module gray\_to\_binary\_2(data\_in, data\_out);

parameter a\_length=3;

integer i,j;

input [a\_length-1:0] data\_in;

output reg [a\_length-1:0] data\_out;

always@(\*)

begin

data\_out[a\_length-1]=data\_in[a\_length-1];

for(i=a\_length-2;i>=0;i=i-1)

begin

for(j=a\_length-1;j>=i;j=j-1)

data\_out[i]=data\_in[i]^data\_out[i+1];

end

end

endmodule