CA 3600 Graphic Programming
Instructor: Krishna Sadasivam

**Working with Attributes in MELscript Grades**

Now that you have modeled your alarm clock, we are going to add some functionality to it. You'll want to make sure you have an hour hand, minute hand, and an hour hand cog wheel and minute hand cog wheel.

**Using MEL script**, neatly type in the appropriate MEL script that will do the following:

1. When the **minute hand cog wheel** rotates, the corresponding **minute hand dial** will rotate.
2. When the **hour hand cog wheel** rotates, the corresponding **hour hand dial** will rotate.
3. As demo'd in class, **use dynamic visual effects** (smoke, lightning, fire, etc.) within your scene. Use attribute connections to vary one of the following (the visual effect's color, its size, or its intensity).
4. Render out your animation in **320 x 240 resolution** (production quality / 300 dpi / highest quality). **480 frames (20 seconds maximum)**

   **Your animation should show the following:**
   1. the hour cog turning the hour hand on its own
   2. the minute cog turning the minute hand on its own
   3. a demo of basic visual effects incorporated into your scene

   Submit your MEL script as a .mel file with the following header:

   ```
   // Firstname Lastname
   // CA 3600 Graphics Programming
   // Attributes Project
   // Fall 2011
   ```

5. Make sure you DOCUMENT your code. In order to receive full-credit, make sure that you neatly format your code, include your name and class information, and COMMENT each line of code – explaining what each line does.
6. Include an OVERVIEW paragraph towards the top of your program that describes what it does.

Submit the following files in the **Class_6_Due** folder:
**Lastname_attributes.mel** - your MEL script
**Lastname_clock.mb** - the mb file that has a functional hour and minute hand.
**Lastname_clock.avi** (or **.mov**) - the animation demo

The Grading Rubric for this project is on the next page.

| | Excellent (4) | Very Good (3) | Good (2) | Average (1) | Poor (0) |
|---|---|---|---|---|---|
| **Camera Angles 20 points** | Compelling camera angles and camera cuts that show the clock in dynamic action. | Camera angles show the clock, but angles could be more dynamic. | Camera angles are clear, but awkward camera cuts break the flow of the animation. | Animation is jerky in clock's movement and the camera angles. | Only one camera angle chosen. |
| **Documentation 20 points** | code fully and neatly commented with student's name, course number, and date at the top of the document. proper syntax- no spelling mistakes. An overview of what the code does is clearly and accurately described. | code neatly commented with student's name, course number, and date at the top of the document. proper syntax- no spelling mistakes - Code does not include an overview at the top of the document. | code includes brief comments with student's name, course number, and date at the top of the document. proper syntax- there may be minor spelling mistakes. Code does not include an overview at the top of the document. | code is sparsely documented. Student's name, course and date not included. | Code is not documented |
| **Execution 20 points** | clock functions as described, with extra elements procedurally animated to compliment the mood and scene. | clock functions as described, with extra elements procedurally animated. | Clock functions as described. | some functionality quirks that prevent the clock from working properly. | Clock no workie. :( |
| **Technical Specs followed 20 points** | Rendered movie is named as specified in handout and at the proper resolution. | Minor misspelling of filename but at proper resolution. | Render is at incorrect resolution OR filename convention not adhered to. | Render is at incorrect resolution AND filename convention not adhered to. | Final animation is not rendered or only available as a playblast. |
| **Visual Effects 20 points** | Visual effects compliment the scene and create an atmosphere and mood and **vary** in intensity, color, or size. | Visual effects **vary** in intensity, color, or size. | Visual effects present but does not vary. | Visual effects do not fit or match the scene. | Visual effects not used. |

**Total Possible Points:** 100