1.0 Alex Osterwalder's Business Model Canvas

The Alex Osterwalder's Business Model Canvas serves as a comprehensive blueprint, designed to show the intricacies of the proponent's study - the NexHK web system. This canvas provides a structured framework to analyze and optimize the key functions of the web-based platform. Through its nine essential building blocks, proponents expound on the critical partnerships, activities, and resources that would drive the system's functionality. Moreover, it highlights the unique characteristics that would make up the project, catering to both HK scholars and the members of the CSDL Department. With this canvas as serving as a guide, the proponents strive to create an efficient scholar management and monitoring system, to assist the scholars and the CSDL department in their endeavors.

<table>
<tr><th>Key Partners</th><th>Key Attributes</th><th>Value Proposition</th><th>Customer Relationship</th><th>Customer Segments</th></tr>
<tr><td rowspan="3">• PHINMA Araullo University
• CSDL Department
• Other Potential Educational Institutions</td><td>• Web System's Development
• HK-Scholar Management
• Duty & Role Management
• Request Management
• Announcement Management
• Analytics Generation
• Duty Recording System
• 2 Phase Security System</td><td rowspan="3">• Streamlined data management system
• Diverse data analytics for better decision making
• Online scholarship renewal process
• Centralized announcement platform
• Efficient Duty scheduling and recording system
• Student-led Initiative</td><td>• Training and on-boarding for new administrators
• Feedback collection for system improvements</td><td rowspan="3">• CSDL Department Administrators and Staff
• PHINMA AU Professors
• Hawak-Kamay Scholars</td></tr>
<tr><th>Key Resources</th><th>Channels</th></tr>
<tr><td>• Student Developers
• DB Management System
• Server Hosting
• Web System Maintenance
• Financial Resources</td><td>• Web Portal Access for all Users
• Email Notifications for OTP and Requests
• In-System Notifications</td></tr>
<tr><th colspan="3">Cost Structures</th><th colspan="2">Revenue Streams</th></tr>
<tr><td colspan="3">• Maintenance Cost
• Website Support and Server Hosting
• Amazon Services Cost
• Staff Salaries</td><td colspan="2">• Subscription Fees
• Potential Funding from Institution</td></tr>
</table>

Table 1.0.1 *- The table above illustrates the Alex Osterwalder's Business Model Canvas for NexHK Web System*

NexHK Web System is a collaborative effort with key partners including PHINMA Araullo University and CSDL Department. Its functions encompass the development of the web system, comprehensive management of HK scholars, efficient duty and role assignment, streamlined request handling, centralized announcement management, advanced analytics generation, and a reliable duty recording system, all fortified by a two-phase security system. To create this project, essential resources such as dedicated student developers, a robust database management system, reliable server hosting, and essential financial resources have been allocated. The system's value proposition lies in its ability to streamline data management, provide diverse analytics for informed decision-making, facilitate online scholarship renewals, offer a centralized announcement platform, and ensure efficient duty scheduling and recording, all backed by a student-led initiative. The customer relationship is nurtured through training and on-boarding for new administrators, and a feedback mechanism for continuous system improvement. This comprehensive solution caters to a diverse user base including CSDL Department Administrators and Staff, PHINMA AU Professors, and Hawak-Kamay Scholars, with revenue streams generated through subscription fees and potential funding from institutions. The cost structure encompasses maintenance, website support, server hosting, and staff salaries, ensuring the sustainability and effectiveness of the system.

2.0 Flow Chart

The flow charts below serves as a visual representation of the operational framework of NexHK, the web system created for the efficient management of HK Scholars by the CSDL Department. It provides a clear and structured outline of how data flows within the system, showcasing key processes and functions offered by the system.

