

*Solve this problem by modifying a copy of <http://www.ece.lsu.edu/ee3755/2001f/hw05.html> which can also be found in </home/classes/ee3755/com/v/hw05.v>. See <http://www.ece.lsu.edu/ee3755/proc.html> for instructions on running the simulator. Alternate instructions can be found in Lesson 7 of the ModelSim Tutorial, linked to the references web page, <http://www.ece.lsu.edu/ee3755/ref.html>. The links are clickable when this assignment is viewed with Acrobat Reader. The ModelSim tutorial and other documentation can also be accessed from the Help menu on the ModelSim GUI (started by the command `vsim -gui`).*

Copy the homework template, </home/classes/ee3755/com/v/hw05.v>, into a subdirectory named `hw` in your class account.

**Problem 1:** Complete module `itod` so that it converts the 52-bit signed integer on input `int` to an IEEE 754 double-precision floating point value, which is placed on output `double`. The module should synthesize to combinational logic. See the solution template for additional instructions.

**Problem 2:** Complete module `pop64` so that it sets output `p` to the population of input `n` after no more than four positive edges of input `clk`. The module must use a single instance of `pop32` to compute the population. See the solution template for additional instructions.