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.

Key Partners	Key Attributes	Value Pro	position	Customer Relationship	Customer Segments
 PHINMA Araullo University 	Web System's Development	Streamlined data		Training and on-boarding	 CSDL Department
CSDL Department	HK-Scholar Management	management system		for new administrators	Administrators and Staff
• Other Potential Educational	Duty & Role Management	• Diverse data a	nalytics for	Feedback collection for	PHINMA AU Professors
Institutions	Request Management	better decision r	making	system improvements	Hawak-Kamay Scholars
	Announcement	• Online scholar	ship renewal	- FE	9
	Management	process			
	Analytics Generation	• Centralized an	nouncement		
	Duty Recording System	platform			
	• 2 Phase Security System	• Efficient Duty	scheduling		
		and recording sy	ystem		
	Key Resources	Student-led Initiative		Channels	
	Student Developers			Web Portal Access for all	
	DB Management System			Users	
	Server Hosting			• Email Notifications for OTP	
	Web System Maintenance			and Requests	
	Financial Resources			In-System Notifications	
	Cost Structures Cost Structures			Revenue Stream	is .
Maintenance Cost			Subscription Fees		
Website Support and Server Hosting			Potential Funding from Institution		
 Amazon Services Cost 					
 Staff Salaries 					

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.

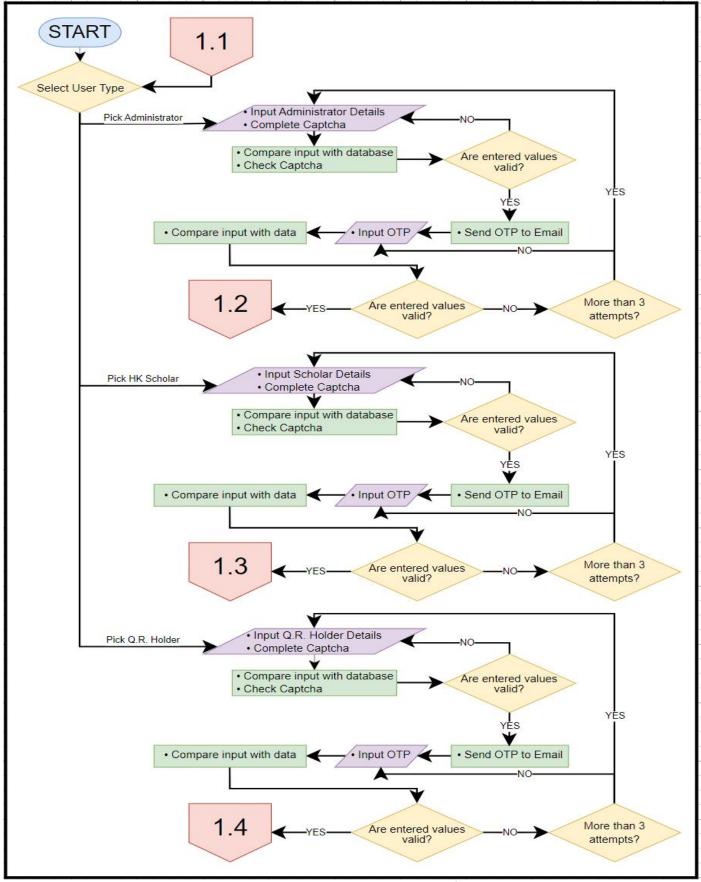


Image 2.0.1 - The image above shows the log-in structure of the web system.

