion of Life* by Frank Thomas and Ollie Johnston. Published by Hyperion. (1995). https://www.barnesandnoble.com/w/illusion-of-life-frank-thomas/1102678914?ean=9780786860708