**Chapter 10, Advanced Interfaces homework**

The purpose of this homework is to expand your solution to Chap\_9\_Functional\_Coverage/homework to use virtual interfaces.

Requirements:

1. By using virtual interfaces it will not be necessary to `include any class definition files.
2. Use an XMR, as opposed to a port listing, to pass the interface to the program.
3. Modify the interface to use a parameter, ADDRESS\_WIDTH. By default the address is 8-bits wide.
4. In the top level testbench create a parameter called ADDRESS\_WIDTH. This parameter will be passed to all classes, interfaces, etc, that require it. Do not use a `define.
5. The compilation and load is allowed to produce no errors or warnings except possibly a warning similar to the following. This warning is expected when the address width is not 8.

# \*\* Warning: (vsim-3015) top.sv(31): [PCDPC] - Port size (8 or 8) does not match connection size (7) for port 'address'. The port definition is at: ../../risc\_spm/RISC\_SPM.v(18).

Deliverables:

1. All of your code in tarred/zipped electronic format including scripts, project if used, etc.
2. Clear directions on running your solution
3. Coverage window when ADDRESS\_WIDTH is set to 9.
4. Run time when ADDRESS\_WIDTH is set to 7, 8, and 9. Why does it differ?