

## 5. Quantum Algorithm

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Deutsch's Algorithm

Hamiltonian Simulation

Quantum Fourier Transformation

Phase Estimation

## Deutsch's Algorithm

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# Hamiltonian Simulation

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## Quantum Fourier Transformation

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# Implement Quantum Fourier Transform

## Phase Estimation

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- M. A. Nielsen and I. L. Chuang, Quantum Computation and Quantum Information
- Lecture notes for QU511: Quantum Computing (Fall 2024)