

```
1 module PC
2     (input clk,write,incpc,
3      input [15:0] data_in,
4      output reg [15:0] data_out = 16'd0
5     );
6     always @(negedge clk)
7         begin
8             if (write) data_out <= data_in;
9             else if (incpc) data_out <= data_out + 1;
10        end
11 endmodule
```