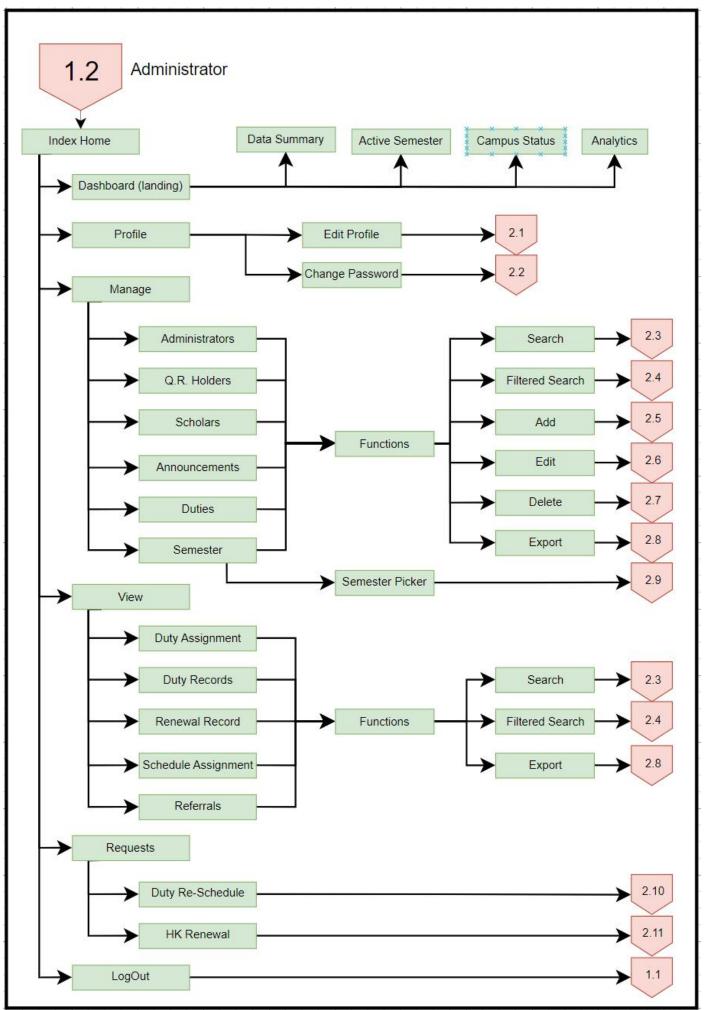


Image 2.0.2 - The image above shows the main administrator data flow

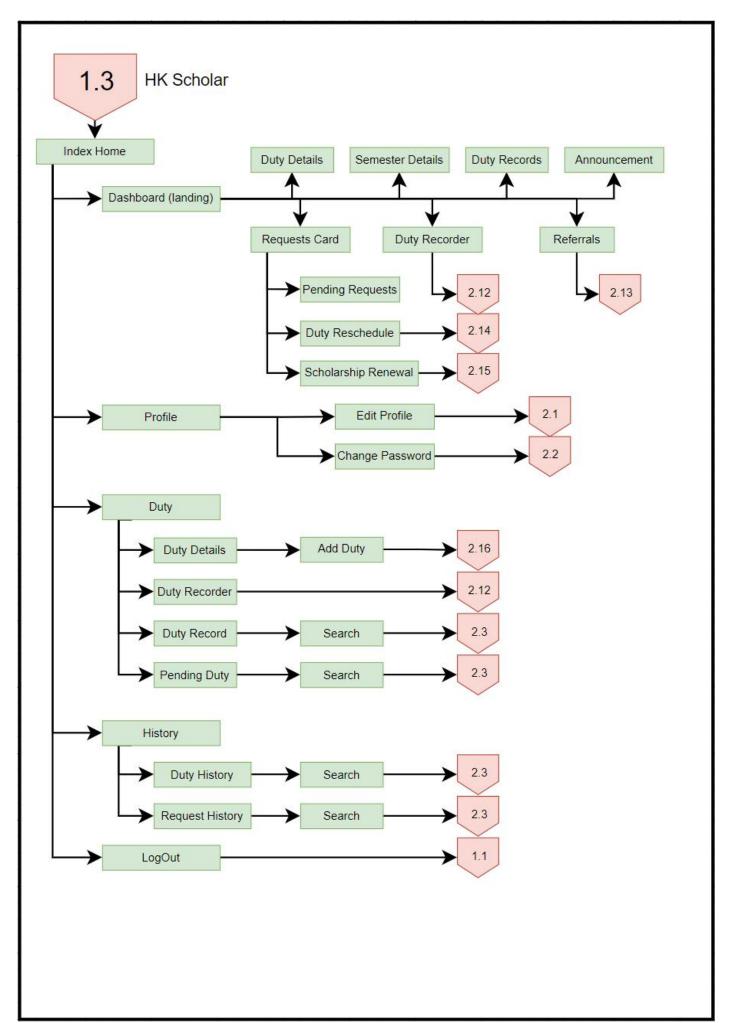


