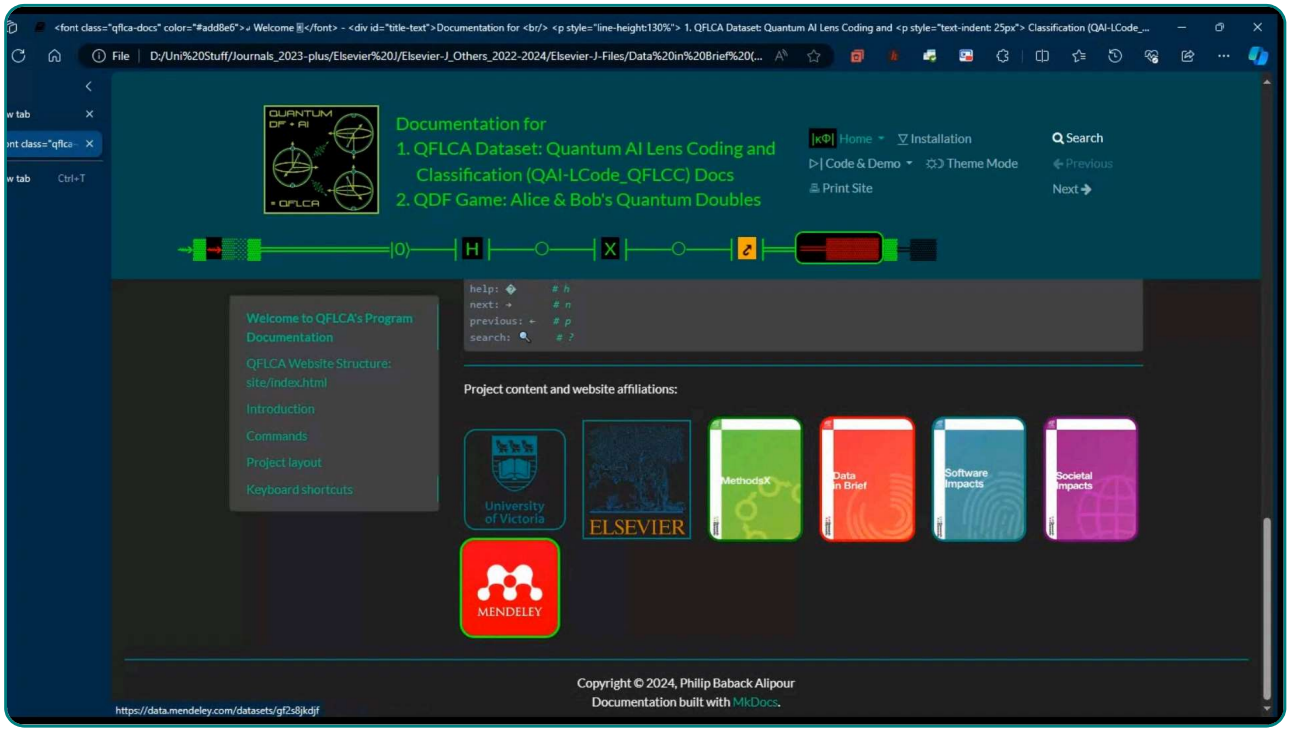
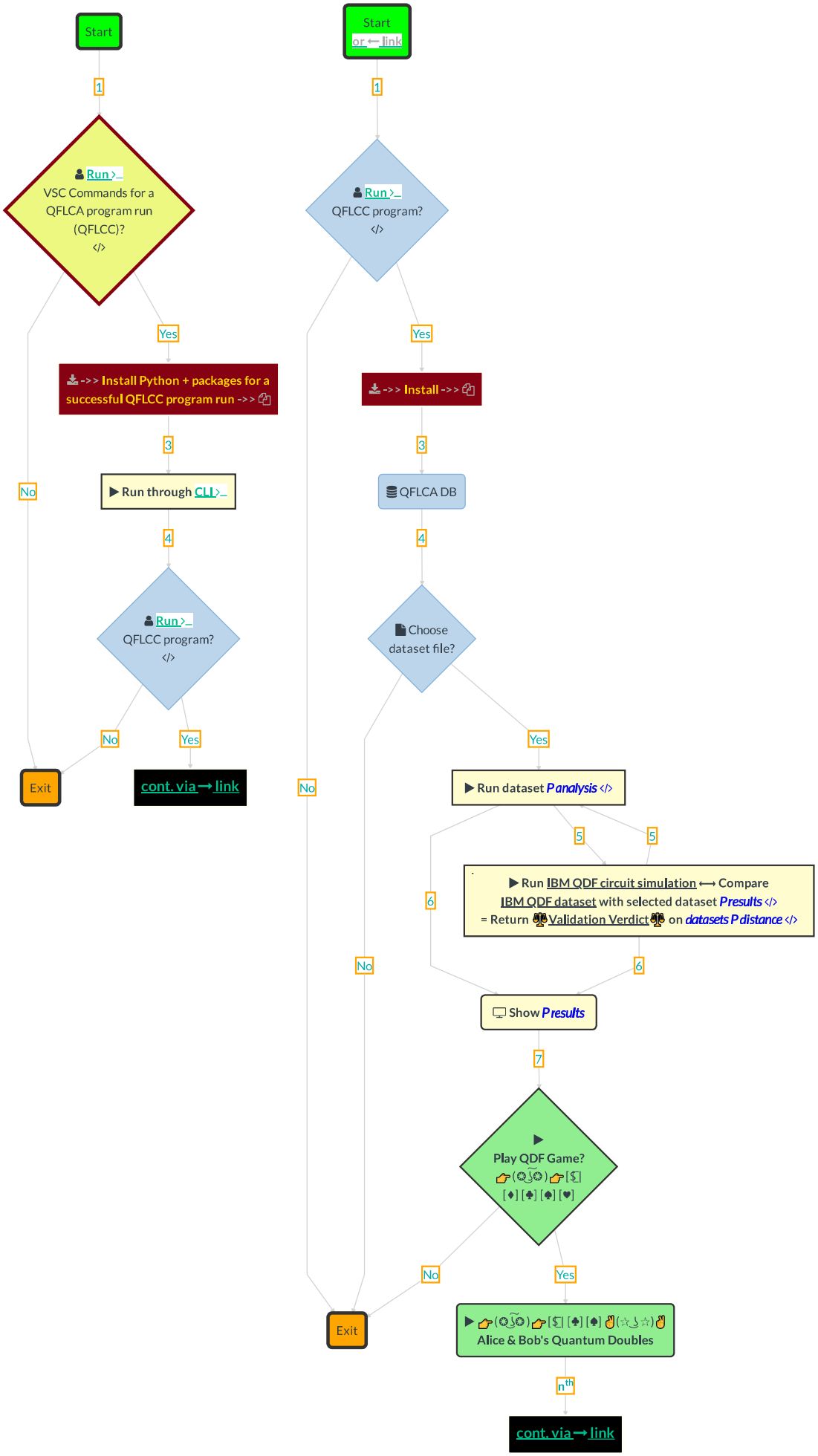
Welcome to Visual Studio Code (VSC) for a QFLCA Code Run



