// load a word stored in memory location 1200 ,add 45 to it and store the result in memory location 121

module test\_mips32;

reg clk1,clk2;

integer k;

pipe\_MIPS32 mips (clk1,clk2);

initial

begin

clk1=0; clk2=0;

repeat (20) //generating two phase clock

begin

#5 clk1=1; #5 clk1=0;

#5 clk2=1; #5 clk2=0;

end

end

initial

begin

for (k=0; k<31;k++)

mips.Reg[k]=k;

mips.Mem[0]= 32'h28010078; // ADDI R1,R0,120

mips.Mem[1]= 32'h0c631800; // OR R3,R3,R3 DUMMY

mips.Mem[2]= 32'h20220000;// LW R2,0(R1)

mips.Mem[3]= 32'h0c631800;// OR R3,R3,R3 dummy

mips.Mem[4]= 32'h2842002d;// ADDI R2,R2,45

mips.Mem[5]= 32'h0c631800;// OR R3,R3,R3 DUMMY

mips.Mem[6]= 32'h24220001;// SW R2,1(R1)

mips.Mem[7]= 32'hfc000000;// HLT

mips.Mem[120]= 85;

mips.PC=0;

mips.HALTED=0;

mips.TAKEN\_BRANCH=0;

#500 $display ("Mem[120] : %4d \nMem[121] : %4d",mips.Mem[120],mips.Mem[121]);

end

initial

begin

$dumpfile("mips.vcd");

$dumpvars(0,test\_mips32);

#600 $finish;

end

endmodule