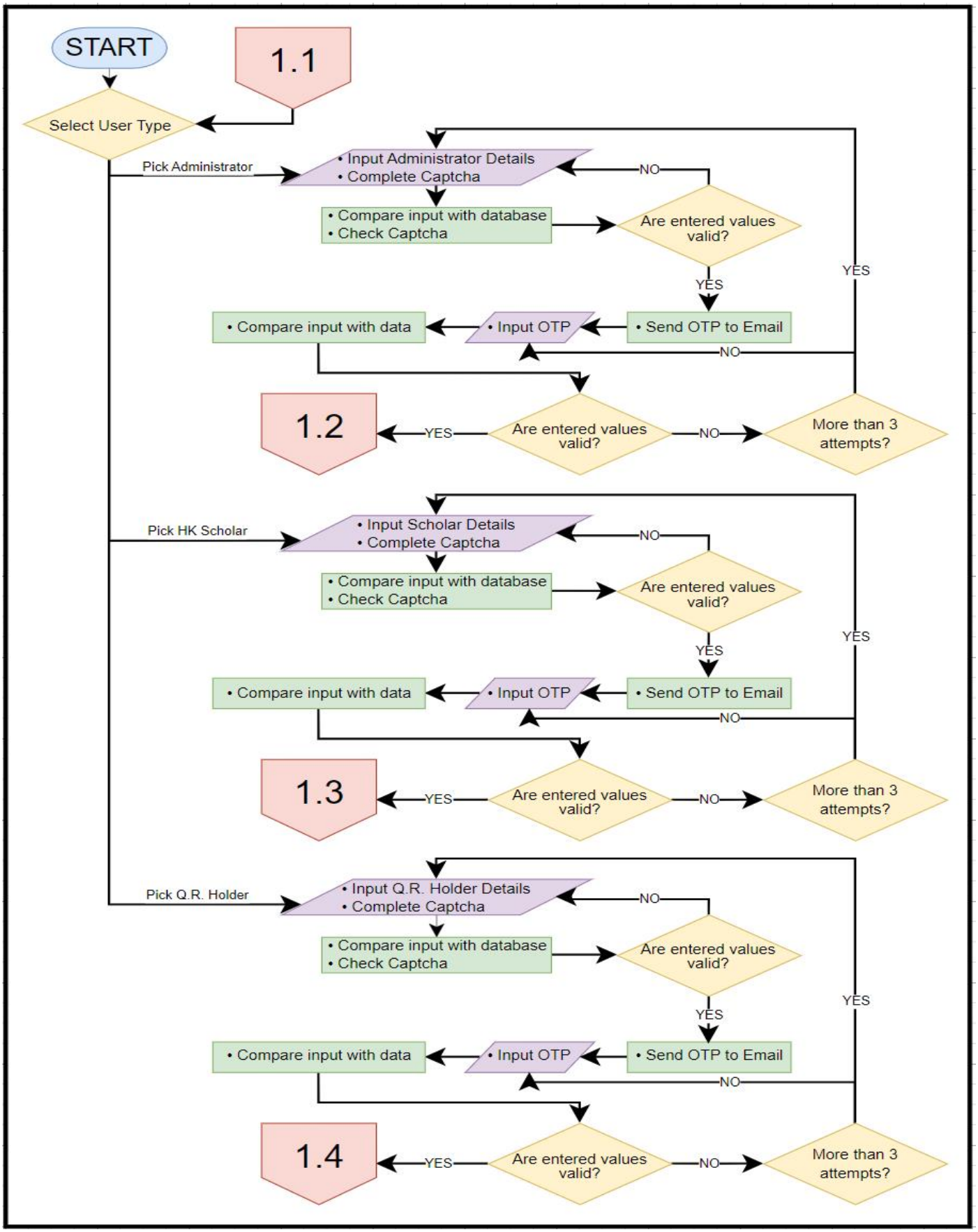

Image 2.0.1 - *The image above shows the log-in structure of the web system.*

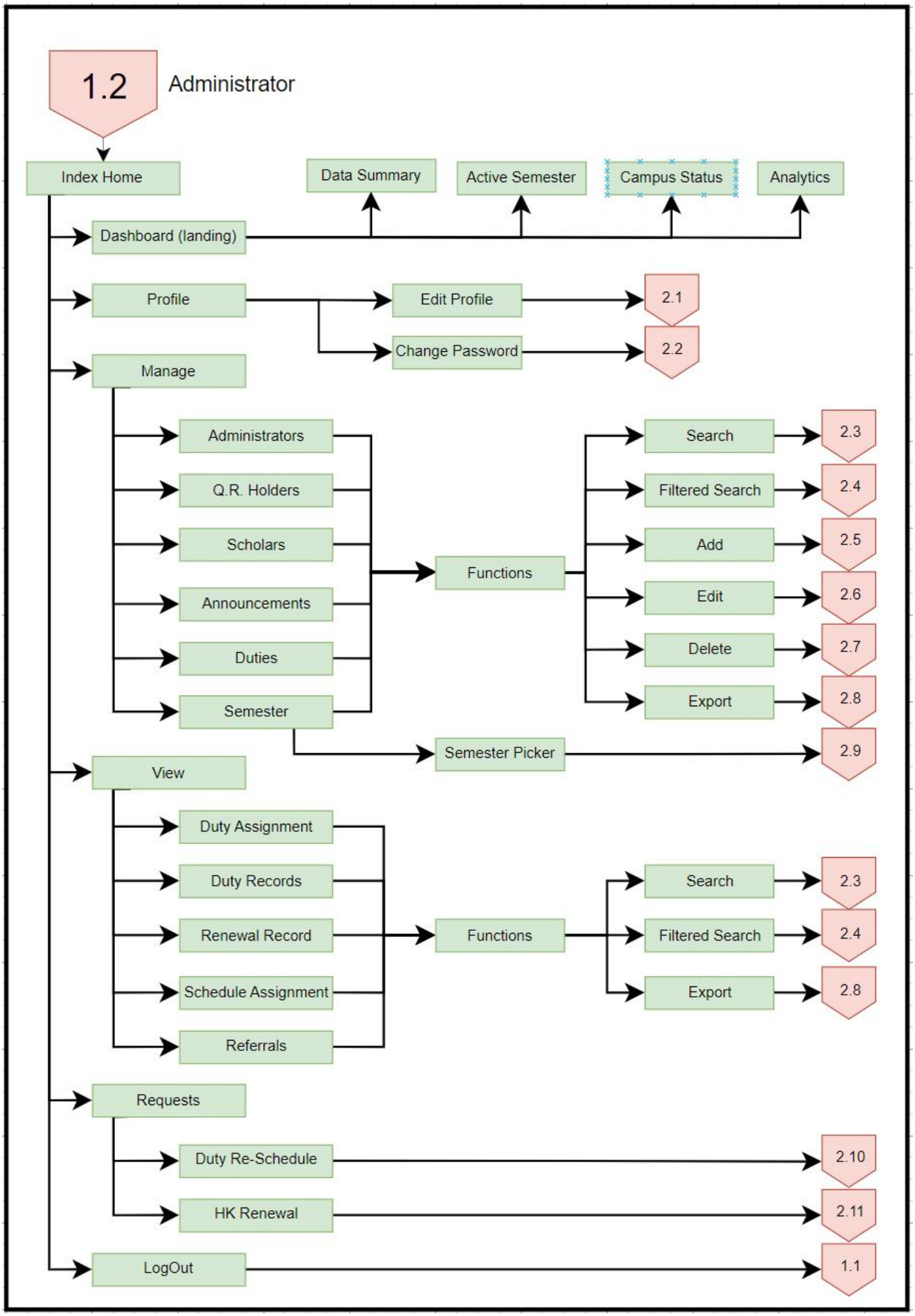

Image 2.0.2 *- The image above shows the main administrator data flow*

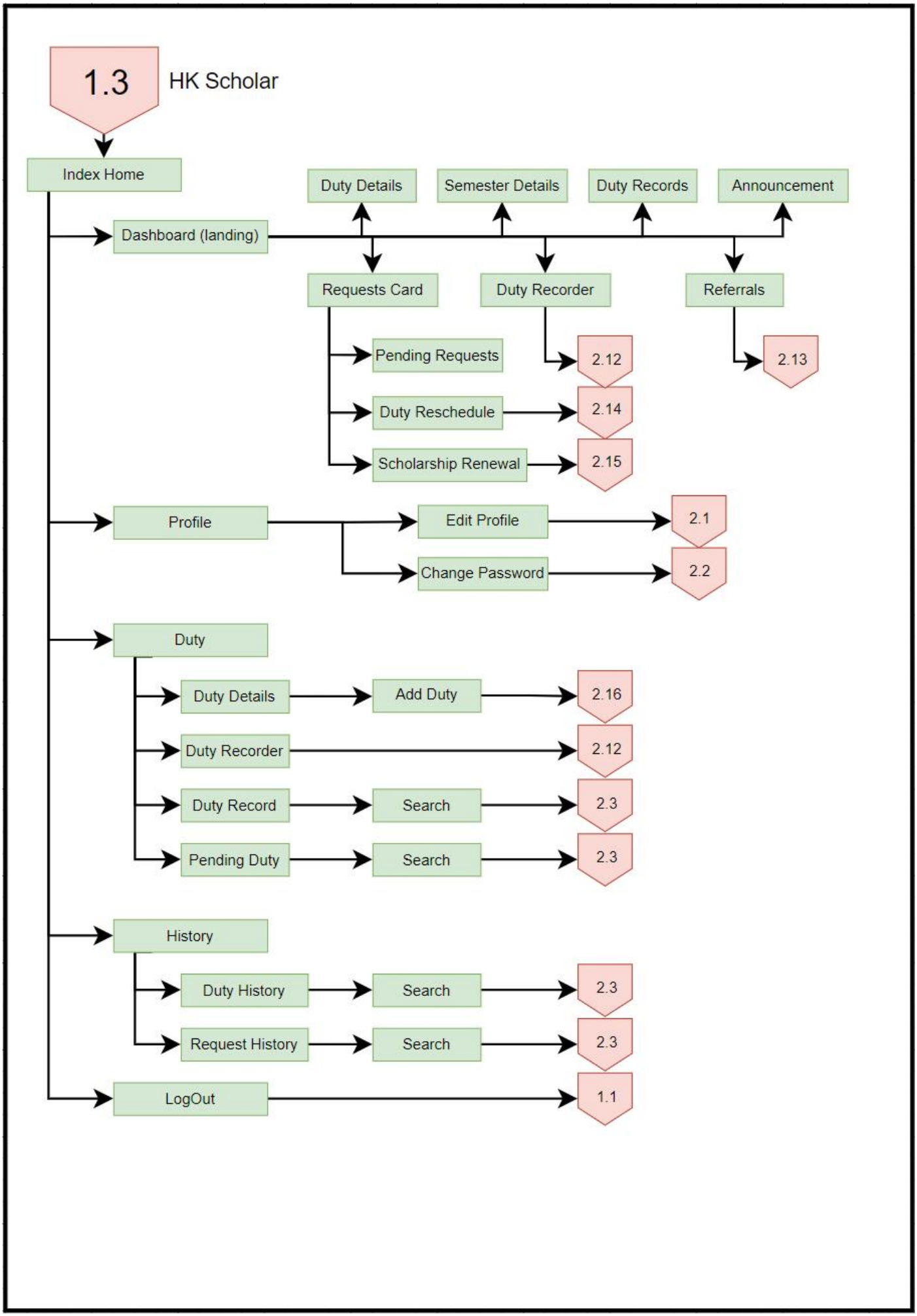

Image 2.0.3 *- The image above shows the main HK Scholar data flow*

