

CLASSICAL AND QUANTUM COMPUTING  
EXERCISE V

1. Design a Moore machine which adds two binary numbers of the same length.
2. Design a Mealy machine which adds two binary numbers of the same length.
3. Describe how to create an equivalent Mealy machine from a Moore machine.
4. Design a Turing machine which subtracts a two's complement binary number from another of the same length.

In each case determine the relevant alphabets and a suitable formatting for the input.