

## COMP 340-08B

# **Reasoning about Programs**

# Assignment 3

This exercise is to be done using the  $J \forall P \exists$  proof assistant, which is available for use in Computing Laboratory 7 (R G.19). This tool is there to guide you in the construction of natural deduction proofs. If you use it with consideration, you will soon learn the way to find these proofs on your own.

#### The Task

Download the  $\mathsf{J}\forall\mathsf{P}\exists$  theory file <code>comp340-ass3.jt</code> from the COMP 340-08B course home page in Moodle at

http://elearn.waikato.ac.nz/course/view.php?id=2567

and use  $\mathsf{J}\forall\mathsf{P}\exists$  to prove all the conjectures in it.

(15 marks)

### Verification

This assignment will be verified during the tutorial session on Friday 8 August 2008 from 9:00–10:00 in Computing Laboratory 7 (RG.19). You will be asked to complete one of the proofs in front of the lecturer. If you cannot attend on 8 August, please arrange an alternative verification time with the lecturer before the due date. (5 marks)

#### Submission

Please save your  $\mathsf{J}\forall\mathsf{P}\exists$  proofs and submit them electronically through the COMP 340-08B course home page in Moodle at

http://elearn.waikato.ac.nz/course/view.php?id=2567

before the due date.

Due date: Wednesday, 6 August 2008, 17:00