創意專題競賽作品

古錐龍舟

指導老師：王志湖

組員：李仕宇

陳柏諺

陳恩靖

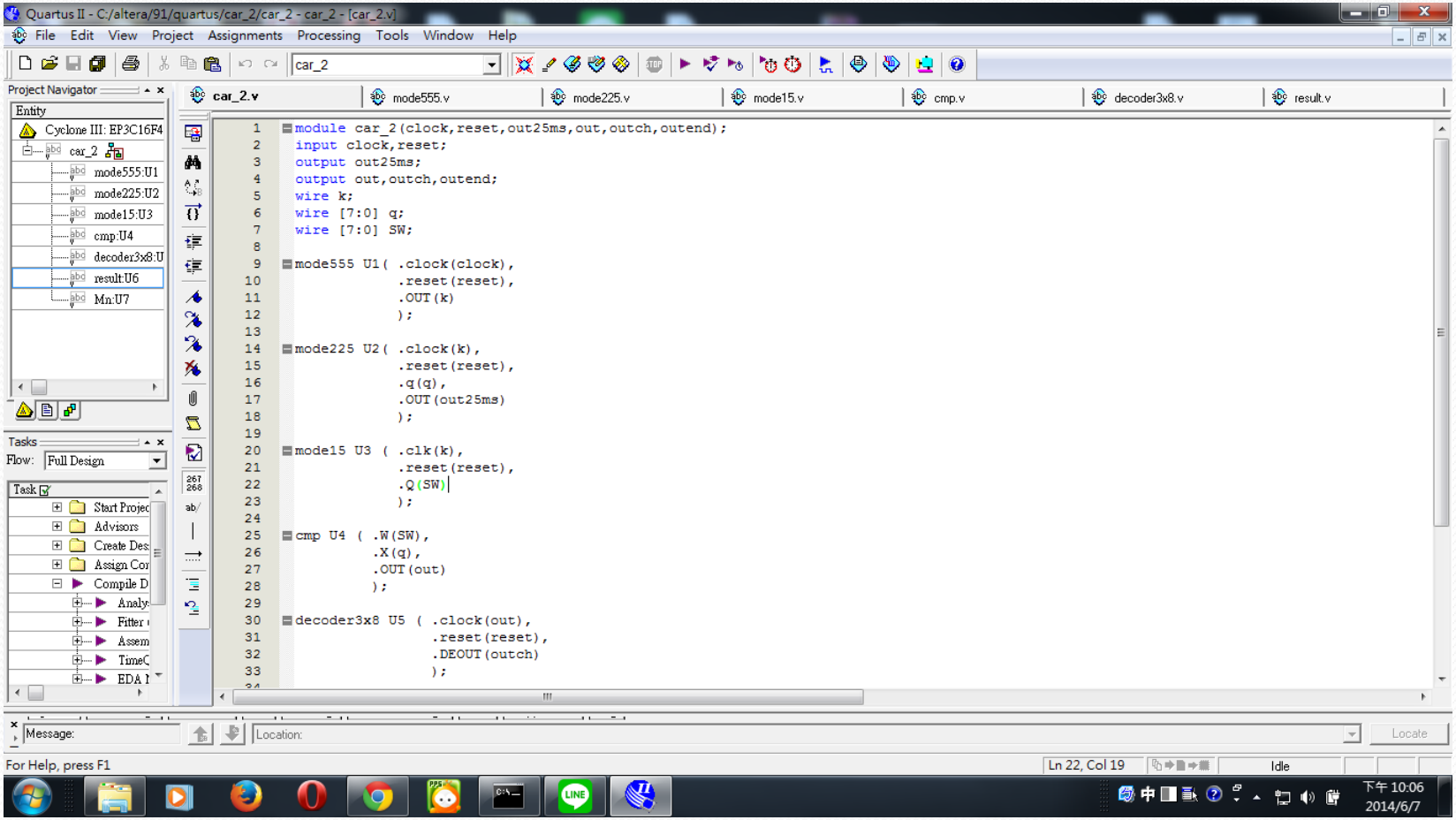
蕭旭宏