Image 2.0.3 - The image above shows the main HK Scholar data flow

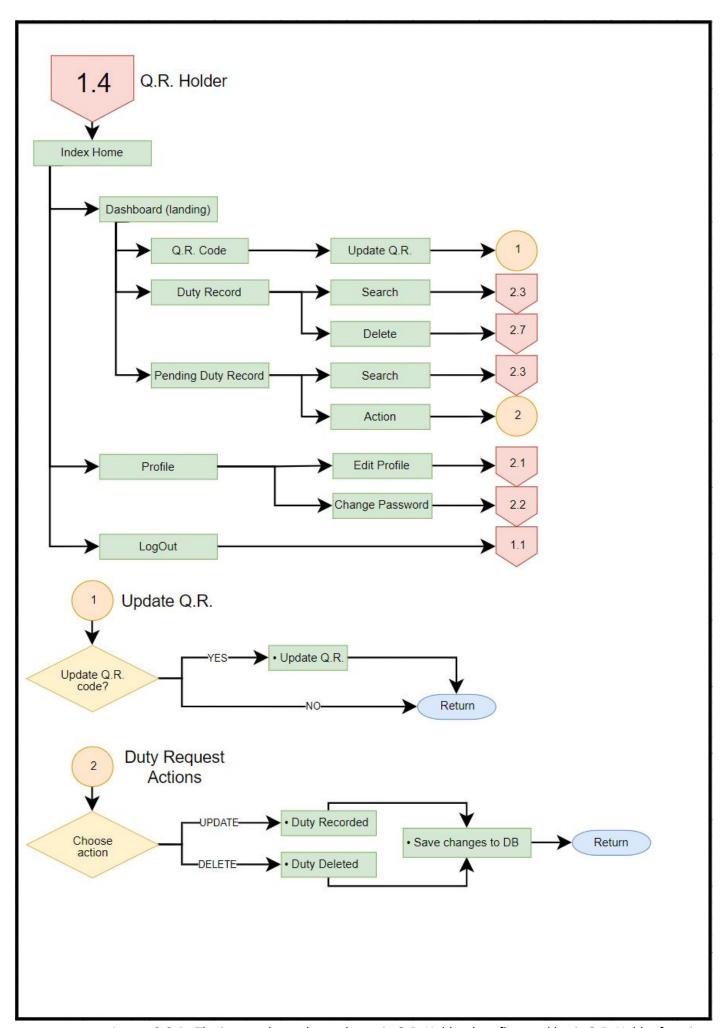


Image 2.0.4 - The image above shows the main Q.R. Holder data flow and basic Q.R. Holder functions.

