ITI Summer Training

LAB Spyglass

Code after editing

```
16 //------------ Internal Wires -----------
17 //wire [1:0] Inernal_wire1 ; //not read
18 //wire [2:0] Inernal_wire2 ;//not read
19 //wire [3:0] Inernal_wire3 ; //not read

21 //------------ Internal Reg -----------
22 reg [1:0] Inernal_reg1 ;
23 // [2:0] Inernal_reg2 ;  //not read
24 reg [3:0] Inernal_reg3 ;
```

```
34 else begin
35 Inernal_reg1 <= Data_in1;
36 //Inernal_reg2 <= Data_in2; //not read
37 Inernal_reg3 <= Data_in3;
38 end
```

```
60 /* always @(posedge clk)
61 begin
62 Data_out3 <= Data_in3 & Data_out3 ;    //multiple drivers
63 end */
```

```
66 always @(posedge clk,negedge rst_n)
67 begin
68 if(!rst_n)
69 Data_out2 <= 0;                              //need a reset signal
70 else
71 Data_out2 <= Data_out2 & Data_in2 ;
72 end
```

```
77 always @( posedge clk,negedge rst_n )
78 begin
79 if  (!rst_n)
80     Data_out1 <= 0;
81                                     //need a reset signal
82 else if(check)
83 begin
84 Data_out1 <= Data_in1 & Inernal_reg1;
85 end
```

```
89 always @(*)
90 begin
91 case(Data_in1)
92 2'b00: Data_out3 = Data_in3 & Inernal_reg3 ;
93 2'b01: Data_out3 = Inernal_reg3 ;
94 default : Data_out3 = 0;       //default case was missed
95 endcase
96 end
```

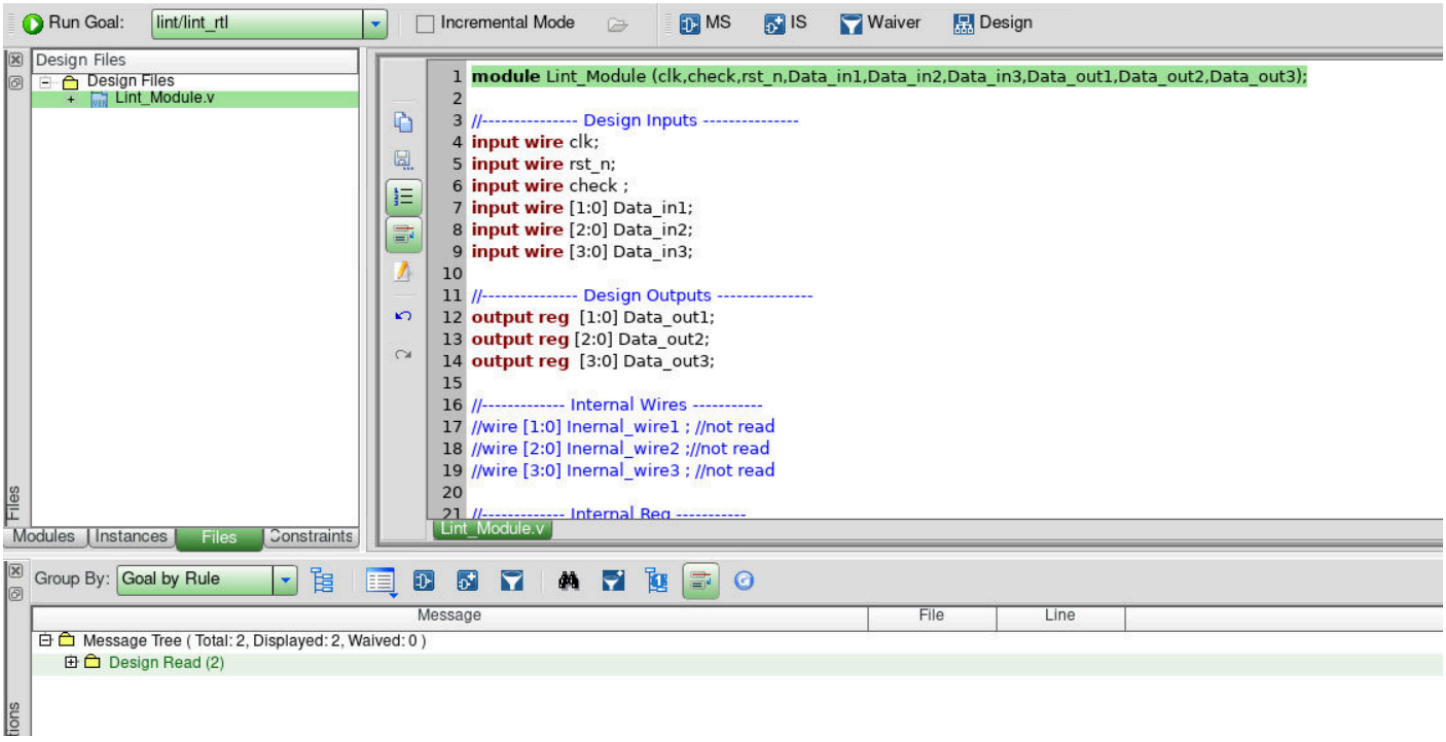
```
100 /*always @(posedge clk)
101 begin
102 Data_out1 <= Data_in1 & Inernal_reg1;       multiple drivers to the same signal
103 Data_out1 <= Data_in1 | Inernal_reg1;        multiple drivers to the same signal
104 end */
105
106 // Data_out2 = Data_in2 & Inernal_reg2;          multiple drivers to the same signal
107 //assign Data_out2 = Data_in2 | Inernal_reg2;    multiple drivers to the same signal
108
```

```
112 //assign Inernal_wire1 = Data_in2  ;   not read
113 //assign Inernal_wire2 = Data_in3 ;   not read
114 //assign Inernal_wire3 = Data_in1 ;   not read
```