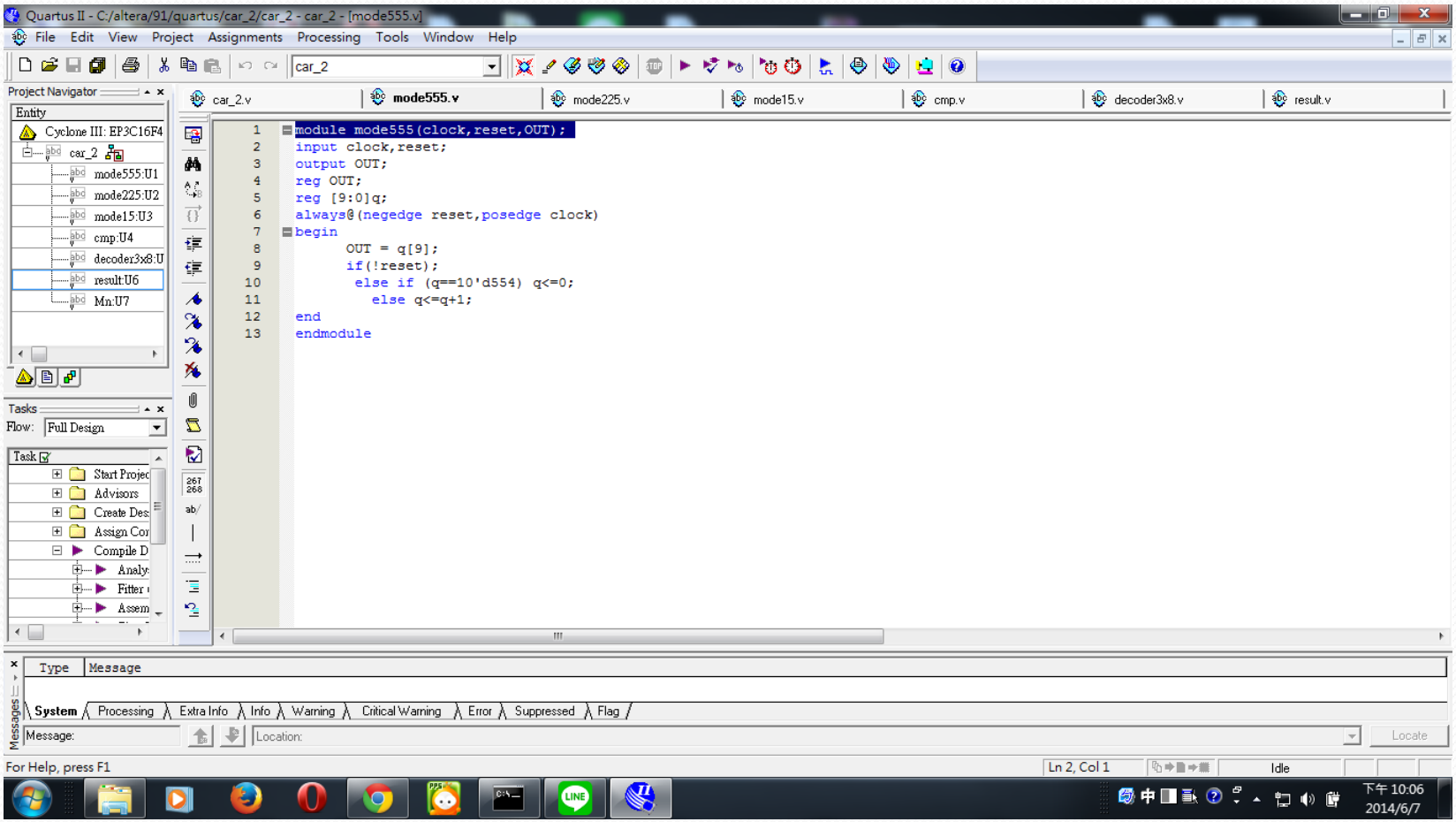
曾盛斌

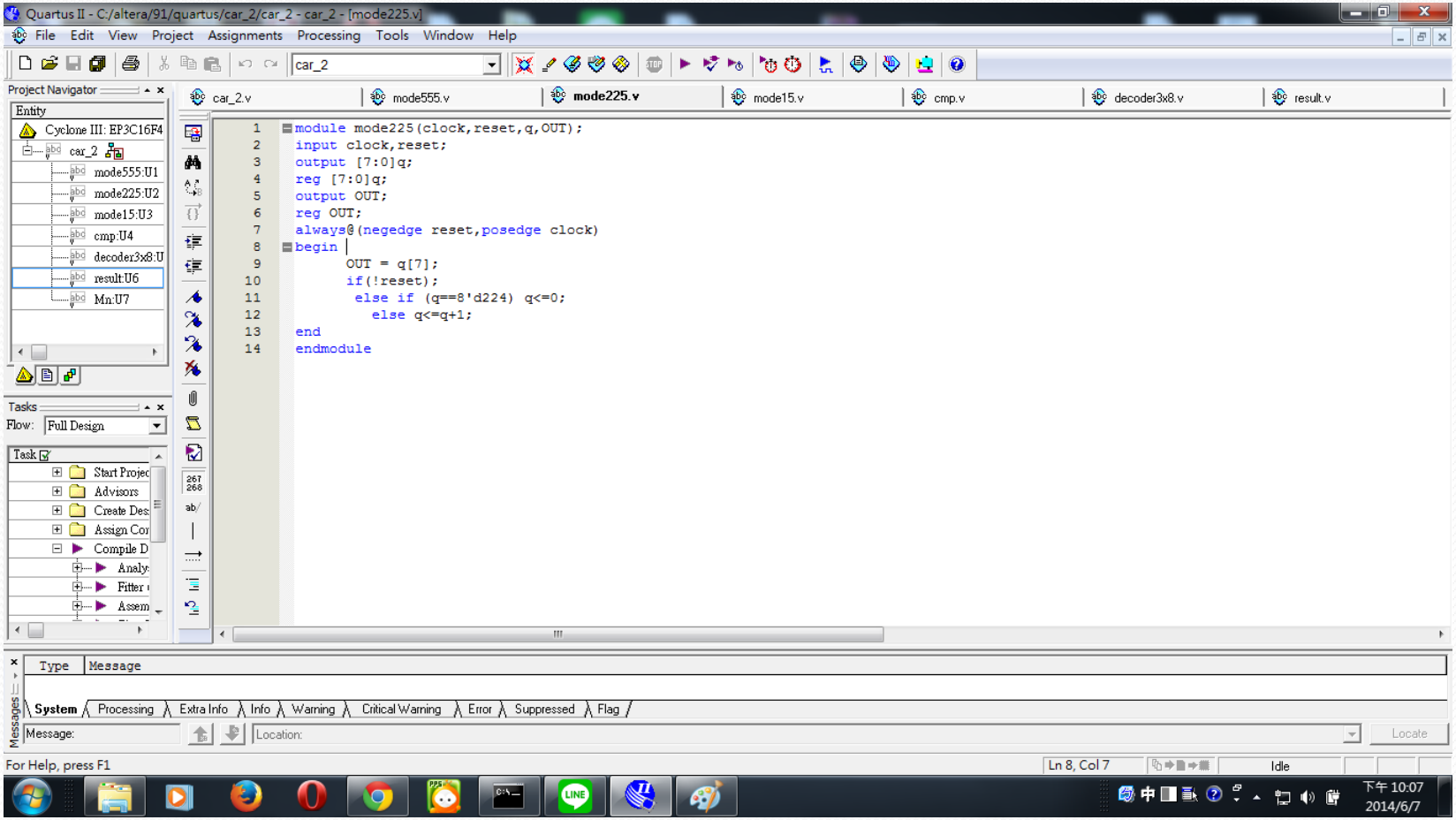
構想