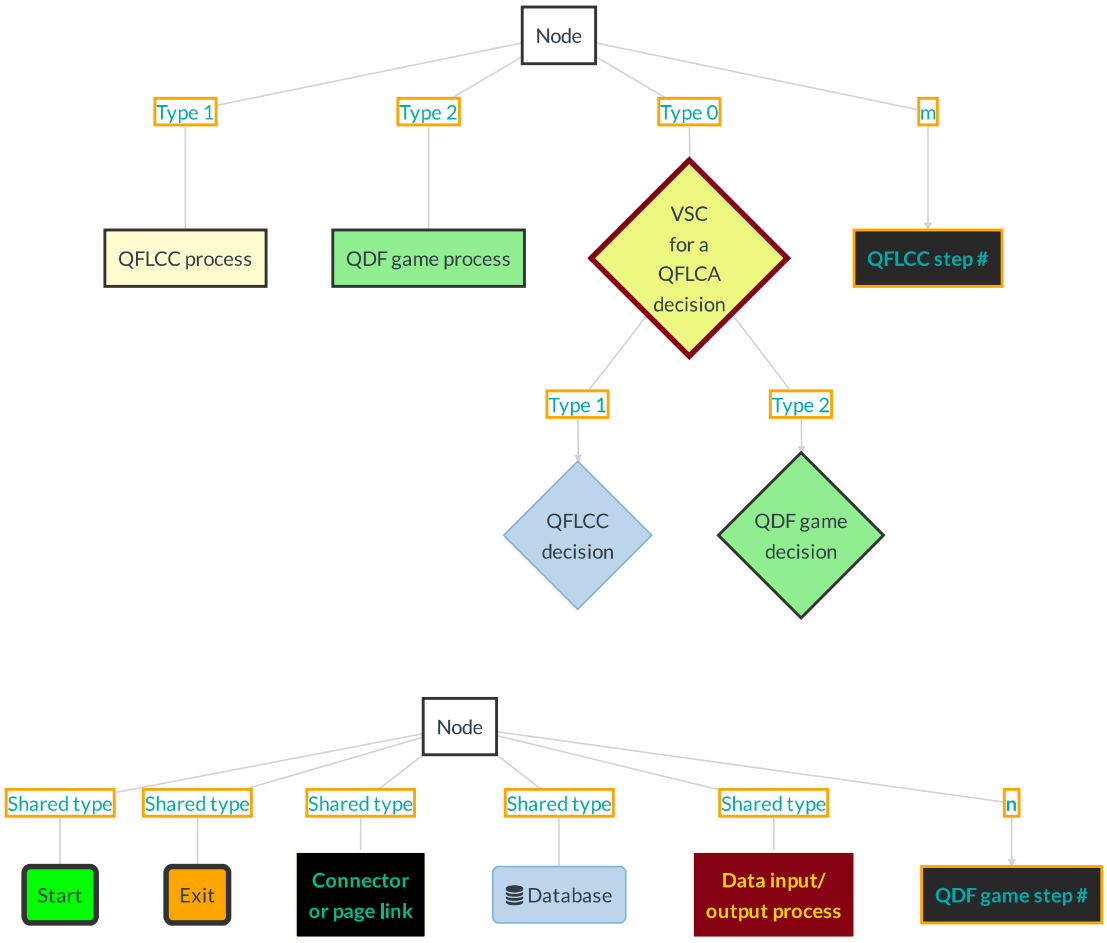
QFLCA Website Installation Demo: 788 MB mp4 file. ∇ | For Subtitles: SRT file. ∇