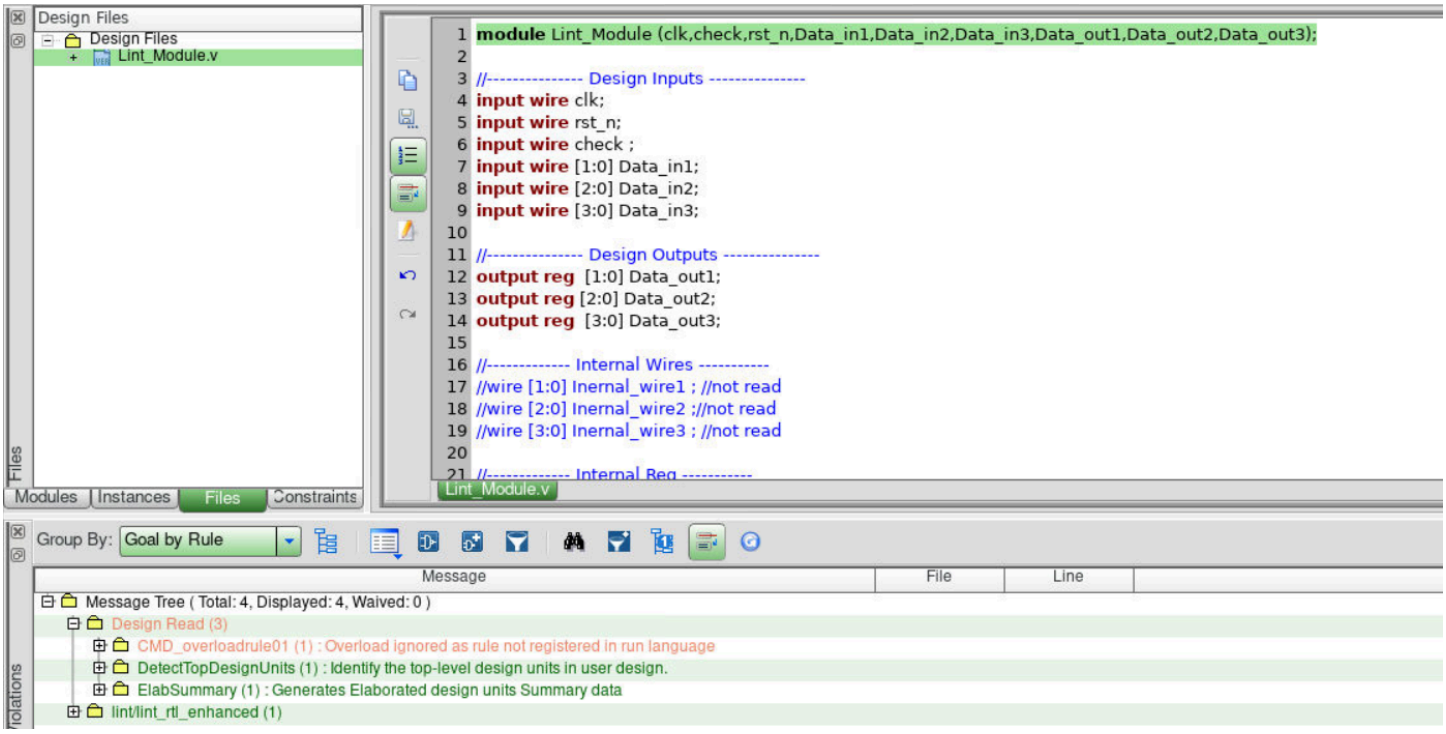
```
118 /* always @(posedge clk )
119 begin
120 Data_out1 <= Data_in1 | Inernal_reg1;  multiple drivers
121 Data_out3 <= Data_in3 |  Inernal_reg3; multiple drivers
122 end */
```

