The file Constellations.csv contain a list of the 88 constellations in the sky. The 5 columns in the files are Name, Symbol, RA of center, Dec of center, Flag. The Flag column letters are Z = Zodiacal constellation, A = Ancient Name, M = Modern Name (after 1603).

- 1. List the Zodiacal constellation in order of increasing RA.
- 2. List the constellations that are circumpolar as seen from Seattle ( $\theta = +47.6$ ).
- 3. List the constellation that can **never** be seen from Seattle.
- 4. What is the percentage of constellations, with  $\delta > 0$ , that have modern names?
- 5. What is the percentage of constellations, with  $\delta < 0$ , that have modern names?
- 6. What constellation is closest to the Zenith, as seen from Seattle, on midnight on the first day of Winter?
- 7. What constellation is closest to the north celestial pole?
- 8. What constellation is closest to the south celestial pole?
- 9. What time of year (approximate date) is the best time to observe Orion?
- 10. What time of year (approximate date) is the best time to observe Andromeda?

Write your answers to a plain text file (do not use WORD) and name it: FirstLast\_HW1.txt .

For Example: TobySmith\_HW1.txt

Copy this file to the class homework directory:

%cp FirstLast\_HW1.txt ~pikaia/HOMEWORK/

Deadline: Tuesday Jan 12 - 5pm (-10% for each 30 minutes late)

If you want to update your answers just recopy with a new name (i.e. TobySmith2\_HW1.txt).

As always, feel free to work with other people, but make sure to turn in your own assignment. Do not just turn in one group assignment.