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Objective

- Develop a software program that may view, edit, and create new designs in order to facilitate the design process for Powertec.

Design/Planning Phase

- Program Flow Chart Created. (Figure 1)
- Python used as the Programming Language and GitHub was used to collaborate with team's code.

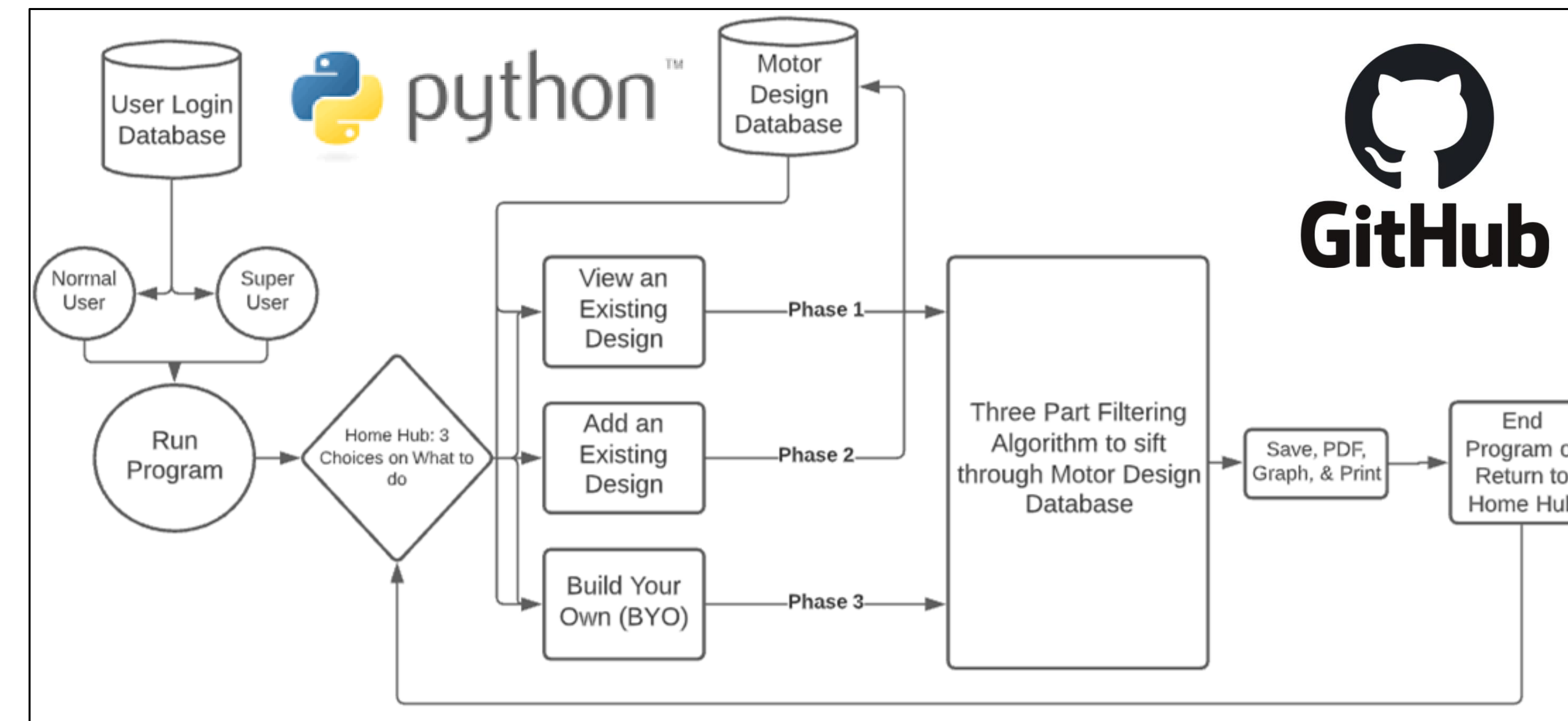


Figure 1 : Program Flow Chart

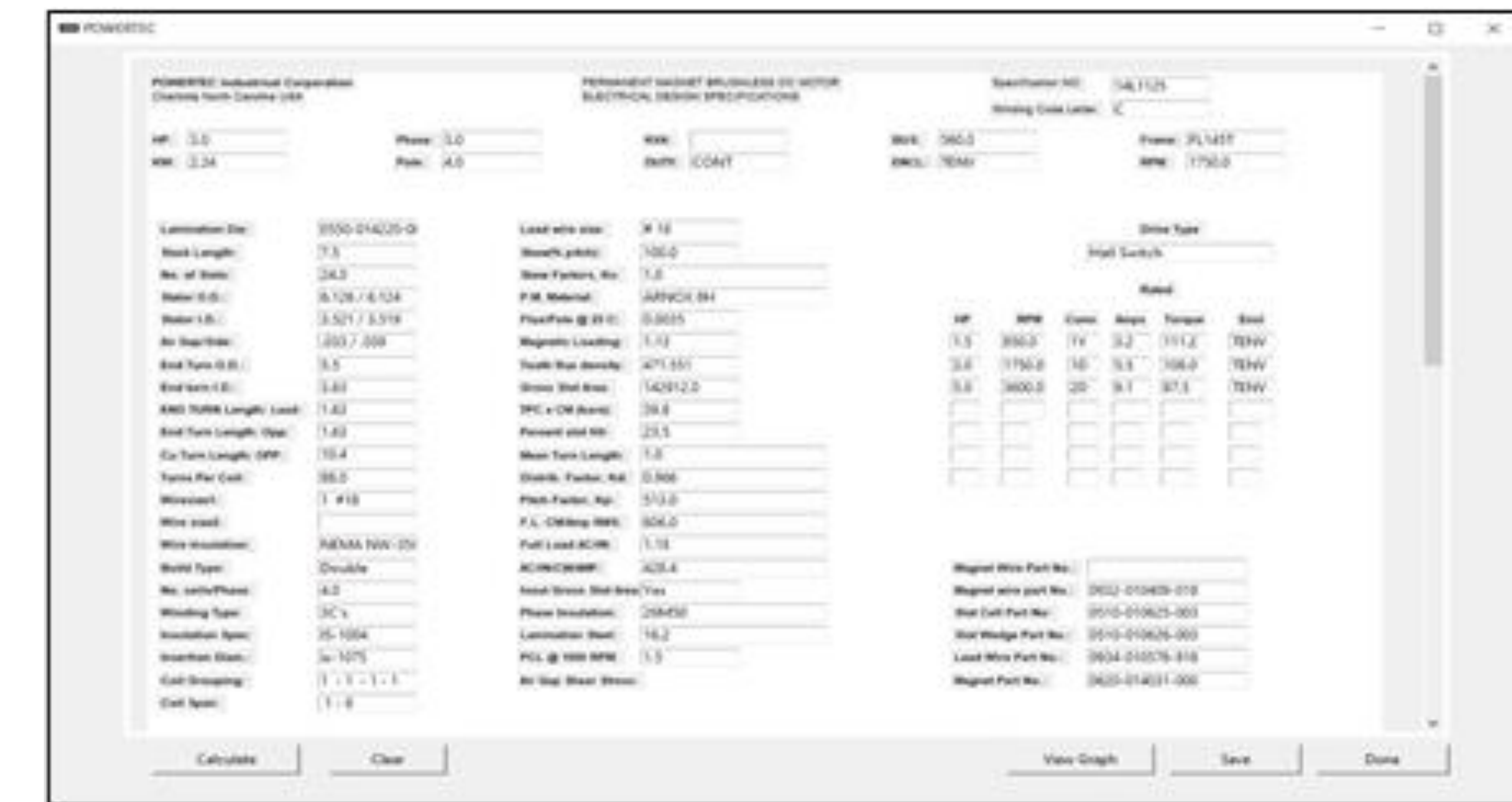


Figure 5 : Specification Windows Format

Specifications & Deliverables

- Excel was used to create the database for the specification sheets and SQLite for the login credentials.
- Program views existing designs by sifting through the database using a three step filtering algorithm using the user's desired search parameters to view design. (Figure 4 & 5)
- The add option will allow the user to expand the database by adding their paper copies into it.
- The create window will allow the user to edit an existing design or have new values be calculated using Powertec's industry standard formulas.
- Graphs, Save, .PDF, & Print Capable
- User manual for user guidance/troubleshooting

Complete Status

- Database with 140 Designs and User Logins Complete
- View, Add, & Create/Edit Windows Created
- PDF, Graph, Save, & Print features Complete.
- User Manual Complete