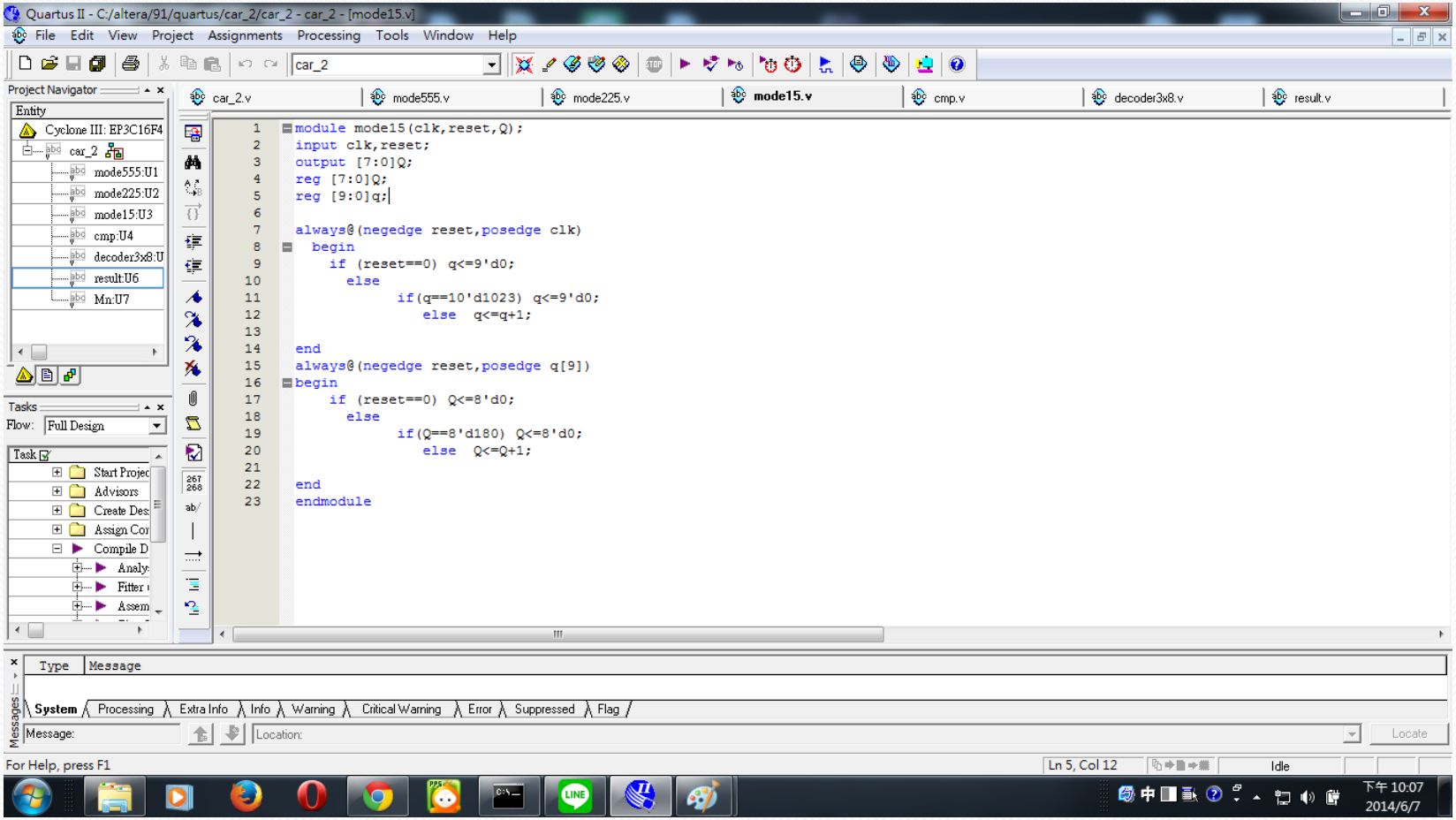
- 在想外觀的時候因為端午節快到了所以就把外觀設計成龍舟的樣子。
- 因為我們只有兩個馬達所以設計成龍舟的頭可以前後移動，槳可以划動。

