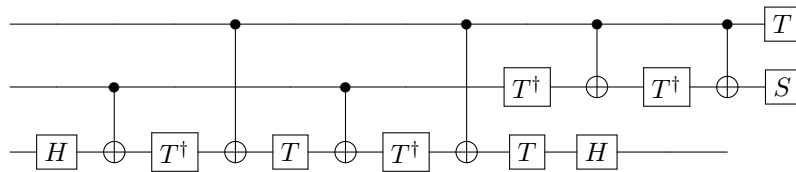# Assignment 2 Solutions
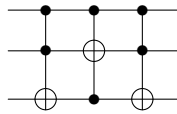
Vishal Bysani

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1 Quantum Gates

1.1 Question 1

The Toffoli gate can be implemented using Hadamard, CNOT, $\pi/8$ and phase gates in the following manner:

1.2 Question 2

The Fredkin gate can be implemented using three Toffoli gates in the following manner:

1.3 Question 3