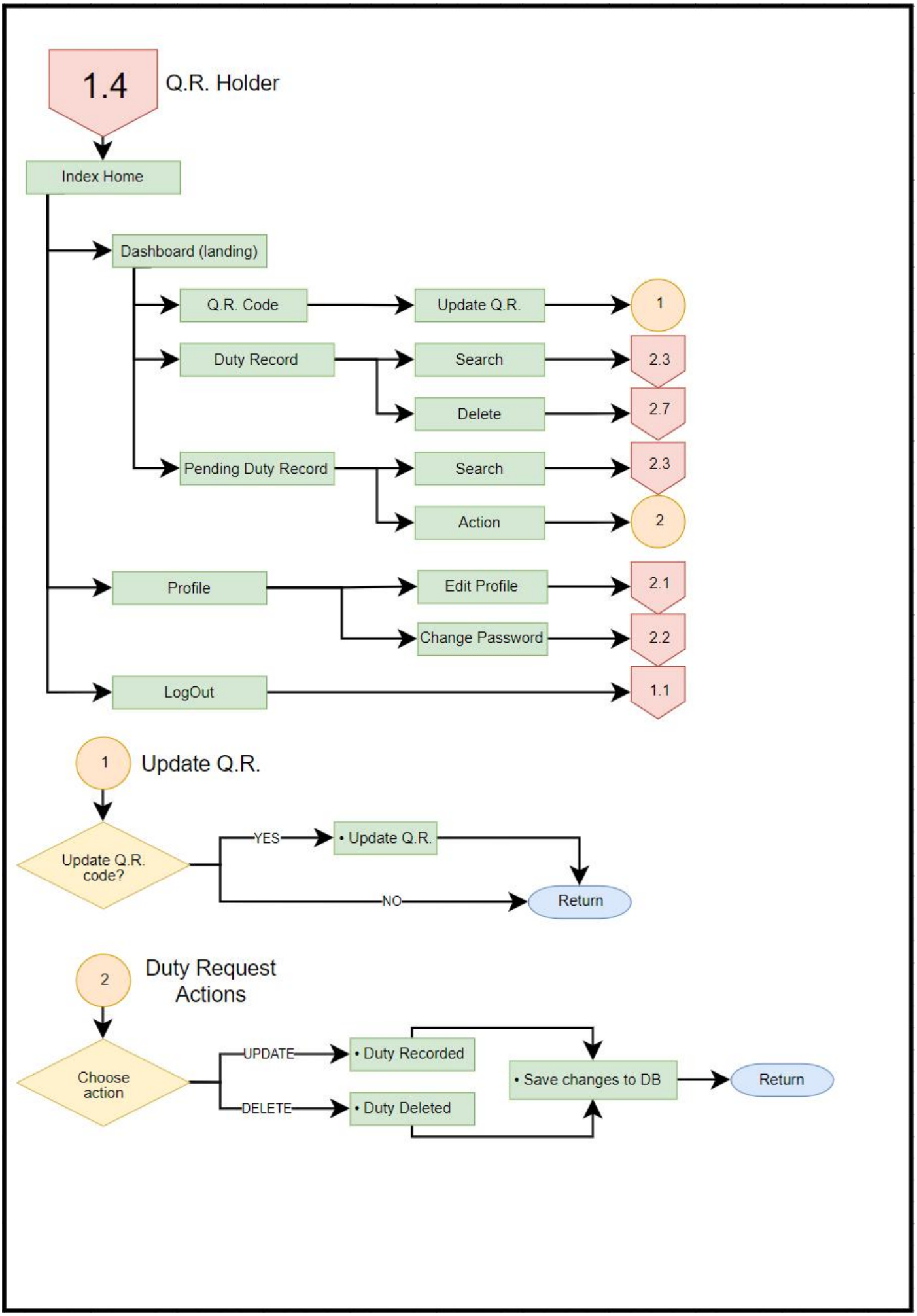

Image 2.0.4 *- The image above shows the main Q.R. Holder data flow and basic Q.R. Holder functions.*

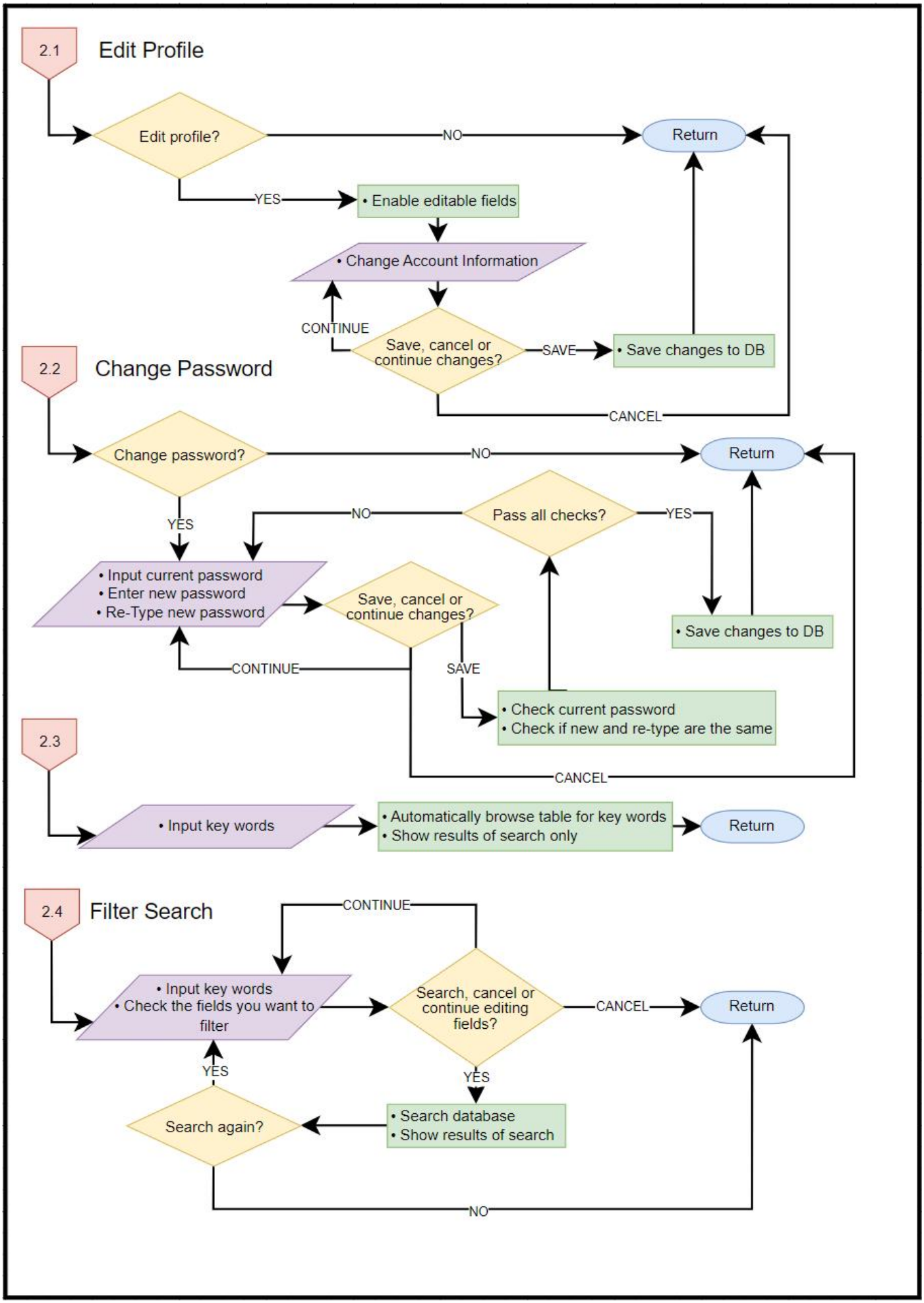

Image 2.0.5 - *The image above shows the data flow for Profile edit, password change, search and filter search.*

