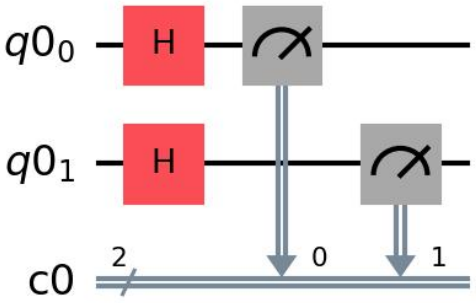
Date Released: Thursday, November 20, 2025

Due Date: Friday, November 21, 2025

Quantum Computing & Information Processing

Assignment - I

Read the Instructions Carefully



Implement a double-coin-toss circuit with the quantum circuit described above.
Use two quantum registers (one qubit per coin) and two classical registers (one bit to store each measurement).

Compare the performance of the circuit under the following simulation methods:
- automatic
- statevector
- stabilizer
- extended_stabilizer
- density_matrix
- matrix_product_state

Number of Shots: 15000

How to upload your code

1. Format your code nicely.
2. Your full name should be added as a block comment in the code.
3. Click **here** to upload your assignment. The file extension should be **.py**.