**Requirements**

**Functional Requirements**

1. User Interface:
2. Display Requirements Record Tab-
3. Button to start recording.
4. Text browser for use in debug and making sure the recording is live.
5. Message to tell the user how to end the recording.
6. File window view to see the finished recording.
7. Clear button to cleat the text browser after the recording.
8. Display Requirements Play Tab-
9. Button to begin the playback.
10. Text browser to make sure the playback is live, and inputs are going through.
11. File window to click which recording you wish to start.
12. Looper pop up window to allow the user to replay the playback many times.
13. Clear button to clear the text browser after playback.
14. Display Requirements Edit Tab-
15. Button to load the Json file.
16. Button to save the Json file.
17. Pop up window to allow the user to change the filename.
18. Table view to allow the user to view and edit the Json file information.
19. Clear button to clear the table view without editing the file.
20. Programming Logic:
21. Recording-
22. Using Pynput to run listeners listening to the keyboard and mouse events.
23. Using the class events to make an array of the keyboard and mouse events.
24. Waiting for the escape key to then using the event array to create the Json file.
25. Playback-
26. Loading the Json file based on the file name from a clickable file view window.
27. Enumerating through the Json data and grabbing the event types, times and positions.
28. Using Pydirectinput library to input the actions from the events.
29. Executing the actions until the end of the data.
30. Edit-
31. Using a clickable file view window to grab the filename.
32. Loading the data and separating the data based on rows in the table.
33. Allowing the user to edit those actions based on clickable cells within the table.
34. Allowing the user to clear the data from the table incase they decide to not edit the data.
35. Saving the data by reading through the table and dumping the data into Json format.

**Non-functional Requirements**

1. Program- should reliably be able to function many times recording and playing the users’ actions.
2. Performance- should be able to play back the actions with little to no lag in the actions taken.
3. UI- should be user-friendly and easily understood.
4. Programing- should be relative free from bugs.