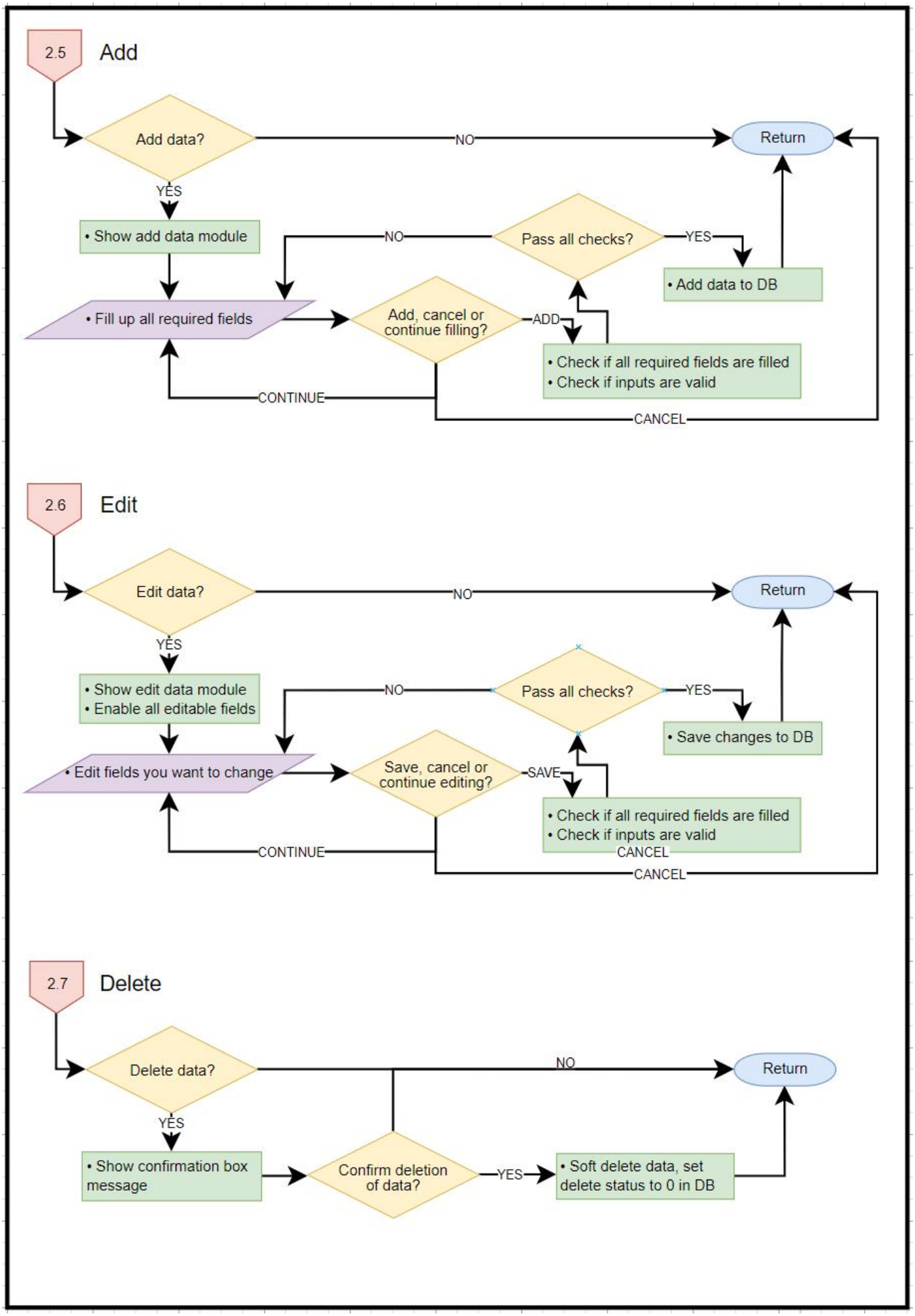

Image 2.0.6 - *The image above shows the data flow Add, Edit and Delete functions in the web system.*

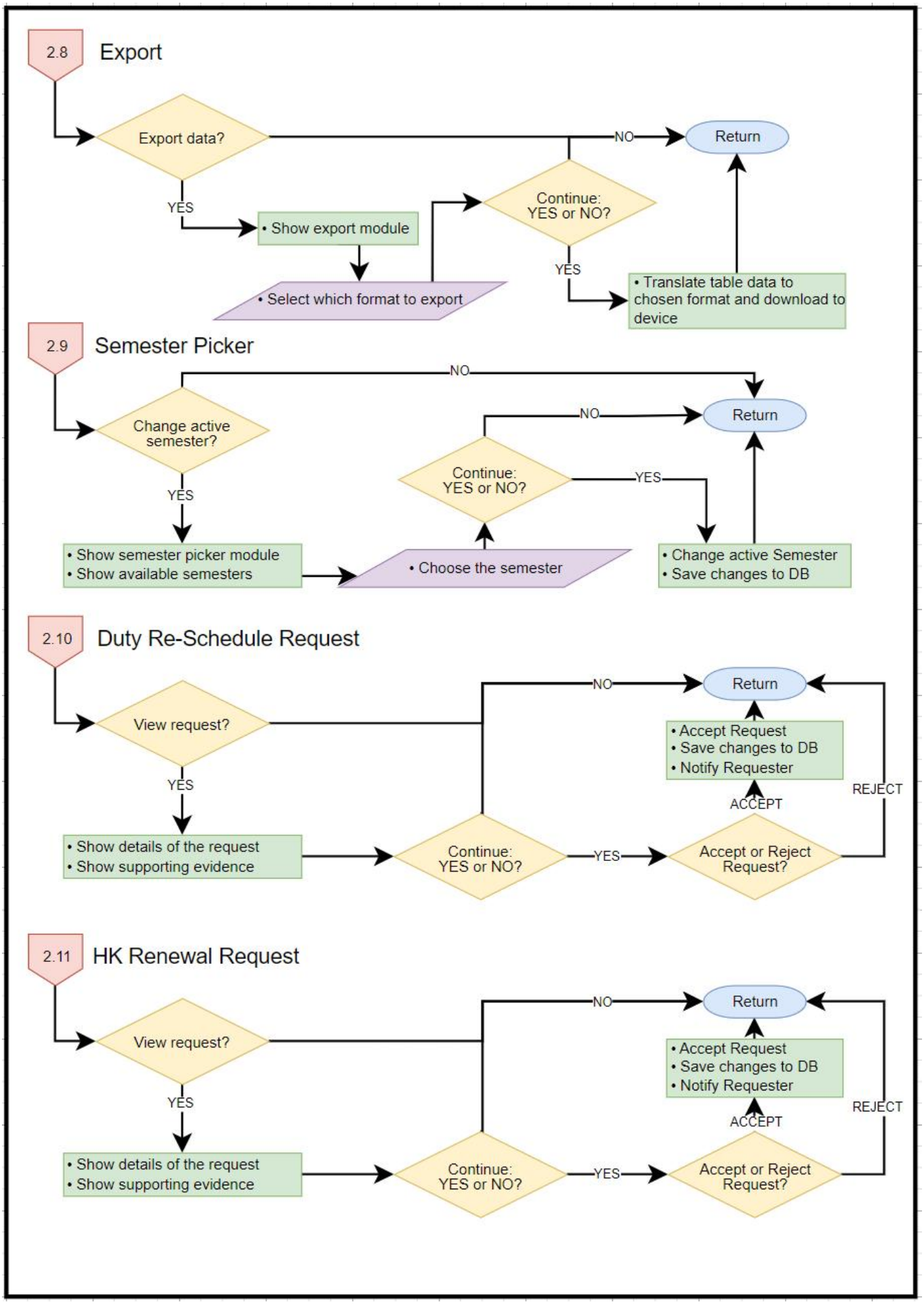

Image 2.0.7 - *The image above shows the data flow for file Export, Semester Picker, Duty-Re Schedule request handler, and HK Renewal Request Handler for the administrator.*

