Character animation: dance

Create a dance animation in which your fully assembled character from the Primitives assignment is '*brought to life*' and dances to an audio track. This animation must begin on the final frame of your last assignment's animation, and continue from that point. You may select any audio file as the sound track. This is an animation exercise designed for you to experience character control design, kinematics and synchronisation. Your Primitives character model will be comprised of separate components that you may need to adapt, combine, organise or structure for character animation. You are required to rig your character with controls to ease the keyframing process. These controls could include IK skeletons, SDK attributes, MEL expressions, constraints or deformer handles. Keyframe your animation and then light, shade and render your scene to best present the style and motions of the dance. Creatively you can add additional geometry or props to the scene, to better represent your audio track, to provide context or to convey a particular mood or style. Limit your animation to a maximum of 30 seconds, 750 frames, ensuring that your animation is a complete designed sequence rather than starting and stopping abruptly as though it were a snapshot of a longer animation.

Assessment and Submission

Submit your animation online as a Quicktime MOV or MP4 file and include the source Maya scene file (with your audio file submitted in the same directory). As a guide the video file you submit for this dance section should not exceed 25mb. Submissions containing video files that significantly exceed 25mb in file size will not be marked. You can choose to submit this second animation independently or combine it with your primitives submission as an extended complete animation design for the unit.

An accompanying report should be submitted as a PDF file that introduces your animation and outlines the production process - specifically highlighting the character controls and techniques built prior to keyframing. Where a progressive animatic approach has been used please feel free to submit multiple files that indicate the stages of development. This assignment represents 50% of the unit assessment.

Prior to the Christmas vacation feedback sessions will be organised for you to discuss your work as it progresses. Your final submission should be submitted online by midday on **Thursday 18th January 2018** - in the January assessment period. Please organise your time carefully in relation to other unit submissions and revision for January examinations as you can submit your work at any point prior to the deadline.

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There are four main objectives on which your mark will be based:

1.   Synchronisation with Music

The primary goal of this assignment is to assess your skill at matching movement to music: be warned this is much harder than it first appears. How well you make the character dance, how naturally it moves, and how much the music, camera and character are in sync will all play a role in determining your mark. Use all the tools at your disposal to add weight and bring the character to life! Think about the weight of your character's body, and how that weight translates through its bulk when it moves. Accurately conveying a sense of weight is key to creating a believable dance animation.

2. Character controls

The secondary goal for this assignment is that you learn how to design a character rig and use skeleton controls to enable the keyframing process to be as simple as possible. These controls should be driven by the demands of your storyboard and design. We will be assessing you on the quality of the puppet controls that you produce - and how you use them. The better your rig is before you start the better your final animation will be. A functional rig enables the choreography of more complex dance moves, moves which will allow you to show off your animating skill and obtain high marks. Keep your controls simple to use, yet flexible and functional.

3. Animation design

Once again, we will mark you on your animation design. This is a subjective criterion based on the overall flow of your animation, the story it tells and how you convey character. Think about your animation as a short film: where is the climax? How does it build towards that climax? Is it well paced? Think about how successful music videos work: they often match lighting or scene changes to important moments in the music to enhance the drama. They sometimes use humour or intensity of motion to match a climax in the track. In order to attain top marks, you must tell us about your character even if all they are doing is dancing. Consider how the combination of lighting, sound, choice of motion and overall choreography will produce a mood: and design it! The goal of this assignment is to produce a finished short. Although you will be able to obtain a first class mark simply using your Primitives model with an incredible animation implementation, adapting your model and polishing your animation will likely make it easier to obtain the highest marks. *Thus, your use of textures, lighting and rendering will be factored into your mark should you choose to spend significant time working on them.*

4. Report - *your PDF report will count for 20% of the assignment mark*

Finally, you must explain your production and animation process clearly in a report. This PDF report should contain a cover sheet with your name and a selected frame from your animation; there is no strict page restriction but as a guide we would expect about eight pages (with an appendix for development storyboards and sketches). Put simply your report needs to tell us the highs and lows from concept to final composition: it should be structured clearly into three sections and populated with multiple illustrative screenshots:

1. Pre-production and planning:

An introduction to your animation, including any sketches, and storyboards. Any and all artwork should be included within the report or as an appendix - with no page restriction. If you have filmed reference video to work from then please include it in your SAFE submission. Where online references have been used for the design simply include YouTube or Vimeo links. All animation tests and progressive animatics can be submitted to indicate process.

2. Implementation process and discussion:

Discuss the process you went through to complete the animation, explaining how you adapted and organised the original character in preparation for animation, how you constructed the skeleton and how you built the character controls. In this section, you should discuss in detail any parts of your animation you feel were particularly complex to create, and why. How did you overcome any problems you faced? Did you achieve the effect you were after? Talk us through the lessons you learned from your experimentation. Also highlight the segments of your animation which you are most proud of, explaining why and how you achieved the effect. *Ensure you discuss the rendering process that you went through*.

3. Conclusion:

In this section, briefly sum up your thoughts on the final animation. **What would you do differently if you did it again?** How did you structure or organise the animation creation process?