

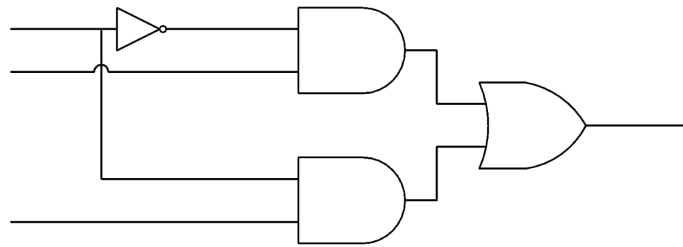
**Department of Computer Engineering**  
**Faculty of Engineering, University of Peradeniya**

**CO221: Digital Design | Lab 04**

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1. Implement a prime number indicator for the range 0-7. Consider each bit in the value as inputs and the indicator as the output (indicator is 1 for a prime number or else 0). If what you got for the pre-lab is too complicated to implement on the breadboard you can use the following.



2. Implement a circuit that outputs the addition of a 2-bit number XY with a 1-bit number A. Let the QR output be a 2-bit number QR. (As  $11+1$  gives 100 which has three bits, omit the overflow and take it as 00). If what you got for the pre-lab is too complicated to implement on the breadboard you can use the following.