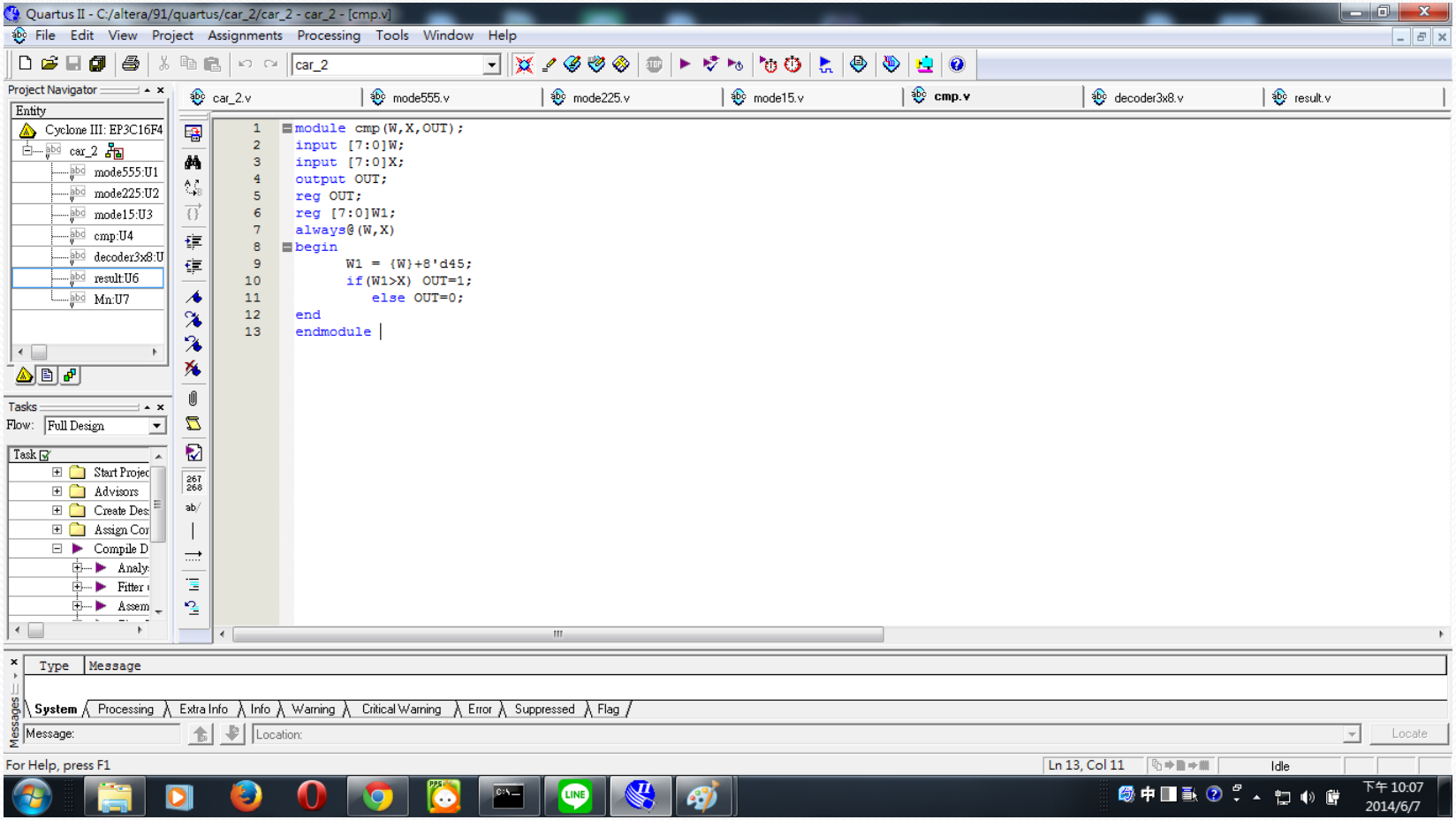
程式

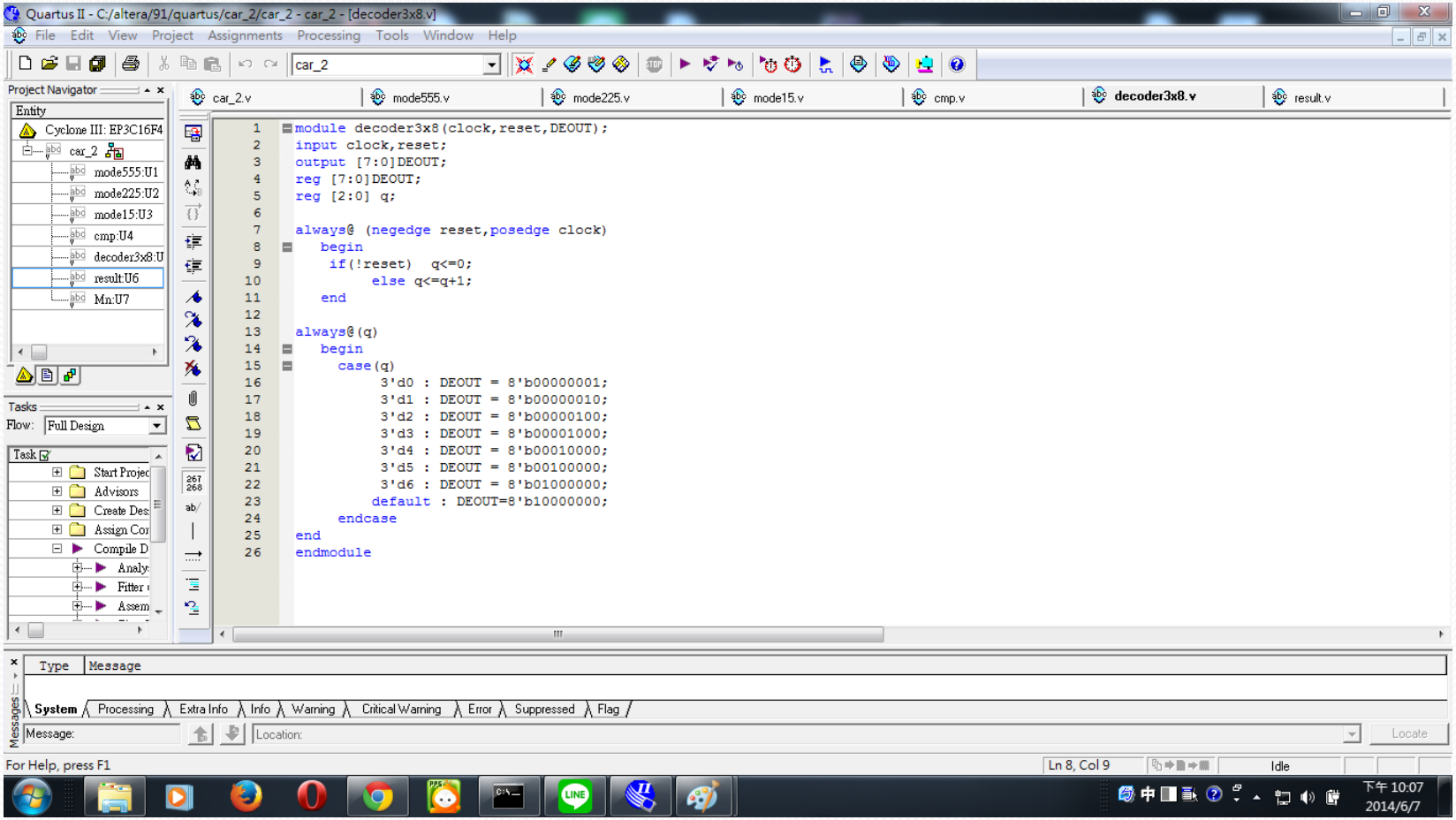

Quartus II - C:/altera/91/quartus/car_2/car_2 - car_2 - [car_2.v]
File Edit View Project Assignments Processing Tools Window Help
car_2
Project Navigator
Entity
Cyclone III: EP3C16F4
car_2
mode555:U1
mode225:U2
mode15:U3
cmp:U4
decoder3x8:U
result:U6
Mn:U7
Tasks
Flow: Full Design
Task
car_2.v
mode555.v
mode225.v
mode15.v
cmp.v
decoder3x8.v
result.v
1 module car_2(clock,reset,out25ms,out,outch,outend);
2 input clock,reset;
3 output out25ms;
4 output out,outch,outend;
5 wire k;
6 wire [7:0] q;
7 wire [7:0] SW;
8
9 mode555 U1(.clock(clock),
10 .reset(reset),
11 .OUT(k)
12);
13
14 mode225 U2(.clock(k),
15 .reset(reset),
16 .q(q),
17 .OUT(out25ms)
18);
19
20 mode15 U3 (.clk(k),
21 .reset(reset),
22 .Q(SW)
23);
24
25 cmp U4 (.W(SW),
26 .X(q),
27 .OUT(out)
28);
29
30 decoder3x8 U5 (.clock(out),
31 .reset(reset),
32 .DEOUT(outch)
33);
Message:
Location:
Locate
For Help, press F1
Ln 22, Col 19
Idle
下午 10:06
2014/6/7