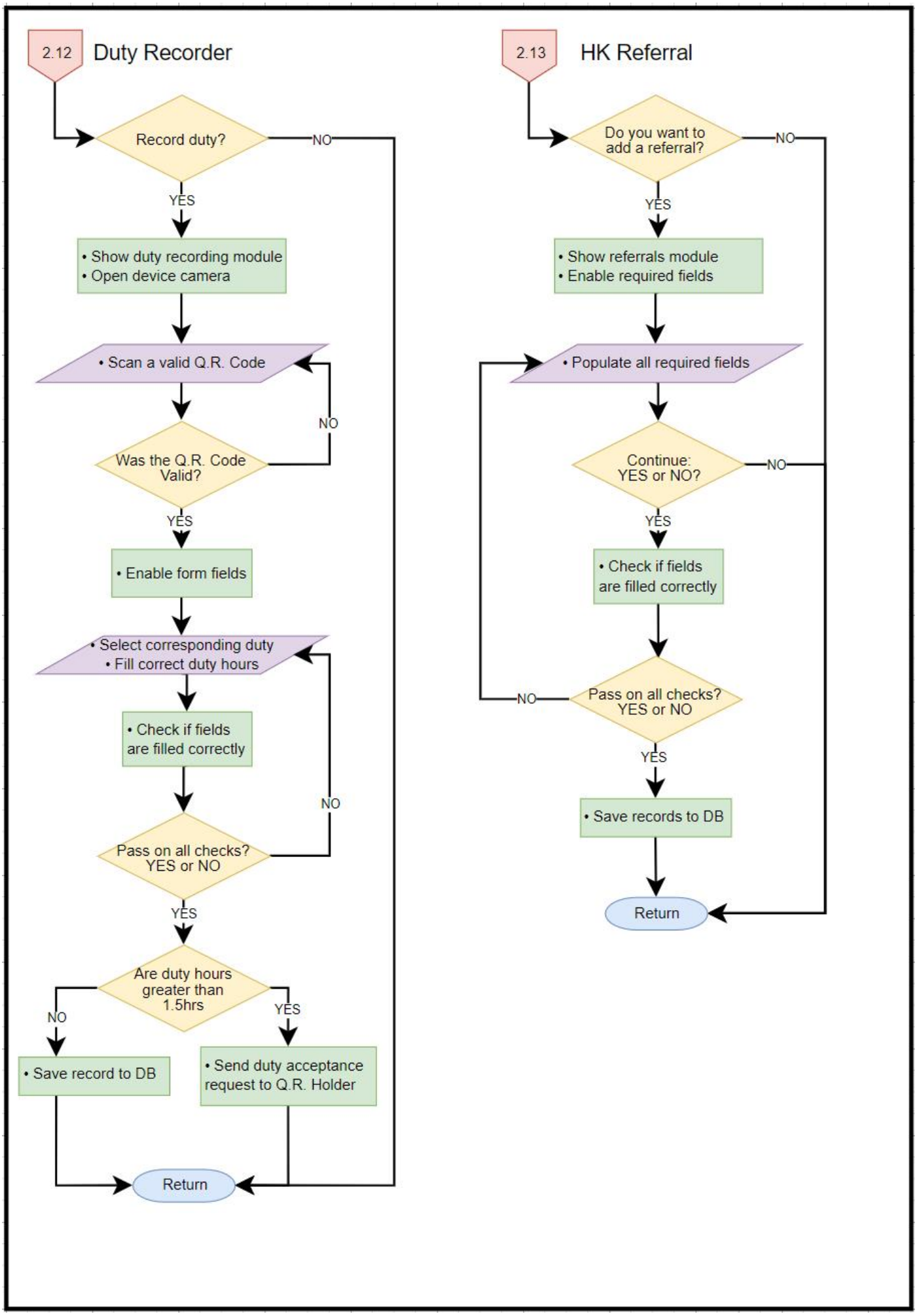

Image 2.0.8 *- The image above shows the data flow for Duty Recording and HK Referrals for HK Users.*

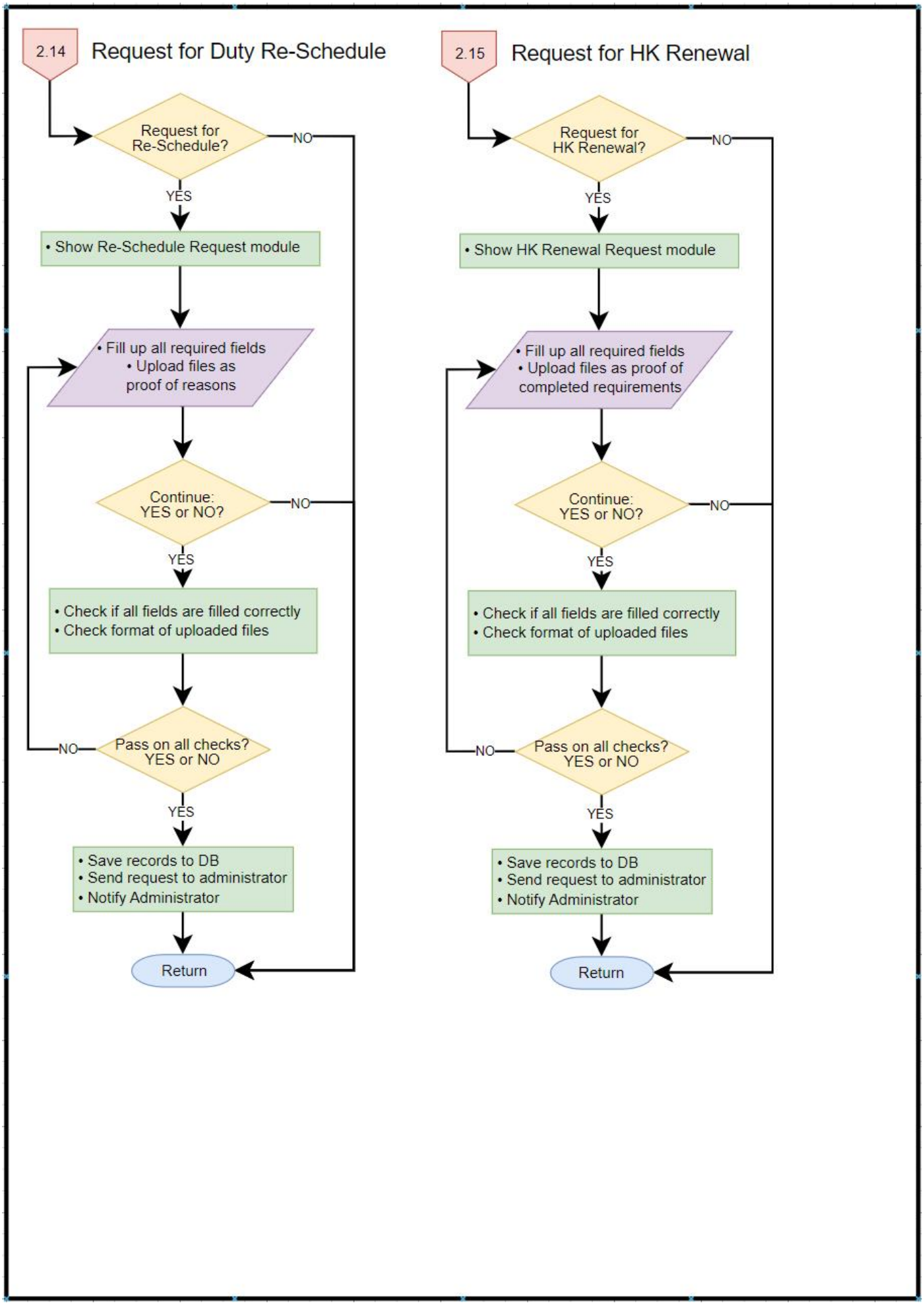

Image 2.0.9 *- The image above shows the data flow requesting Duty Rescheduling and Scholar Renewal for HK Users of the web system.*