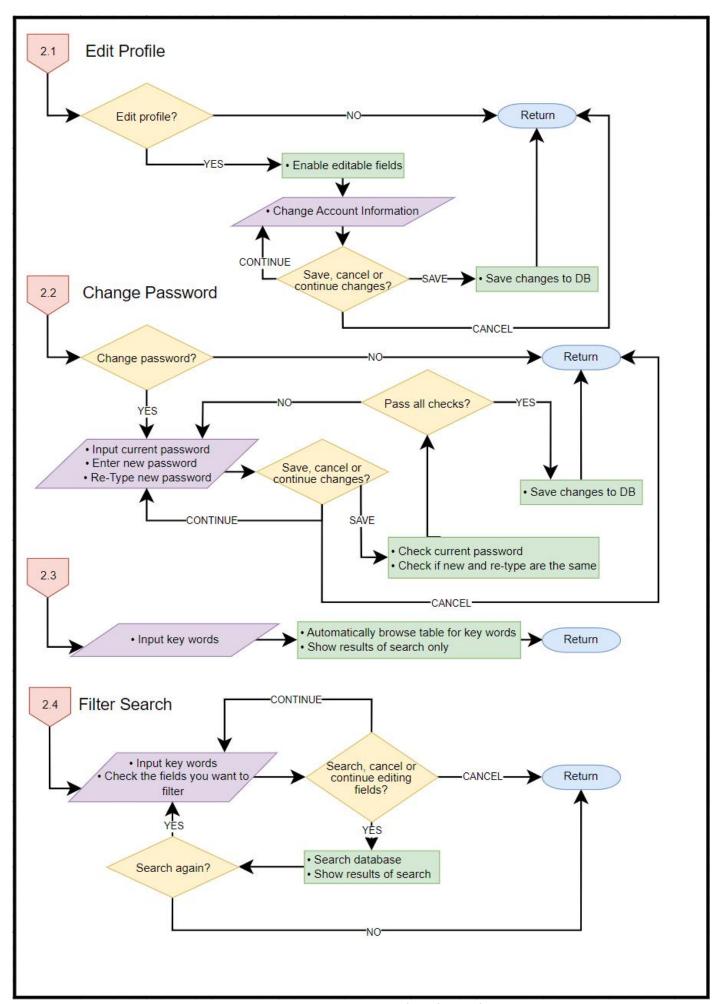


Image 2.0.5 - The image above shows the data flow for Profile edit, password change, search and filter search.

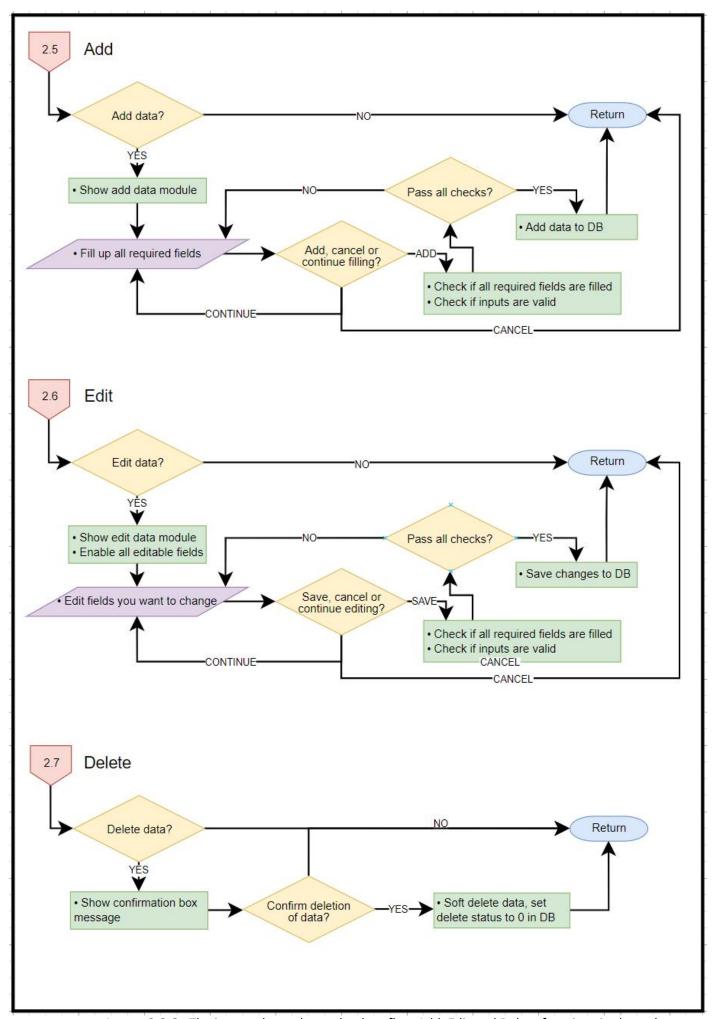


Image 2.0.6 - The image above shows the data flow Add, Edit and Delete functions in the web system.

