

IBM Qiskit Fall Fest 2026

Beginner Hackathon: Problem Statements

BITS Pilani, Goa Campus

Choose one of the following themes and build a creative, understandable, and functional project using Qiskit. Each category is judged separately. Qiskit simulators are the recommended starting point; access to a physical quantum processor is limited and requires mentor approval.

Problem 1 Quantum Playground

Visual learning and interaction

Make quantum computing something people can explore, play with, and understand.

The theme

Design an engaging visual or interactive teaching experience that introduces a quantum concept to someone encountering it for the first time. You might focus on quantum gates, superposition, entanglement, a basic algorithm, or a small quantum chemistry experiment. Prioritize learning through interaction rather than a static lecture.

Ideas to explore

- Could a puzzle or game make quantum gates easier to learn?
- Could users explore what changes when they adjust a molecule or circuit parameter?

Prototype requirements

Demonstrate a working interactive experience, Qiskit-backed circuit behavior, and a clear explanation of what users are meant to learn.

Judging criteria

- Learning effectiveness: 25 points
- Creativity and engagement: 25 points
- Quantum concept accuracy: 25 points
- Interactive implementation: 15 points
- Presentation and accessibility: 10 points