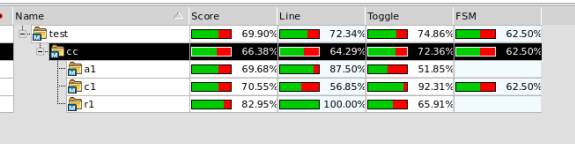
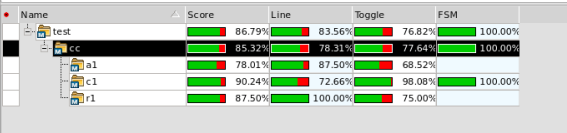
309551055 萬芊伶

1.Why coverage rate can’t reach 100% in problem 1(with coverage rate pictures)



因為random生指令可能有部分指令沒有被產生，且也有可能是cup.v檔本身有bug導致部分line接錯無法被修改

2. Analyze problem 2 results (with coverage rate pictures)



先根據cup的instruct code任意給部分指令，再根據verdi line與toggle顯示的缺漏，再補上其他指令。因為是對應verdi結果產生相應的test檔，所以結果較problem 1佳。

3. Where is the bug in cpu\_bug.v and how you correct it

else if (sel == MEM\_OUT)//MEM\_OUT=3

write\_data = mem\_out;

always@(posedge clk)begin

if (!reset)

current\_state = next\_state;

else

current\_state = ST\_0;

end

4'b0000: next\_state=ST\_0;

4'b0100: w\_reg\_c=1;

4'b0101: w\_reg\_c=1;

4'b0101: w\_reg\_c=1;

4'b0110: w\_out=1;

4'b1000: next\_state=ST\_2;

4'b1010: w\_reg\_c=1; sel=MEM\_OUT; next\_state=ST\_3;

4'b1011: next\_state=ST\_0;

4'b1100: w\_out=1; sel=DATA\_IN;

4'b1101: next\_state=ST\_0;

ST\_1 : next\_state = ST\_0;

ST\_2 : next\_state = ST\_0;

ST\_3 : next\_state = ST\_0;

4. What did you do to increase the coverage rate (with 100% coverage rate pictures)

verdi缺甚麼就加甚麼。

5. What did you learn in this project

使用verdi debug，看波形圖。