module LDA\_datapath

(

input x0, x1, y0, y1,

input color,

input start,

output x,

output y,

output plot,

output color\_out,

output done

);

logic e2, dx, dy;

dx <= x1 - x0;  
dy <= y1 - y0;  
right <= not x1x0(10);  
down <= not y1y0(10);

endmodule