from qiskit import QuantumCircuit, execute, Aer

def advanced\_quills\_algorithm():

 """

 Function Docstring

 Executes the Advanced Quill's Algorithm using Qiskit and returns the result.

 This function creates a quantum circuit, applies gates, and measures the qubits.

 """

 # Create a quantum circuit with 2 qubits

 qc = QuantumCircuit(2)

 # Apply a Hadamard gate to the first qubit

 qc.h(0)

 # Apply a CNOT gate

 qc.cx(0, 1)

 # Measure the qubits

 qc.measure\_all()

 # Execute the circuit on a quantum simulator

 simulator = Aer.get\_backend('qasm\_simulator')

 execution\_result = execute(qc, simulator, shots=1).result() # Rename to avoid conflict

 counts = execution\_result.get\_counts(qc)

 return counts

# Run Advanced Quill's Algorithm

final\_result = advanced\_quills\_algorithm() # Rename to avoid conflict

print("Result of Advanced Quill's Algorithm:", final\_result)