

Womanium 2022 Challenge

The IBM Quantum Challenge is presented in two tiers:

Tier 1 – Create a working interactive ‘program’ (it can be a website, game, app, etc.) in which a human user is facing off against a quantum computer. This is broad on purpose – the program can be built in many different ways. Your program should implement strategies that seriously challenge the human player. The implementation must utilize more than just probabilities related to measuring quantum states. You must use Qiskit to program the computer’s gameplay strategy, and as much as possible, the strategy should be implemented with quantum circuits and quantum gates on real quantum hardware (although using the Simulator is understandable given the time limit).

Tier 2 –Augment your program to include as many of the following as possible:

- Add a compelling UI implemented with available, or custom, widgets
- Display code in real time alongside the UI
- Include a gameplay progression loop, or a competitive aspect to be shared on social media
- Make the game playable in an IBM Quantum Lab notebook
- Create educational elements of your game for non-quantum players to learn from
- Different difficulty levels, with an explanation of what happens behind the scenes to change the difficulty

Any game or experience is allowed, but preference will be shown to projects which:

- Emphasize *quality* of features over quantity
- Are fully original
- Benefit the quantum community at large
- Present the concepts in a new and unique manner
- Show clear love for the source material

All projects submitted must be using Qiskit version 0.35. Anyone can submit a project, however someone working for a GOE, i.e. Government Owned Entity, will not be eligible for prizes or awards from IBM Quantum. [Full eligibility rules here.](#)