

CS410 Homework - 4

Question 1 of 1: [100 marks]

The goal of this assignment is to prepare your computer for running Prolog programs, and for you to learn the basics of editing/compiling/executing by working with simple Prolog programs. So, it is essential that you complete this assignment soon in order to become ready for later assignments. Please carry out the following installation step on your personal computer:

Download the Prolog Environment: Visit <http://www.swi-prolog.org/download/stable> and install the SWI-Prolog Environment for the operating system on your computer. You are recommended to also download the SWI-Prolog Reference Manual PDF-file from that page.

This installation will set your computer up for all future Prolog assignments. If you get stuck anywhere during the installation, please start a discussion thread, and someone should be able to help you.

Now, download the startup Prolog program text file **ha4.pl** given above, start SWI-Prolog, and load the **ha4.pl** program. First, play with this program by entering some queries to see if you get expected answers. You are free to think of your own queries, but here are some examples:

- a) Is gary a sibling of mary?
- b) Who are the parents of bill?
- c) Give all pairs of cousins.
- d) Give all aunts of tom.

Finally add rules to this program for the following clauses:

1. ancestor(X, Y) :- This clause would return **true** if X is an ancestor of Y. For example, **James** is an ancestor of **Linda** because James is the father of Sophia who is the mother of Catherine. Catherine has a child called Beth and a grandchild Linda.

For this assignment, name your source file **HW4_WSUID.pl**. For example, if your user ID is A999B999 name your file as **HW4_A999B999.pl**.