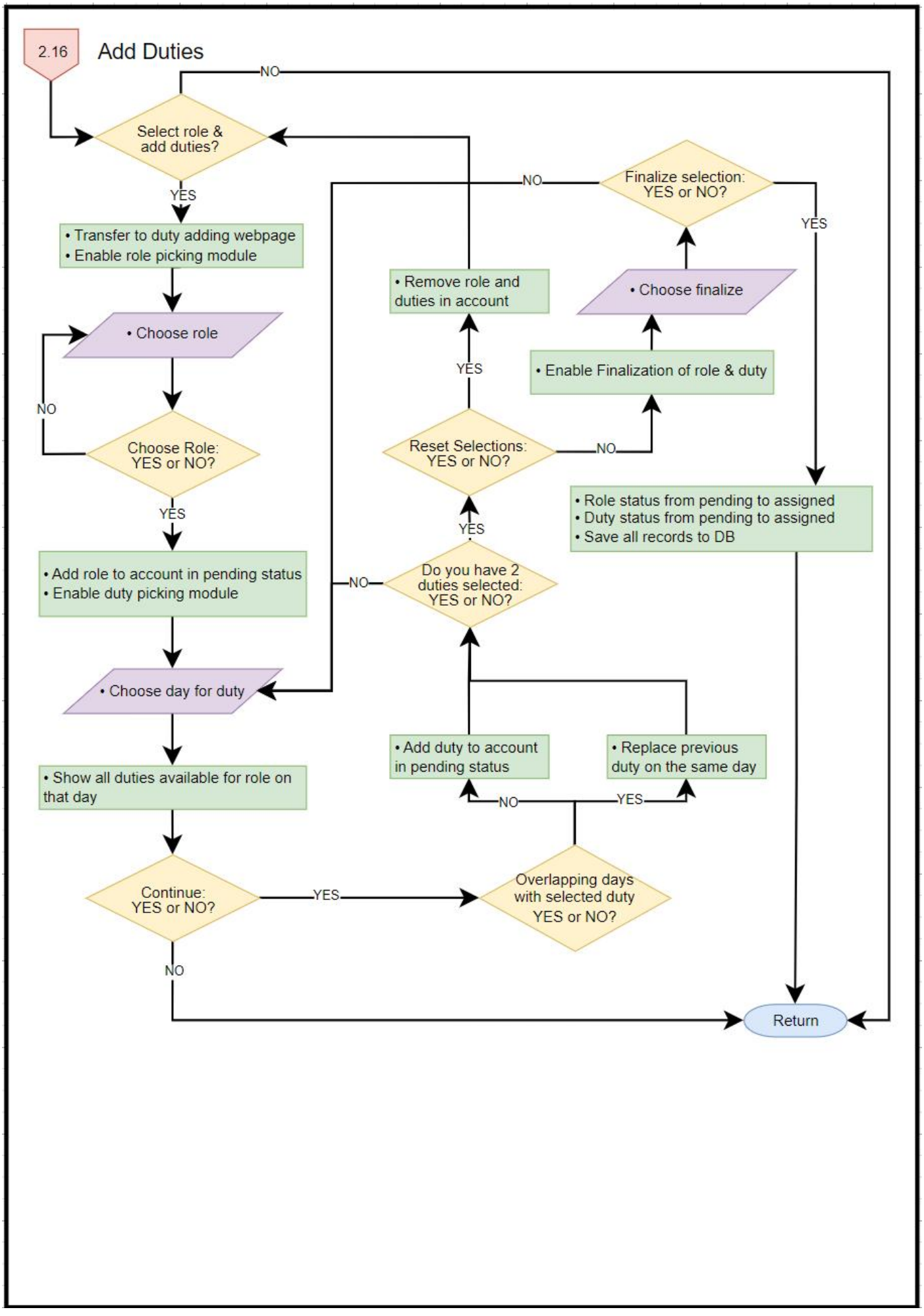

Image 2.0.10 - *The image above shows the data flow for adding duties as a HK Scholar in the web system.*

3.0 Entity Relationship Diagram (ERD)

The Entity-Relationship Diagram (ERD) shown in the study is a fundamental visual representation that shows the intricate database structure of NexHK, created for the efficient management of Hawak-Kamay Scholars' data by the CSDL Department. The diagram below serves as the blueprint for the NexHK database structure, detailing the essential entities, their attributes, and the relationships that define their interactions within the system. It stands as a tool in shaping the database's design and functionality, providing a comprehensive view of how data is organized throughout the web system. By mapping out the relationships between each table, the ERD lays the foundation for optimized operations.

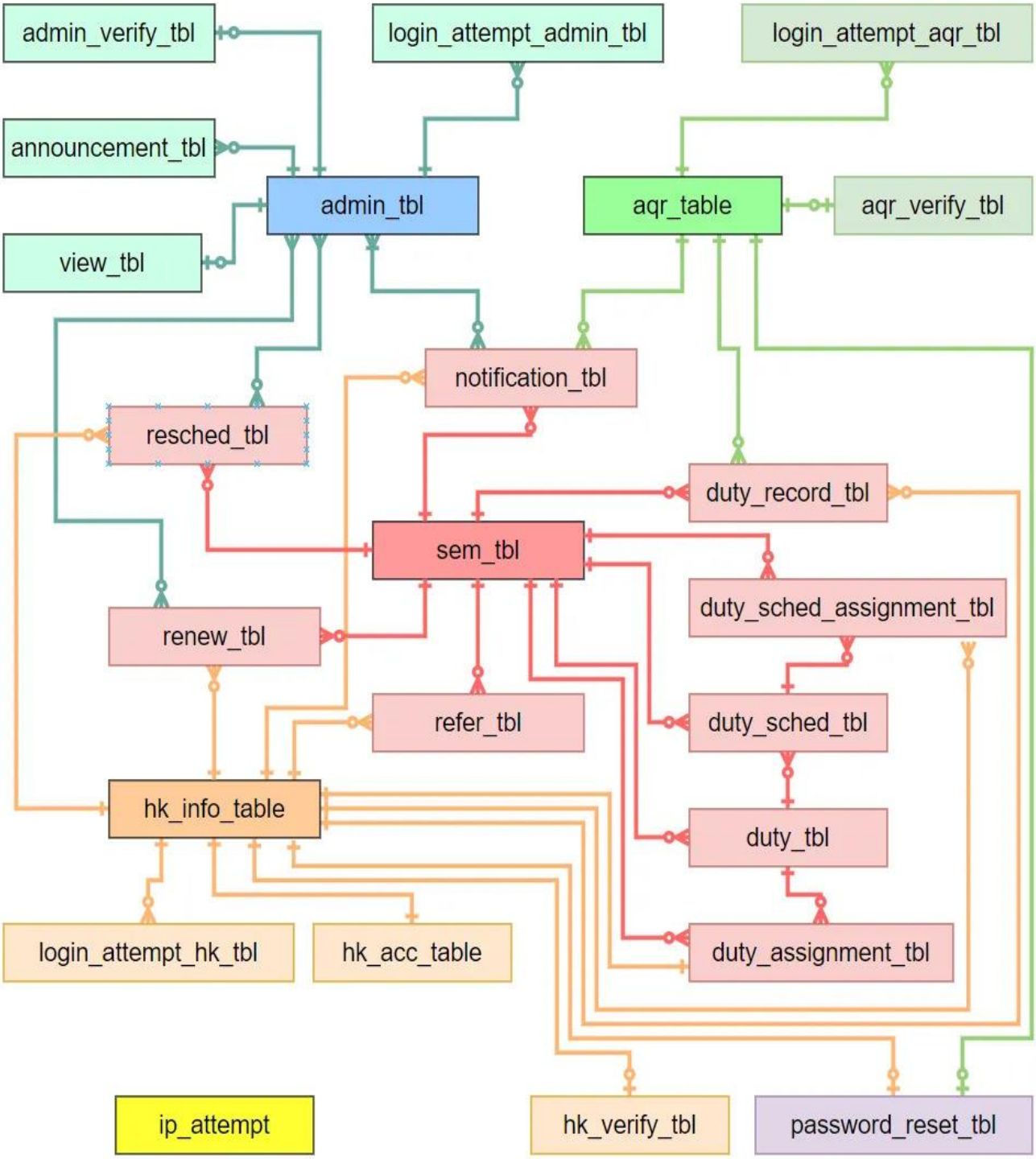

Image 3.0.1 *- The figure above shows a graphical representation of the relationship of each table in the database of propose web application*