Program Windows

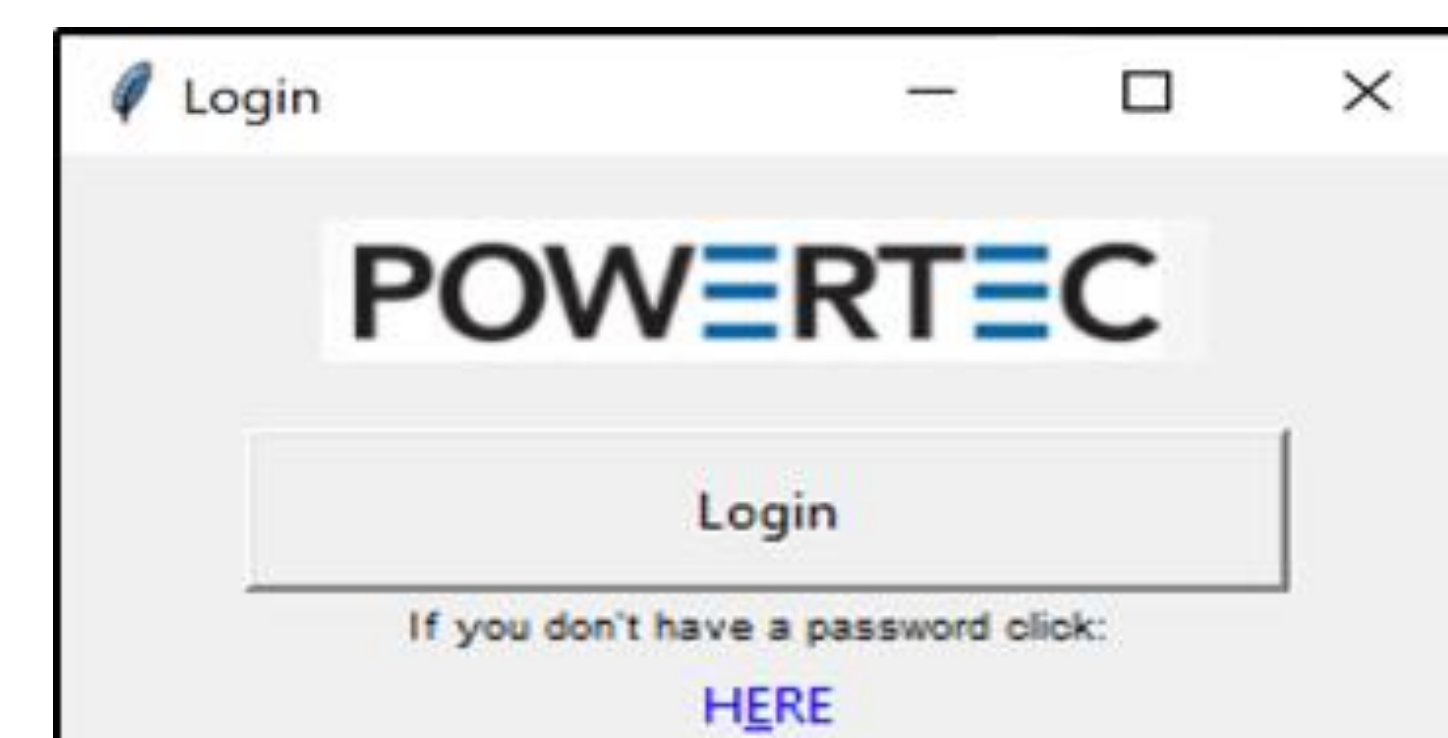


Figure 2a: Login/Register Window

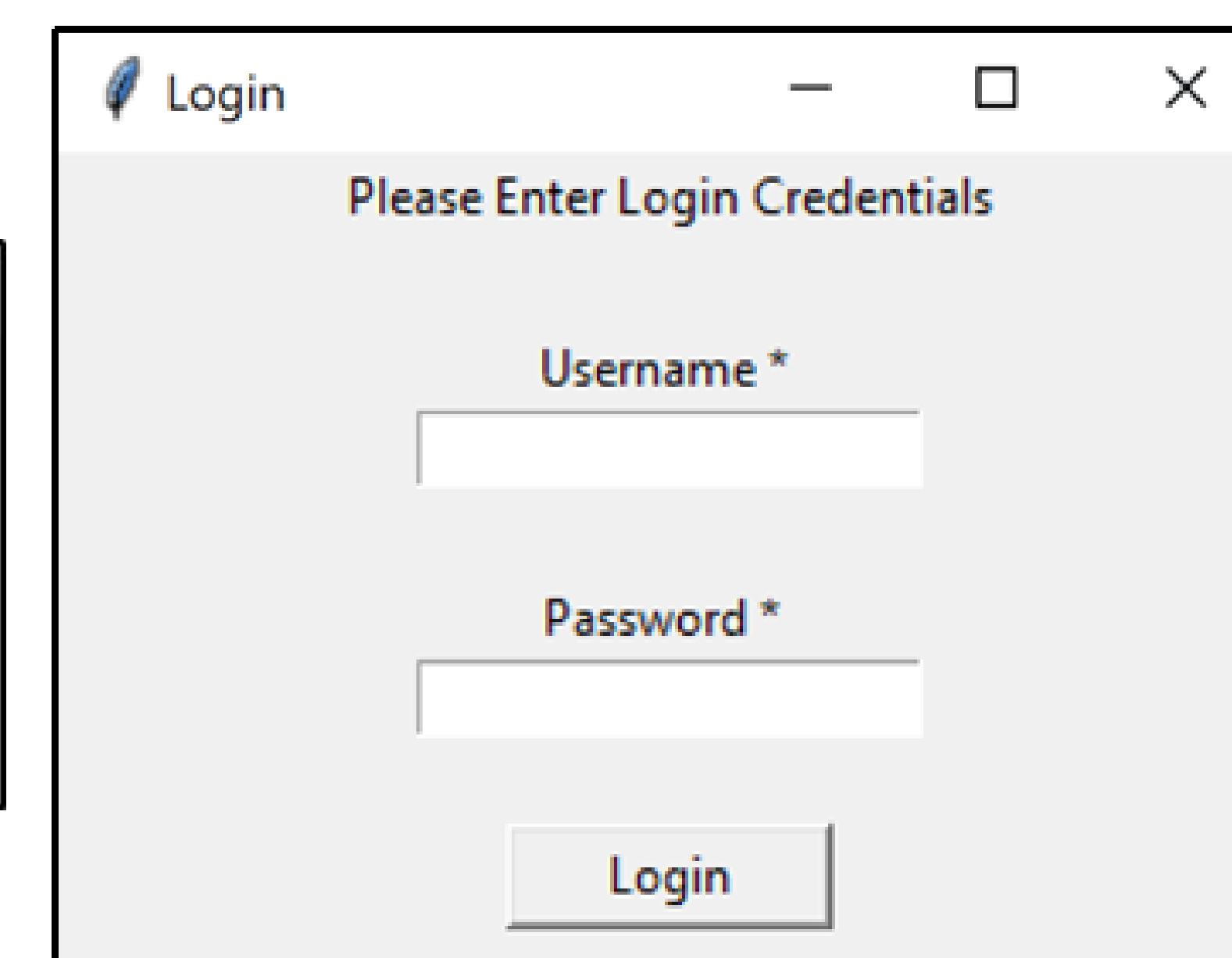


Figure 2b: Login Window

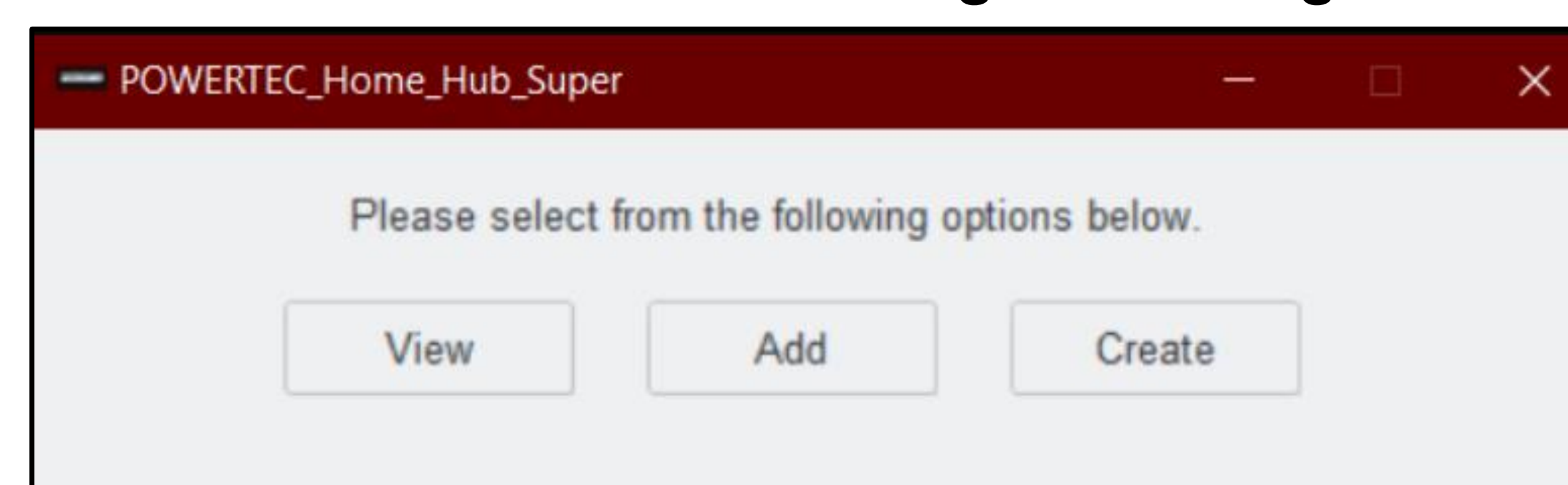


Figure 3 : Home Hub

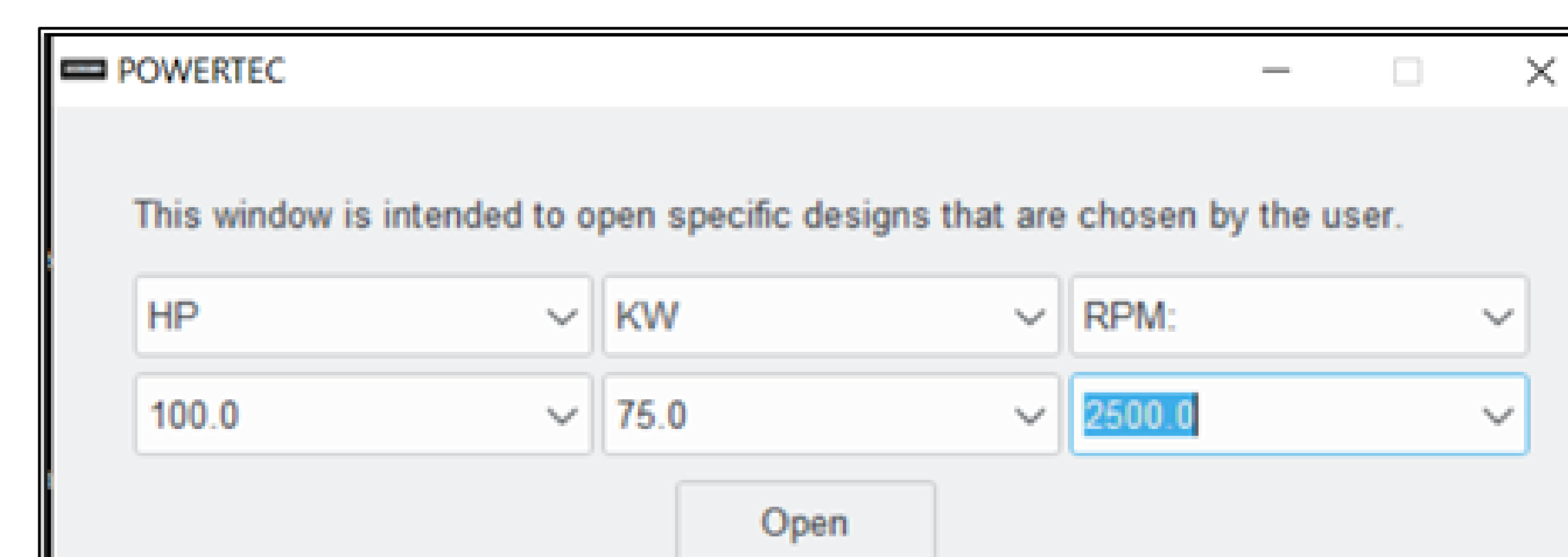


Figure 4 : Filter Window

Conclusion/Next Steps

- Viewing of designs has never been any easier with the View option in the Home Hub
- Expansion of the specification sheet database is now an easy process using the Add button on the Home Hub.
- Continuous improvement to the code and user interface may be done with python knowledge and with the help of the user manual.
- Powertec industry standard formulas need to be added to the backend of the program for calculation of select input values from the user.
- Complete program with user manual will be delivered to Powertec.

References

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