Inventor Assignment #7

Reading Assignment:
Read Chapter 14 in Parametric Modeling with Autodesk Inventor 2013, by Randy Shih

Computer Assignment:
(Note: Extra time may be allowed on this project as it will take a bit more time than earlier projects.)

Complete the exercise (Leveling Assembly) at the end of Chapter 14 in the text.
Additional specifications:
1) Create metric parts for the 4 parts in the problem.
   - Create a detail drawing for each part using an A-size sheet with an appropriate scale.
   - The detail drawings for the first three parts should include 4 views (front, top, right, and isometric), including dimensions, title block information, etc.
   - The detail drawing for the 4th part (the adjusting screw) should include 3 views (front – showing the hex hole), right, and isometric)
2) Create an assembly using the 4 parts. Use appropriate constraints to put the parts together.
3) Create an assembly drawing using an A-size (portrait) sheet with an appropriate scale. Include:
   - A parts list (include a column for material with mild steel listed as the material for each)
   - Balloons identifying each part
   - Appropriate title block information.
4) Add a motion constraint to the assembly so that when you turn the screw with the mouse, the lifting assembly operates as designed. Also add a mate constraint that can be driven so that the device will operate properly over its intended range. Demonstrate the proper of motion to the instructor. Also record a video clip of the motion of the leveling assembly and demonstrate it to the instructor as well. (Note: the adjusting screw has M10 x 1.5 threads, so its pitch (distance between threads) is 1.5mm, meaning that it should move 1.5mm for each rotation. Use this value with the motion constraint.)
5) Staple together the assembly drawing and the four detail drawings and submit them to the instructor.