Prime Number Indentifier Circuit
PC/CP120 Project Phase I

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Description

Finding prime numbers is a common task in mathematics. This circuit will identify the prime numbers between zero and fifteen. A number is defined as prime if it has exactly two divisors, itself and one.

Inputs

The **Prime Number Indentifier Circuit** will have four inputs, a_0 to a_3, which give the binary representation of the number. (a_0 is the least significant bit.)

Outputs

The **Prime Number Indentifier Circuit** will have one output, *prime*, which will be asserted if the number input is prime. Between 0 and 15, the prime numbers are 2, 3, 5, 7, 11 and 13.

Notes

- By definition, the numbers zero and one are *neither* prime nor composite.