

```

end
else
begin
    if(load_x)
        out_x[6:0] <= location;
        out_x[7] <= 1'b0;
        if(load_y)
            out_y <= location;
        if(load_color)
            out_colour <= colour;
        end
    end
end

```

```

reg temp_enable;
reg [1:0] temp_x, temp_y;

```

```

always @(posedge clock)
begin
    if(!resetn)
        temp_x <= 2'b00;
    else if(enable)
    begin
        if(temp_x == 2'b11)
        begin
            temp_x <= 2'b00;
            temp_enable <= 1;
        end
    end
    else
    begin
        temp_x <= temp_x + 1;
    end
end

```