ECEN 689-605/700 Dependable Learning Systems Fall 2018

Final Exam

Due 10:00 AM, December 12, Wednesday

No late submission is accepted!

(**20 Points**) Please make *one* selection among the following model checking tools:

- SPIN http://spinroot.com/spin/whatispin.html
- CBMC http://www.cs.cmu.edu/~modelcheck/cbmc/
- JBMC http://www.cs.cmu.edu/~modelcheck/cbmc/
- EBMC http://www.cs.cmu.edu/~modelcheck/cbmc/
- PRISM http://www.prismmodelchecker.org/

For the tool that you selected, please learn its basic usage and then do the following:

1. Find a simple yet non-trivial example of design, for example, several lines of software code in C or Java, or a small circuit design in Verilog.
2. Specify a simple yet non-trivial property in temporal logic. For example, at least two atomic propositions, at least one logic operator, and at least one temporal operator.
3. Run the tool you selected to verify the property that you specified in 2 on design in 1.

Please tell the tool you selected and show the results (with important details) on 1, 2 and 3 above in no more than 3 pages of typed report. Please include a snapshot of the tool output in your report. You can discuss with classmates in learning how to use the tools. However, items 1, 2 and 3 must be completed by each student independently.