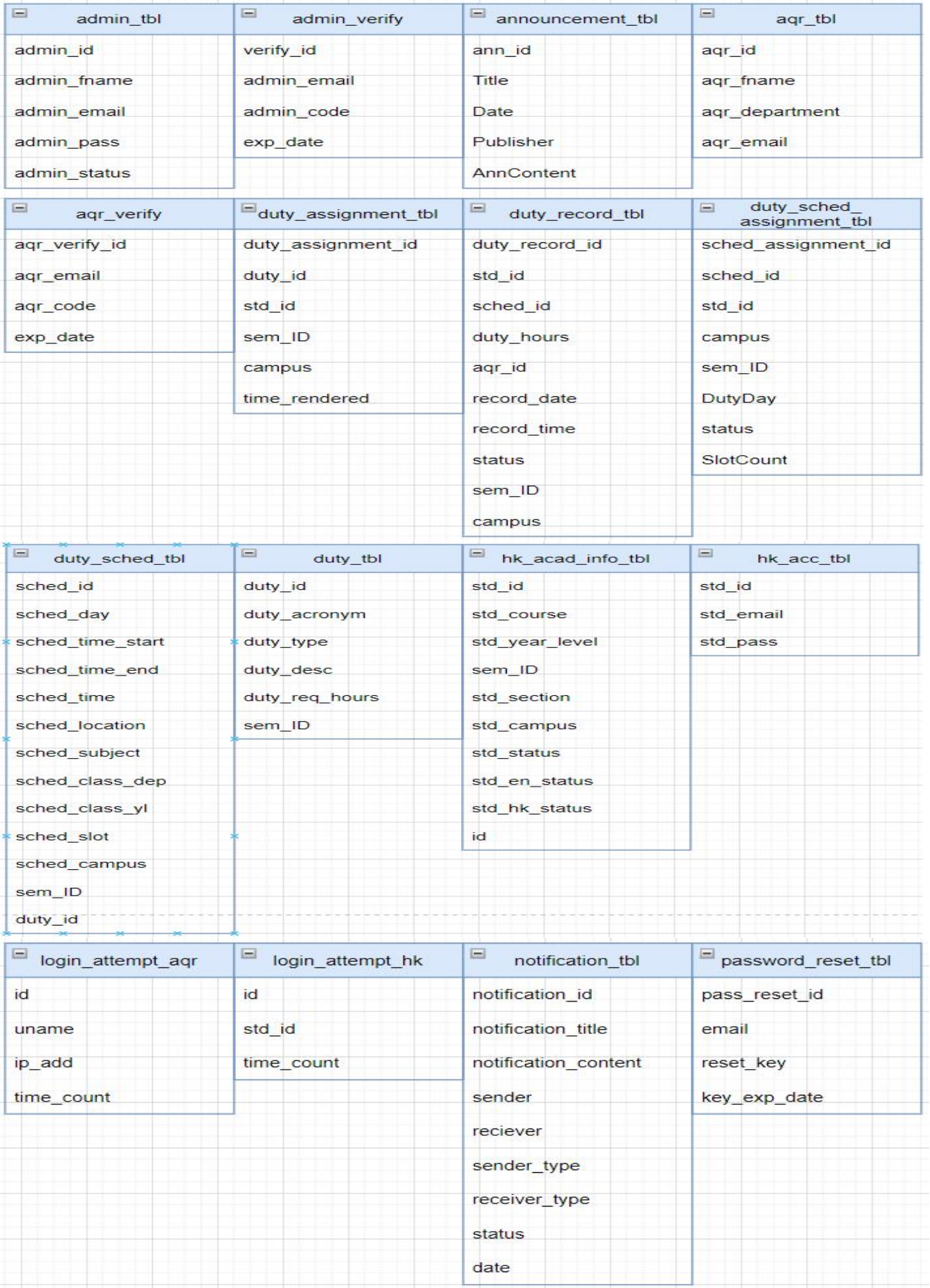

Image 3.0.2 - *The figure above shows fields of the table that are used to build the Entity Relationship Diagram.*

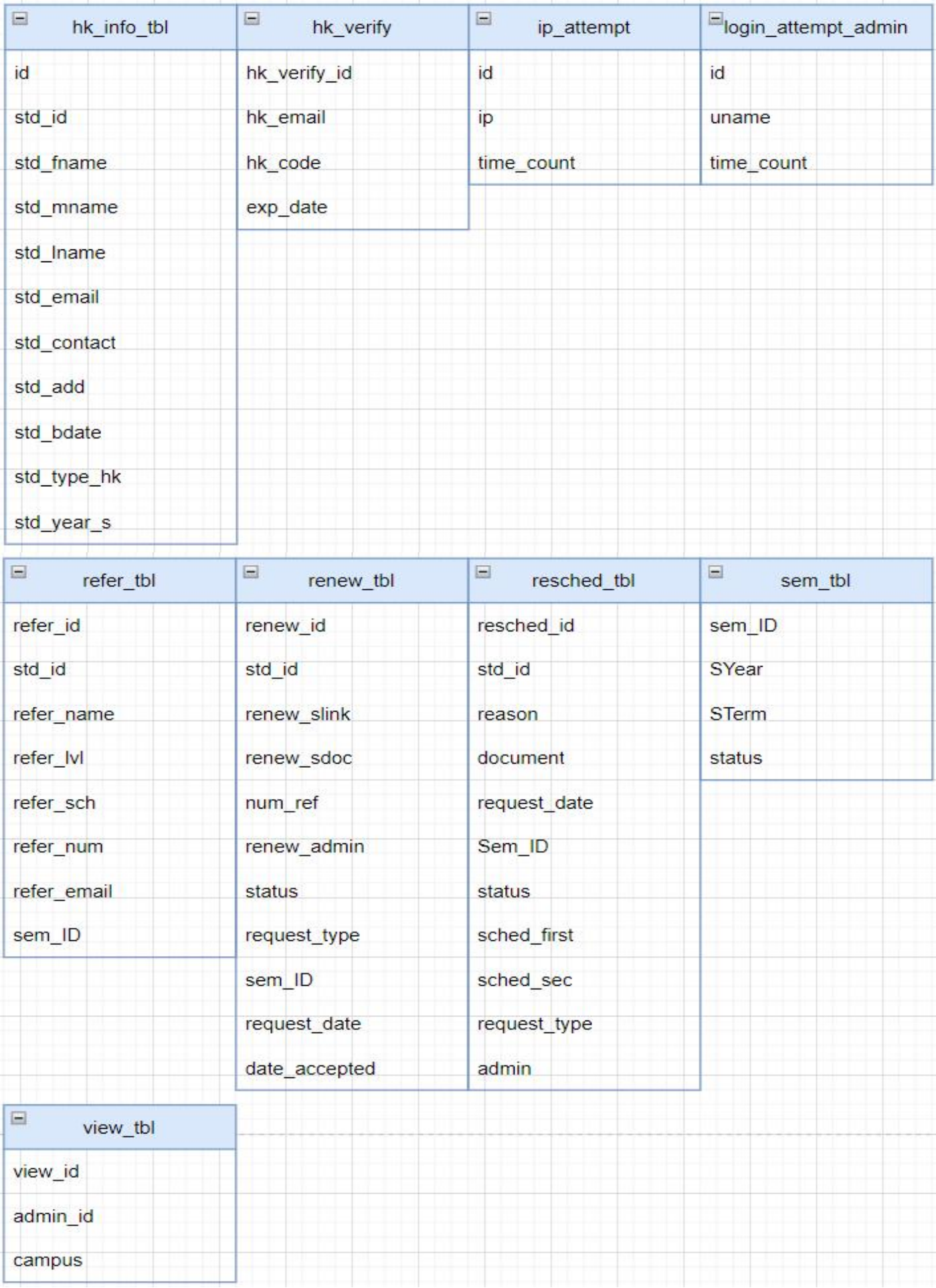

Image 3.0.3 - *The figure above shows fields of the table that are used to build the Entity Relationship Diagram.*

4.0 Schedule of Activities / GANTT Chart

The GANTT Chart shown below in the study is a visual representation of the project timeline for NexHK. The chart offers a view of the project's tasks, and their respective durations, providing a structured roadmap for the system's development and implementation. With clear milestones and timelines, it serves as a tool to track progress and ensure timely completion. By breaking down the project into manageable segments, the GANTT Chart facilitates effective resource allocation, task assignment, and risk management, contributing to the overall success of the creation of NexHK. This visual aid not only enhances project coordination but also assists the proponents with a strategic overview, ensuring a cohesive and efficient development process.

Image 4.0.1 *- The figure above shows the GANTT Chart for the project NexHK showcasing the status of each segment of the study.*

5.0 Project Context Diagram

The Project Context Diagram shown below shows the scope of work the proponents implemented as a part of the upgrades conducted on NexHK. The removal of Bootstrap 5, Metrical UI, and certain Google APIs is a deliberate shift, directly influencing the system's User Interface (UI) and User Experience (UX), as well as the overall functionality of the web system. With the integration of Laravel Framework, Tailwind, React, Customized APIs, and some Amazon Services such as EC2, NexHK undergoes an upgrade regarding its Tech Stack, elevating its capabilities. These enhancements are made in consideration of the user satisfaction and the system's efficiency. Some noteworthy changes to the web system include enhanced data tables, refined analytics, paginated HK profiles, and other robust features that further assists its user.

