class coverage extends uvm\_subscriber#(mem\_sequence\_item);

`uvm\_component\_utils(coverage)

bit enable;

bit [31:0] dina;

bit [31:0] dinb;

bit [31:0] addr;

bit wr;

bit [1:0] slave\_sel;

covergroup cov;

coverpoint enable{ //coverpoint enable;

bins a1 ={0};

bins a2 ={1};

}

coverpoint dina{

bins a1 ={[0:50]};

bins a2 ={[51:100]};

}

coverpoint dinb{

bins a1 ={[0:50]};

bins a2 ={[51:100]};

}

coverpoint addr{

bins a1 ={[0:50]};

bins a2 ={[51:100]};

}

coverpoint wr{ //coverpoint wr;

bins a1 ={0};

bins a2 ={1};

}

coverpoint slave\_sel{ //coverpoint slave\_Sel;

bins a1 ={0};

bins a2 ={1};

bins a3 ={2};

bins a4 ={3};

}

endgroup

function new(string name, uvm\_component parent);

super.new(name,parent);

cov=new;

endfunction

function void write(mem\_sequence\_item t);

`uvm\_info("APB\_SUBSCRIBER", $psprintf(" sampled tx %s", t.convert2string()), UVM\_NONE);

enable = t.enable;

dina = t.dina;

dinb = t.dinb;

addr = t.addr;

wr = t.wr;

slave\_sel = t.slave\_sel;

cov.sample();

$display("Coverage Percentage: %.2f%%", cov.get\_inst\_coverage());

endfunction

endclass