For the full VSC documentation visit visualstudio.com/docs and browse Python on the homepage menu to install packages.

Program installation and code run flowchart


Start
1
Run >_
VSC Commands for a QFLCA program run (QFLCC)?
</>
Yes
->> Install Python + packages for a successful QFLCC program run ->>
3
No
▶ Run through CLI >_
4
Run >_
QFLCC program?
</>
No
Yes
Exit
cont. via → link
Start
or ← link
1
Run >_
QFLCC program?
</>
Yes
->> Install ->>
3
QFLCA DB
4
Choose dataset file?
No
Yes
▶ Run dataset Panalysis </>
5
5
6
▶ Run IBM QDF circuit simulation ⟷ Compare IBM QDF dataset with selected dataset Presults </>
= Return 🦋 Validation Verdict 🦋 on datasets Pdistance </>
No
6
Show Presults
7
▶
Play QDF Game?
👉(ʘ‿ʘ)👉[$] [♦] [♠] [♠] [♥]
No
Yes
Exit
▶ 👉(ʘ‿ʘ)👉[$] [♦] [♠] 👌(☆‿☆)👌
Alice & Bob's Quantum Doubles
nth
cont. via → link

▼ Legend...



▼ Left flowchart description...

This 5-step diagram represents the flow of installation steps of the QFLCC program to run as `part of the QFLCA simulator`, listed in the `VSC commands` section below, and then its run by the user. It starts with dataset files installation, then the QFLCC program run via the VSC terminal ❯_ and coding environment.

▼ Right flowchart description...

This 8-step diagram represents the flow of QFLCC steps of the complete QFLCA program (17 steps) after a successful installation (left flowchart) and program run by the user. It starts with dataset files installation, then the selection of one of the datasets for probability `P analysis`. The results are further compared to the `IBM QDF circuit dataset` to `validate P results` between the two datasets by running the IBM QDF simulation module from the QFLCC program. Finally, the program `prompts` ❯_ `the user to continue` by playing the QDF game for further validation of dataset results (`P analysis`). The diagram continues on the relevant page linked here.

VSC commands

- `VS Code program` -> `View` -> `Command Palette` ... `(Ctrl+Shift+P)` -> Python: `Select Interpreter -> select "Python: Select Interpreter" (or Enter)` -> `select an interpreter` based on our chosen Python version under which you have installed the package.
  - `Change the VSC Interpreter` for the QAI-LCode_QFLCC.py project.
  - `Install package under the correct Python version`, which means to change your default Python version and repeat the process of installation again.

To change your default Python version (for Windows 10 OS):

- `Right click on This PC` -> `Properties` -> `Advanced System Settings` (in the right panel) -> `Environment Variables` -> `System variables (the bottom part of the window)` -> double-click on `"Path"` -> `Select the 1st row for the wanted Python version and move it up` -> then do the same with the 2nd row. I recommend to restart (close and open again) your Command Prompt session if you want to see/work with the new default Python version. - Correct Python version installation.

  ⚠ Note on installation: ✅ Following command (in Command Prompt) works: `pip3 install pandas --user`

Run code commands

You can open a terminal in the current directory of the code as follows:

- `Press Ctrl+F5` or select `Debug` -> `Start` without Debugging in VSC environment. - Run program.
- `pip3 install <package name>` - For missing packages to import modules from, use this Python syntax.
- `pip3 install mkdocs` - For generating documentation and build the documentation site as you change code of this project. Then visit: homepage for more commands on MkDocs, or visit: mkdocs.org.

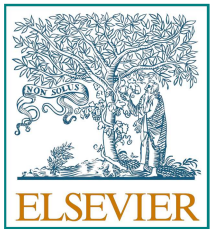
Optional:

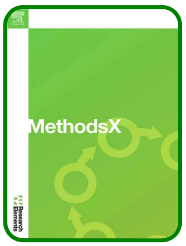
- `pip3 install pdoc3`
  - For generating documentation and *.exe (under Windows OS) use. Then type after installation: `pdoc --html pdoc`
- `replace the "second pdoc" with your package/directory/filename` to view the documentation of this project. For more information, visit: pdoc3.github.io/pdoc
- Second method is, in the terminal you may run the following command to convert QAI-LCode_QFLCC.py file to QAI-LCode_QFLCC.exe on Windows 10 OS. `pip install auto-py-to-exe`

Project layout (folder structure)

```
QFLCC classifiers/     # The python file home directory. Type in your CLI this command:
                         cd "QFLCC classifiers"
                       # so to enter it under e.g., Windows OS, as its name has space(s).
  QAI-LCode_QFLCC.py   # Main python file. In VSC, press [Ctrl + F5] to run .py in CLI.
      *.py             # Python files imported as modules to run by QAI-LCode_QFLCC.py.
    ...                # Dataset files, etc. used for I/O operations by QAI-LCode_QFLCC.py.
  mkdocs.yml           # The configuration file for documentation via <docs> content.
  site/
    index.html         # Website homepage created in MkDocs by Markdown files inside <docs>.
    ...                # Other website pages and their dependencies such as image files.
  docs/
    index.md  # The documentation homepage.
    ...       # Other Markdown pages, stylesheets, images, and their dependencies.
```

Project abstract sources, content and website affiliations:





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