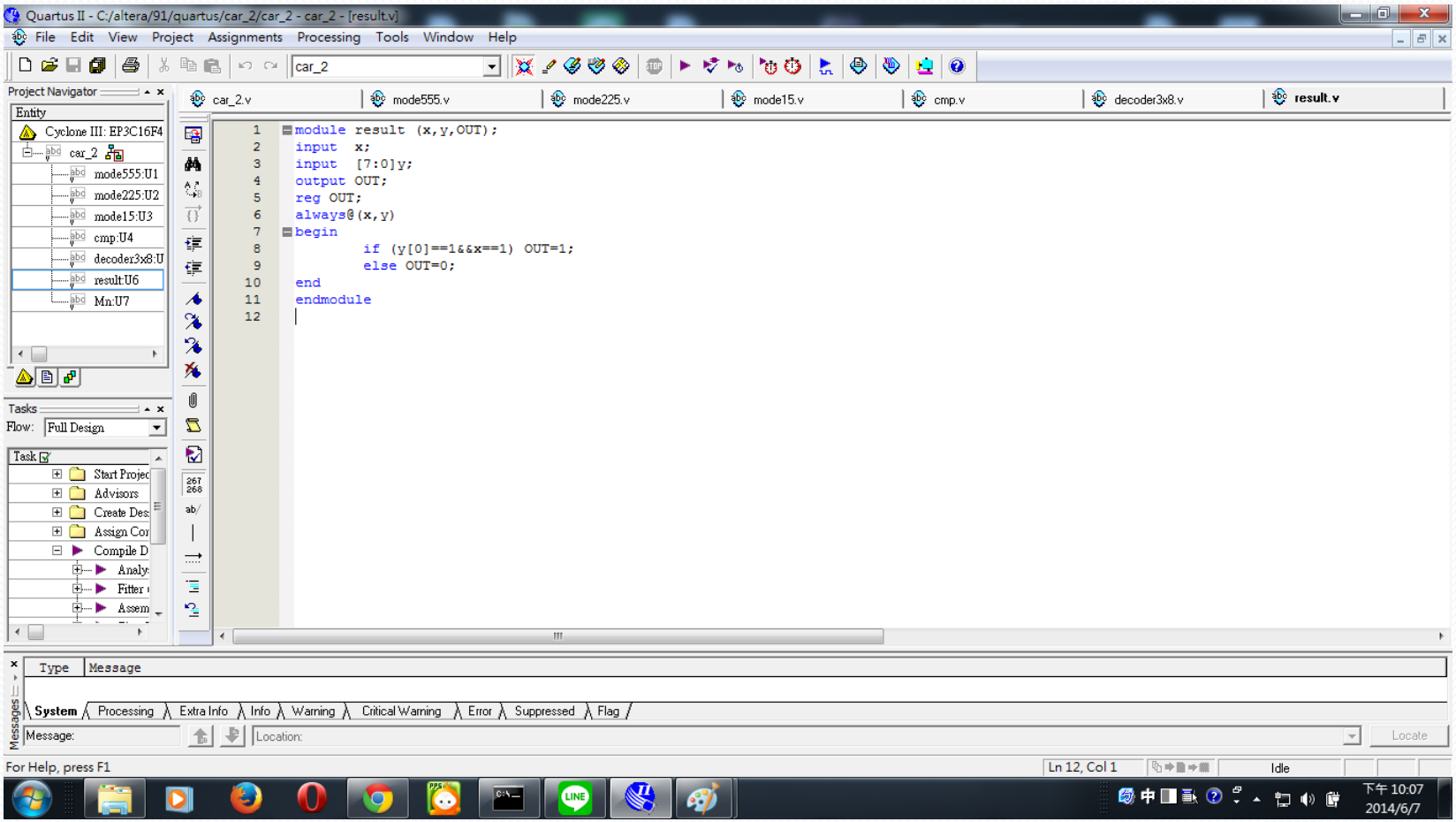

Quartus II - C:/altera/91/quartus/car_2/car_2 - car_2 - [mode555.v]
File Edit View Project Assignments Processing Tools Window Help
car_2
Project Navigator
Entity
Cyclone III: EP3C16F4
car_2
mode555:U1
mode225:U2
mode15:U3
cmp:U4
decoder3x8:U
result:U6
Mn:U7
Tasks
Flow: Full Design
Task
Start Projec
Advisors
Create Des
Assign Cor
Compile D
Analy
Fitter
Assem
car_2.v
mode555.v
mode225.v
mode15.v
cmp.v
decoder3x8.v
result.v
1 module mode555(clock,reset,OUT);
2 input clock,reset;
3 output OUT;
4 reg OUT;
5 reg [9:0]q;
6 always@(negedge reset,posedge clock)
7 begin
8 OUT = q[9];
9 if(!reset);
10 else if (q==10'd554) q<=0;
11 else q<=q+1;
12 end
13 endmodule
Type
Message
System
Processing
Extra Info
Info
Warning
Critical Warning
Error
Suppressed
Flag
Message:
Location:
Locate
Messages
For Help, press F1
Ln 2, Col 1
Idle
下午 10:06
2014/6/7


Quartus II - C:/altera/91/quartus/car_2/car_2 - car_2 - [mode225.v]
File Edit View Project Assignments Processing Tools Window Help
car_2
Project Navigator
Entity
Cyclone III: EP3C16F4
car_2
mode555:U1
mode225:U2
mode15:U3
cmp:U4
decoder3x8:U
result:U6
Mn:U7
Tasks
Flow: Full Design
Task
Start Projec
Advisors
Create Des
Assign Cor
Compile D
Analy
Fitter
Assem
car_2.v
mode555.v
mode225.v
mode15.v
cmp.v
decoder3x8.v
result.v
1 module mode225(clock,reset,q,OUT);
2 input clock,reset;
