[Lemmings1](https://hdlbits.01xz.net/wiki/Lemmings1)

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| --- |
| module top\_module(  input clk,  input areset, // Freshly brainwashed Lemmings walk left.  input bump\_left,  input bump\_right,  output walk\_left,  output walk\_right); //    parameter LEFT=0, RIGHT=1;  reg state, next\_state;   always @(\*) begin  next\_state= (bump\_left)&(~bump\_right); // State transition logic  end   always @(posedge clk, posedge areset) begin  if (areset)  state<=LEFT;  else if ((bump\_left&bump\_right)==1)  state<=~state;  else if ((bump\_left==0)&(bump\_right==0))  state<=state;  else  state<=next\_state;  end  // State flip-flops with asynchronous reset  assign walk\_left = (state == LEFT);  assign walk\_right = (state == RIGHT);  // Output logic  // assign walk\_left = (state == ...);  // assign walk\_right = (state == ...);  endmodule |