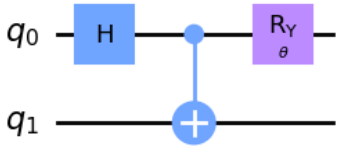
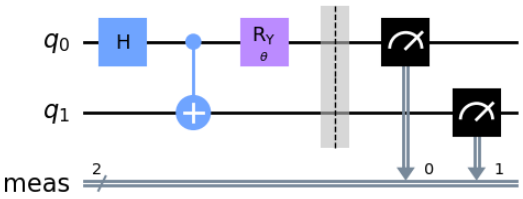
Quantum Correlations with qiskit

1. Include other strategies from the list into the function
2. Find the best strategy set to win the game and find the best result
3. Find statistical error given by the number of times N the experiment is repeated
4. What is the maximum winning probability with the classical strategy?
5. Generate the circuit with two qubits
6. Write down the quantum state it generates for various theta values
7. Does the resulting state is always entangled?



8. Add measurement to the circuit
9. Write down the measurement strategies for Alice and Bob for the quantum game



10. In analogy with the classical game finalise the script for the quantum game
11. Find statistical error given by the number of times N the experiment is repeated
12. Find optimal condition for CHSH inequality violation
13. Calculate the CHSH parameters S and S2 for different angles between their bases using the loop. Plot the result
14. Find the maximum CHSH parameter value reached within quantum mechanics
15. Check the CHSH violation after generating a bit different Bell state
16. Try to find a way to get the CHSH violation using this state