

1. Active high because when it is pressed down the output will connect with the 5v line.
2. Bounce is when the switch is toggled and the signal becomes unusable for a short period of time. You can avoid this by using a debouncer and a single pulser.

3.

```
module singlePulser(  
    output reg Q,  
    input D,  
    input clk  
);  
    reg last_state;  
  
    initial  
        last_state = 0;  
  
    always @(posedge clk)  
    begin  
        last_state <= D;  
        Q <= last_state == 0 && D == 1;  
    end  
endmodule
```