Lab Assignment #7: Patterns & Model Modifications

Instructor: Mike Philpott (email: mphilpot@illinois.edu)
Date Due: One week from Start Day of Lab (turn in deadline – 11pm night before next lab)

Part I. Complete Exercise 13, Tasks 1-3 (pg 297-298)
This exercise works with mirror features.

Part II. Complete Exercise 14, Tasks 1-4 (pg 310-312)
The goal of this exercise is to become familiar with patterns.

Task 1
- Select the appropriate axis in the model tree instead of selecting it in the model window.

Part III. Complete Exercise 15, Tasks 2 thru 8 (pg 331-339)
You will become familiar with feature manipulation in this exercise.

Task 4
- The "Edit Definition" text has changed to the "Edit the Definition" icon in Creo 3.0.

Task 7
0) Follow the following instructions to complete task 7.
1) Drag the DTM1 datum plane up the list and drop it above the "Extrude 1" feature as shown in the book.
2) In the model tree, select the "Revolve 1" feature. In the RMB menu, click the chain icon, "Edit the References".
3) In the "Edit References" dialog box, select the line with the RIGHT datum plane.
4) Select the DTM1 datum plane in either the model window or the model tree.
5) Click OK in the "Edit References" dialog box. The revolve feature should move as shown in the book due to its new DTM1 reference.
6) In the model tree, select the "Revolve 2" feature. In the RMB menu, click the chain icon, "Edit the References".
7) In the "Edit References" dialog box, select the line with the RIGHT datum plane.
8) Select the DTM1 datum plane in either the model window or the model tree.
9) Click OK in the "Edit References dialog box. The revolve feature should move as shown in the book.
Part IV. Design Project: Ethical and Professional Responsibility

As discussed in class last week, and with reference to class notes: “Ethical and Professional Responsibilities of an Engineer” posted on the class website, please brainstorm in your teams the following:

1. Professional Responsibilities: Develop some potential scenarios that may occur in your company, and within your team, that may require you to make some difficult professional decisions. Then describe how you might handle these with proposed courses of action and/or decisions you would make.

2. Ethical Issues and Product Design Decisions: Discuss some potential ethical issues associated with your product. Then describe how you might handle these with some specific design decisions. You may also want to update your PDS to reflect these decisions.

Having worked as a team to develop your plans, individually write essays of at least 2 pages in length; with a section on each of the above (i.e. there should be a section 1. Professional Responsibilities AND a section 2. Ethical Issues and Product Design Decisions)

Part V. Submission Requirements

Create a zip file named "<netid>_lab7.zip" with the following files. Submit it for grading through the my.mechse website. Be sure to include the latest version of each part.

- netid_4455-002.prt.\# (from Part I)
- netid_4455-005.prt.\# (from Part III)
- netid_4455-007.prt.\# (from Part I)
- netid_4455-008.prt.\# (from Part III)

- team#_Ethics.zip (from Part IV) – One team member from the “Grading Lab Section” please submit the word essay files from each team member