Sprint 4 Report (4/3/2023- 5/2/2023)

What's New (User Facing)
- Reach button for instant graph plot.
- Save/Load calibrations
- Better file read implementation
- Fixed real-time plot latency issues
- Save plotted points
- Speed real-time graph plot up to 32x
- GUI improvements
- User testing
- Unit testing
- Application deployment
- Copy/Edit table rows

Work Summary (Developer Facing)
At the beginning of this sprint, our focus was improving the efficiency of real-time graph plot. Due to latency issues in the graph plot, we had to redesign our approach towards the file reading. In this sprint, we're using a Watchdog API on a separate thread for better efficiency. We also worked on the increasing the speed of the graph up to 32x. Then we also implemented the Reach button, a feature requested by our client to plot all the data at once. Our client also requested some UI fixes. We also added another requested feature of saving and loading the calibrations along with saving the plotted datapoints to a specified location in the computer. Then we worked on allowing the user to edit and copy rows from the table. We also worked on unit testing and user testing to ensure that the application is bug free.

Completed Issues/User Stories
Here are links to the issues that we completed in this sprint:
- https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/issues/60
- https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/issues/59
- https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/issues/58
- https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/issues/57
- https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/issues/55

Incomplete Issues/ User Stories
We completed all the issues that we opened this sprint.

Code Files for Review

- main.py
  https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/blob/main/application/mainUI/main.py
- Calculations.py
  https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/blob/main/application/calculations/Calculations.py
- newFileNotifierThread.py
  https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/tree/main/application/mainUI
- plotAllThread.py
  https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/blob/main/application/mainUI/plotAllThread.py
- file.py
  https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/blob/main/application/read-data/file.py
- getData.py
  https://github.com/WSUCptSCapstone-Fall2022Spring2023/biology-labviewtopython/blob/main/application/read-data/getData.py

Retrospective Summary

Here's what went well:
- We were able to improve the performance and usability of the app
- We were able to implement all the requested features.
- We were able to get positive results of testing.

Here's what we'd like to improve:
- Allow the user to select and copy multiple rows. However, this is an enhancement feature.

Here are changes we plan to implement in the next sprint:
- Allow the user to select and copy multiple rows.