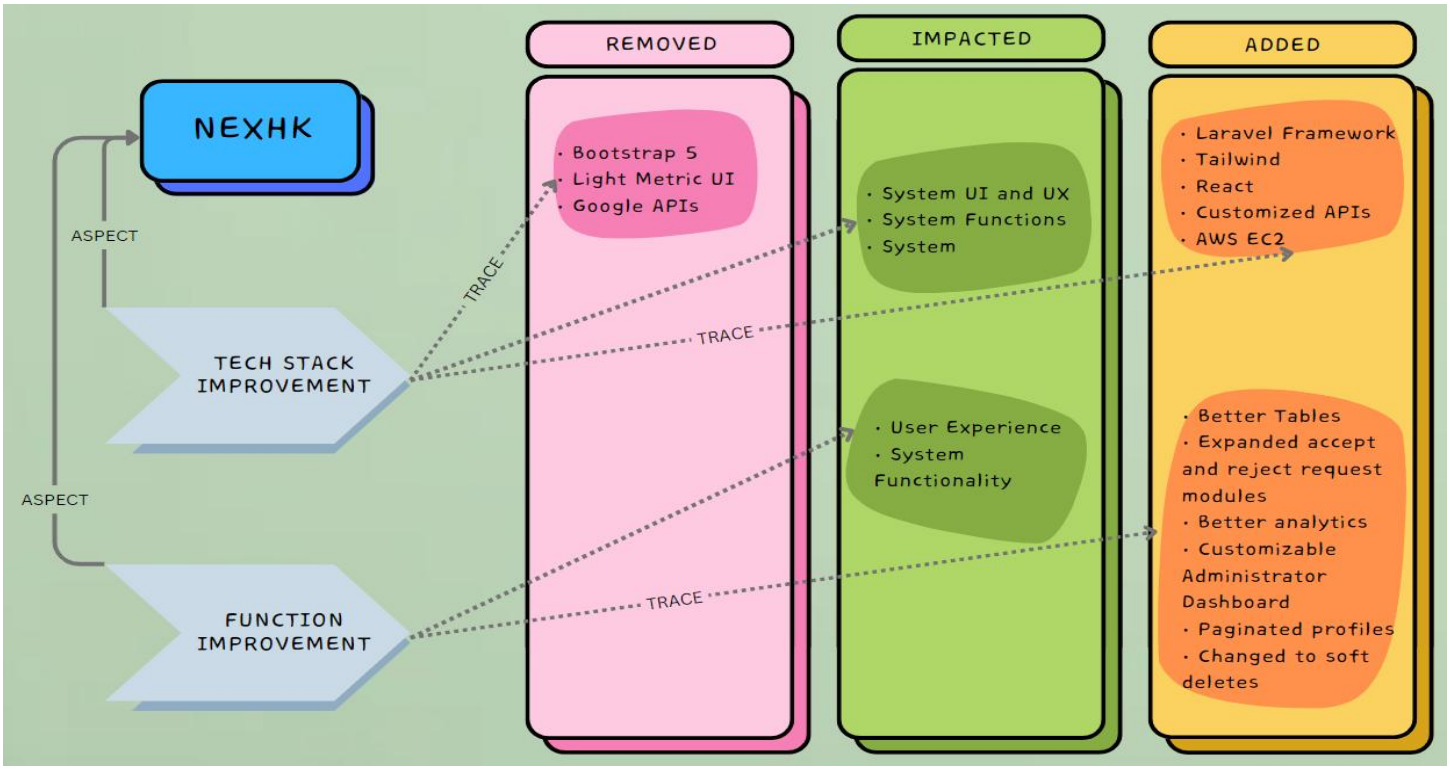

Image 5.0.1 *- The figure above shows the Project Context Diagram for NexHK which shows the context of the current package.*

6.0 Benefits Diagram

The Benefits Diagram for NexHK offers a visual representation of the multitude of advantages the web system brings to the CSDL Department and HK Scholars. These benefits are rated using their size, benefits, and complexity. Among these benefits is an efficient duty recording system, ensuring accurate and streamlined tracking of HK scholar duties. The system's impact on the efficiency of the CSDL Department is also evident, increasing efficiency with a more centralized and integrated system. Through normalized data, NexHK guarantees consistency and accuracy in scholarly data, making sure of the data's integrity.

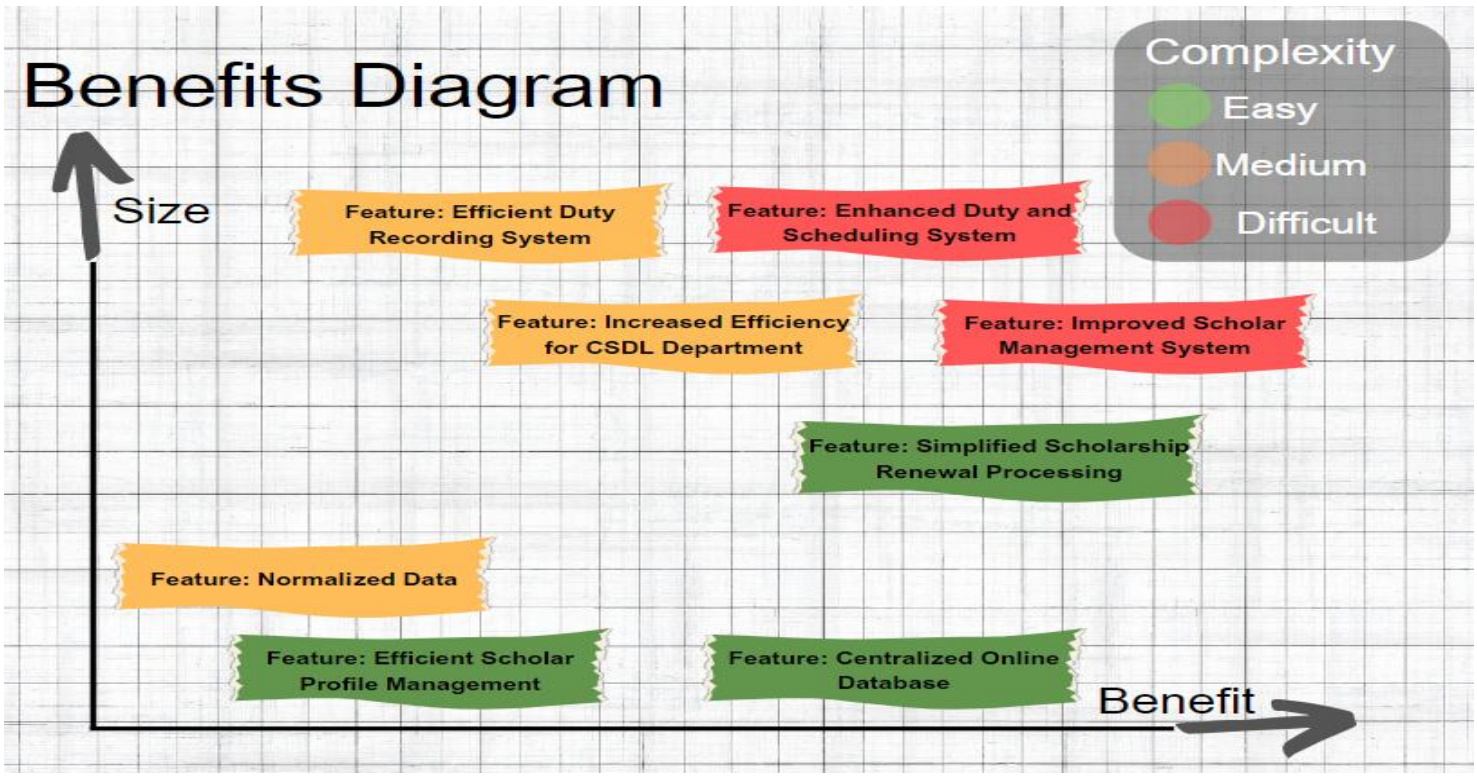

Image 6.0.1 *- The figure above shows the Benefits Diagram for NexHK which shows the proposed benefits of the web system.*