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Tutorials for Decision Procedures
Exercise sheet 12

Exercise 1: The πVC compiler (pivc)

Install and run the program pivc. You do not need an external solver as the new versions of πVC use a webservice for these tasks. Thus you have to be online to use it. You can find πVC and some samples on http://cs.stanford.edu/people/jasonaue/pivc/.

(a) Load the example program InsertionSort. Replace the post condition with true. Check the flag "Generate Runtime Assertions" in the compile menu and add the loop invariants that are needed to prove them. All verification conditions should be valid (green).

(b) Now set the post-condition back to sorted(rv,0,length(a)-1). Add the necessary invariants to prove the correctness of the program.