Solidworks 3 (50 points)

For your final project design, you will be asked to create Solidworks designs of your device. Before being able to do this, you are being asked to practice building drawings in Solidworks. In class, you will be given time to complete the Solidworks tutorial 3 and ask questions for the instructional team. This tutorial will further build upon skills developed in Solidworks tutorial 1 and 2, but with significantly less direct instruction. In the handout, we have given you drawings for five parts that need to be built in order to assemble a Castor. You should try to build the parts based on the drawings, but example videos of how to do it are also available for you in the Media Gallery. For this assignment, please submit 8 ".sldprt"s files, including the five parts that you created and the 3 parts from McMaster Carr, and your assembly file. Although you do not have to build the parts from McMaster Carr, you **must** submit them with your assignment so we can properly open your assembly. Each part should be able to be opened in Solidworks, be **fully defined**, and have correct dimensions and materials.

Note: This is NOT a group assignment. Each student needs to work on this assignment independently. WARNING: In Solidworks, there is a way to see who created the part, which we will check to make sure that each student is submitting their own part. Submitting other students' Solidworks files is an Honor Code violation.

Course learning objectives addressed by Solidworks 3:

2.) Translate real life items and ideas into 2D and 3D models accurately

Specific assignment objectives:

1. Apply skills from tutorials 1 and 2 to build parts based on drawing files
2. Find and use part files from internet databases
3. Create a complex assembly of parts

Grading Criteria:

Please submit all part files included in the assembly **(even the screws and washer provided)** so that we can open the assembly for grading purposes.
Each incorrect dimension will result in a 1 point deduction
Each under (or over) defined part file will result in a 1.5 point deduction

Base:
- Part file – 5 points

Bracket:
- Part file - 10 points

Bushing:
- Part file - 5 points

Roller:
- Part file – 5 points

Shaft:

- Part file – 5 points

Assembly

- Assembly file – 20 points
    - Each missing mate will results in a 2.5 point deduction
    - If **any** part files (**including the pre-made screws and washer**) are missing from the submission, we will apply a one time, 5 point deduction from this section.