Results

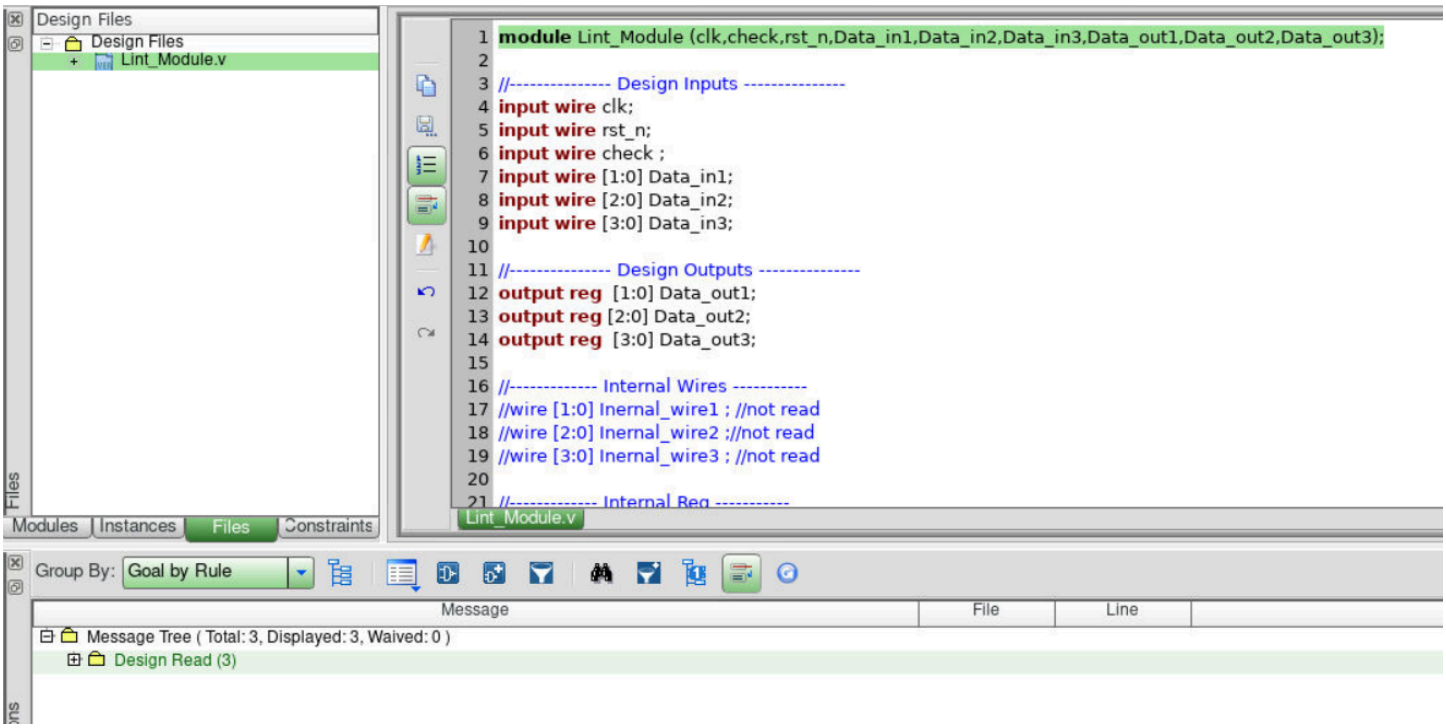
1- Lint RTL



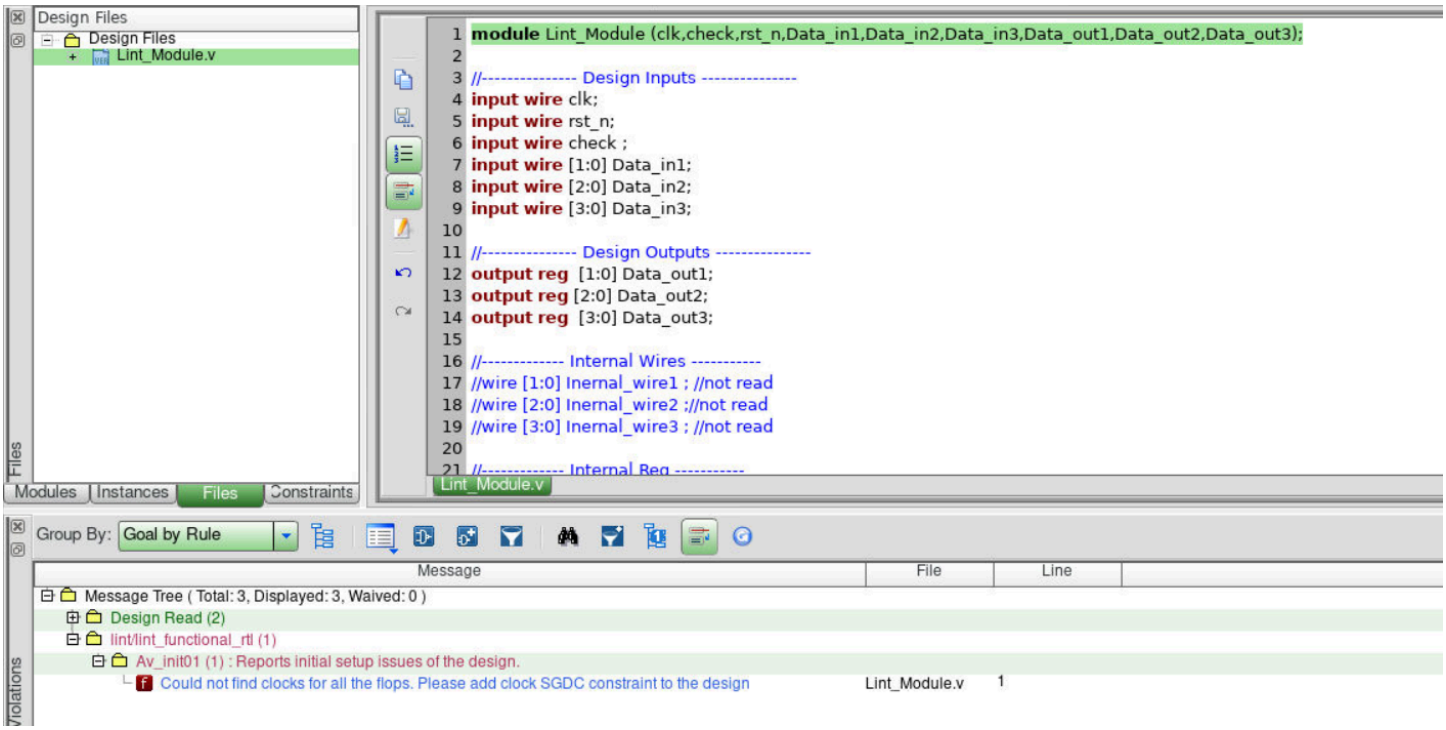
2- Lint RTL enhanced



3- RTL Turbo



4- Lint Functional RTL



5- Lint abstract