3 output [7:0]q;
4 reg [7:0]q;
5 output OUT;
6 reg OUT;
7 always@(negedge reset,posedge clock)
8 begin
9 OUT = q[7];
10 if(!reset);
11 else if (q==8'd224) q<=0;
12 else q<=q+1;
13 end
14 endmodule
Type
Message
System
Processing
Extra Info
Info
Warning
Critical Warning
Error
Suppressed
Flag
Message:
Location:
Locate
Messages
For Help, press F1
Ln 8, Col 7
Idle
下午 10:07
2014/6/7


Quartus II - C:/altera/91/quartus/car_2/car_2 - car_2 - [mode15.v]
File Edit View Project Assignments Processing Tools Window Help
car_2
Project Navigator
Entity
Cyclone III: EP3C16F4
car_2
mode555:U1
mode225:U2
mode15:U3
cmp:U4
decoder3x8:U
result:U6
Mn:U7
Tasks
Flow: Full Design
Task
Start Projec
Advisors
Create Des
Assign Cor
Compile D
Analy
Fitter
Assem
car_2.v
mode555.v
mode225.v
mode15.v
cmp.v
decoder3x8.v
result.v
1 module mode15(clk,reset,Q);
2 input clk,reset;
3 output [7:0]Q;
4 reg [7:0]Q;
5 reg [9:0]q;
6
7 always@(negedge reset,posedge clk)
8 begin
9 if (reset==0) q<=9'd0;
10 else
11 if(q==10'd1023) q<=9'd0;
12 else q<=q+1;
13
14 end
15 always@(negedge reset,posedge q[9])
16 begin
17 if (reset==0) Q<=8'd0;
18 else
19 if(Q==8'd180) Q<=8'd0;
20 else Q<=Q+1;
21
22 end
23 endmodule
Type
Message
System
Processing
Extra Info
Info
Warning
Critical Warning
Error
Suppressed
Flag
Message:
Location:
Locate
Messages
For Help, press F1
Ln 5, Col 12
Idle
下午 10:07
2014/6/7


