#5 Good First Issues in Qiskit Terra

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Goal of the Project:

In this project, we aimed to work and fix the good first GitHub issues of Qiskit Terra, as many as possible.

Our Work:

Our work in this project can be categorized into two major sections; first is a sub project in which we focused on adding a new feature that allows conditioning gates on individual classical bits and in the other we focused on fixing multiple independent issues in visualization, testing and documentation. We briefly summarize our work below:

- Classical condition of gates on single classical bits (#1160)

  - Quantum gates can now also be conditioned on single classical bits (#6018).
  - Extended all three drawers to draw circuits with single bit conditioned gates (#6261, #6248, #6259).
  - This feature has also been extended to registerless circuits (#6244).
  - Introducing this new feature breaks some functions (#6475).
  - Fixed errors in computing certain properties of quantum circuits involving single bit conditionals (#6476).

- Issues related to visualization, testing and documentation

  - Classical conditions are now drawn as bullets rather than boxes when cregbundle is set to False (#6290, #6370).
  - Fixed incorrect ordering of classical condition bullets when cregbundle is set to False and reverse_bits is set to True (#6370).
  - Fixed incorrect numbering and drawing of custom instructions that uses classical bits in arbitrary order in text drawer (#6178, #6242).
  - Fixed Latex drawer ignoring classical bits when drawing custom instructions (#3006, #3202, #6240).
  - Wire numbers supported in latex drawer (#2092, #6153).
  - Fixed MPL drawer ignoring classical bits when drawing custom instructions (#3006, #3201, #6339).
  - Enabled latex drawer tests in binder (#6371, #6450).
  - Fixed an issue of undescriptive error message when unroller reaches a node without definition (#5840, #6235).

A more detailed description of our project and a recording describing our project can be found in the following GitHub link:
https://github.com/TharrmashasthaPV/Good-First-Issues-in-Qiskit-Terra