Lab 4: Mechanisms

Lab professor: Holly Yanco

Start in lab: Thursday 2/17 or Tuesday 2/22

Due: At start of lab on Thursday 2/24 or Tuesday 3/1 (due Tuesday for Tuesday lab students; Thursday for Thursday lab students)

Overview: In this lab you will build one or more prototype mechanisms. The attached sheet has instructions on how to build a simple waving crank. You may build:
1. The waving crank, or...
2. Any other mechanism discussed in the 2/15 Mechanisms lecture.
You must make a piece of automata out of your mechanism. Use it to animate an object, a scene, an image, etc. You can use foamcore or any of the other building materials.

Materials (provided): Foamcore, wooden sticks, screws, nuts.

Process (if you are making the waving crank):
1. Cut foamcore pieces according to the attached sheet.
2. Score the foamcore along the dotted lines, cutting only one side and folding.
3. Attach all linkages, screws, nuts, etc. and glue your mounts to a foamcore base.
4. Attach your DC motor head to your motor.
5. Program your motor to spin (any sequence you want).
6. Attach a sensor to make it interactive.
7. Incorporate this mechanism into a piece of automata.
8. Document your process (Lab write-up)

Lab write-up: Your write up should include the following:
1. Your name
2. A description of how you modified the project (which sensor(s) you added and where, what the mechanism was used to achieve, etc.)
3. A discussion of how your model performs
4. A copy of your final running code (e-mail this to Holly as well).
5. Any other thoughts or ideas.