

```
1  module fastCounter (  
2      input clk,  
3      output reg f  
4  );  
5  
6      reg [3:0] q;  
7  
8      always @(posedge clk) begin  
9          if (q == 3) begin  
10             f <= 1;  
11             q <= 0;  
12         end  
13         else begin  
14             q <= q+1;  
15             f <= 0;  
16         end  
17     end  
18  
19  
20  
21 endmodule
```