Quartus II - C:/altera/91/quartus/car_2/car_2 - car_2 - [cmp.v]
File Edit View Project Assignments Processing Tools Window Help
car_2
Project Navigator
Entity
Cyclone III: EP3C16F4
car_2
mode555:U1
mode225:U2
mode15:U3
cmp:U4
decoder3x8:U
result:U6
Mn:U7
Tasks
Flow: Full Design
Task
Start Projec
Advisors
Create Des
Assign Cor
Compile D
Analy
Fitter
Assem
car_2.v
mode555.v
mode225.v
mode15.v
cmp.v
decoder3x8.v
result.v
1 module cmp(W,X,OUT);
2 input [7:0]W;
3 input [7:0]X;
4 output OUT;
5 reg OUT;
6 reg [7:0]W1;
7 always@(W,X)
8 begin
9 W1 = {W}+8'd45;
10 if(W1>X) OUT=1;
11 else OUT=0;
12 end
13 endmodule
Type
Message
System
Processing
Extra Info
Info
Warning
Critical Warning
Error
Suppressed
Flag
Message:
Location:
Locate
Messages
For Help, press F1
Ln 13, Col 11
Idle
下午 10:07
2014/6/7


Quartus II - C:/altera/91/quartus/car_2/car_2 - car_2 - [decoder3x8.v]
File Edit View Project Assignments Processing Tools Window Help
car_2
Project Navigator
Entity
Cyclone III: EP3C16F4
car_2
mode555:U1
mode225:U2
mode15:U3
cmp:U4
decoder3x8:U
result:U6
Mn:U7
Tasks
Flow: Full Design
Task
Start Projec
Advisors
Create Des
Assign Cor
Compile D
Analy
Fitter
Assem
car_2.v
mode555.v
mode225.v
mode15.v
cmp.v
decoder3x8.v
result.v
1 module decoder3x8(clock,reset,DEOUT);
2 input clock,reset;
3 output [7:0]DEOUT;
4 reg [7:0]DEOUT;
5 reg [2:0] q;
6
7 always@ (negedge reset,posedge clock)
8 begin
9 if(!reset) q<=0;
10 else q<=q+1;
11 end
12
13 always@(q)
14 begin
15 case(q)
16 3'd0 : DEOUT = 8'b00000001;
17 3'd1 : DEOUT = 8'b00000010;
18 3'd2 : DEOUT = 8'b00000100;
19 3'd3 : DEOUT = 8'b00001000;
20 3'd4 : DEOUT = 8'b00010000;
21 3'd5 : DEOUT = 8'b00100000;
22 3'd6 : DEOUT = 8'b01000000;
23 default : DEOUT=8'b10000000;
24 endcase
25 end
26 endmodule
Type Message
System Processing Extra Info Info Warning Critical Warning Error Suppressed Flag
Message:
Location:
Locate
For Help, press F1
Ln 8, Col 9
Idle
下午 10:07
2014/6/7


Quartus II - C:/altera/91/quartus/car_2/car_2 - car_2 - [result.v]
File Edit View Project Assignments Processing Tools Window Help
car_2
Project Navigator
Entity
Cyclone III: EP3C16F4
car_2
mode555:U1
mode225:U2
mode15:U3
cmp:U4
decoder3x8:U
result:U6
Mn:U7
Tasks
Flow: Full Design
Task
Start Projec
Advisors
Create Des
Assign Cor
Compile D
Analy
Fitter
Assem
car_2.v
mode555.v
mode225.v
mode15.v
cmp.v
decoder3x8.v
result.v
1 module result (x,y,OUT);
2 input x;
3 input [7:0]y;
4 output OUT;
5 reg OUT;
6 always@(x,y)
7 begin
8 if (y[0]==1&&x==1) OUT=1;
9 else OUT=0;
10 end
11 endmodule
12
Type
Message
System
Processing
Extra Info
Info
Warning
Critical Warning
Error
Suppressed
Flag
Message:
Location:
Locate
Messages
For Help, press F1
Ln 12, Col 1
Idle
下午 10:07
2014/6/7

完成圖

作品影片網址

- https://www.youtube.com/watch?v=bINpefmZ3uM