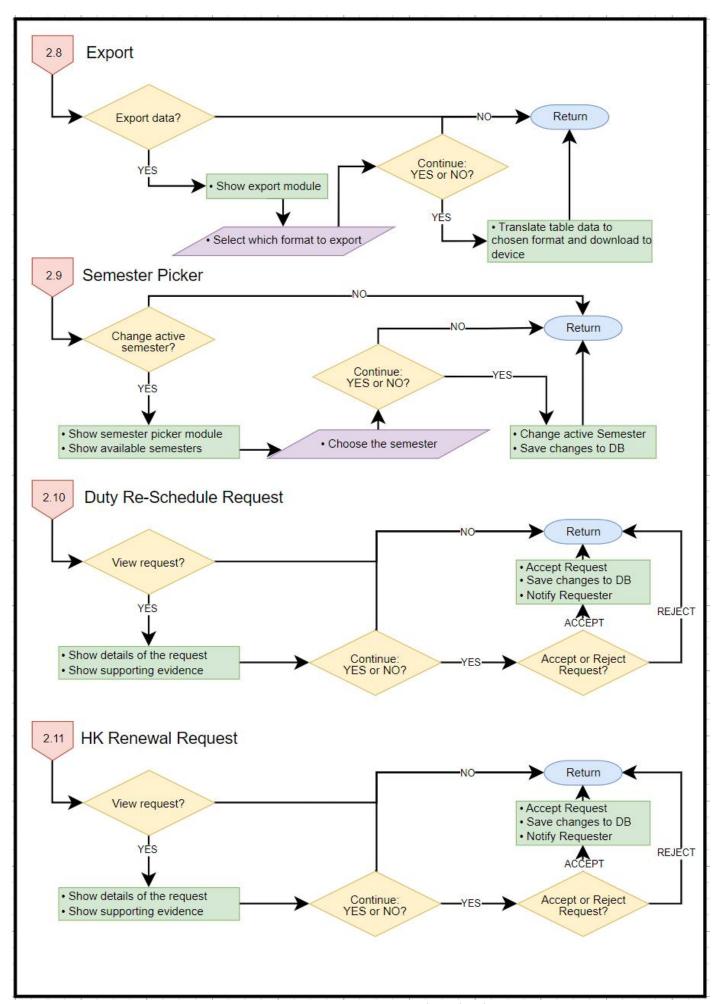


Image 2.0.7 - The image above shows the data flow for file Export, Semester Picker, Duty-Re Schedule request handler, and HK Renewal Request Handler for the administrator.

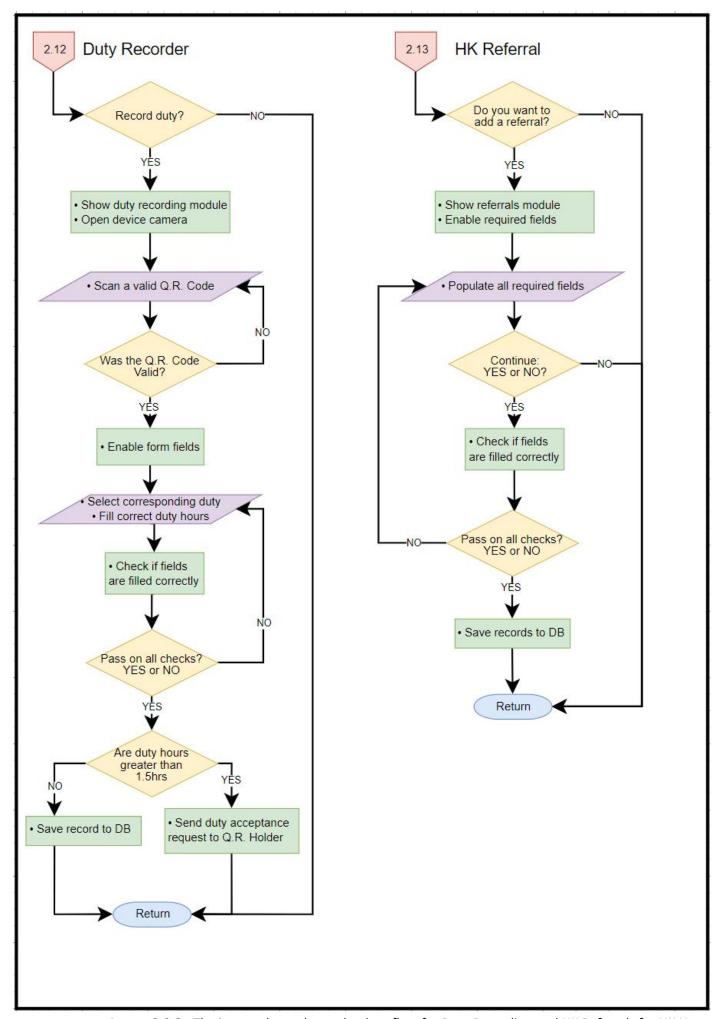


Image 2.0.8 - The image above shows the data flow for Duty Recording and HK Referrals for HK Users.

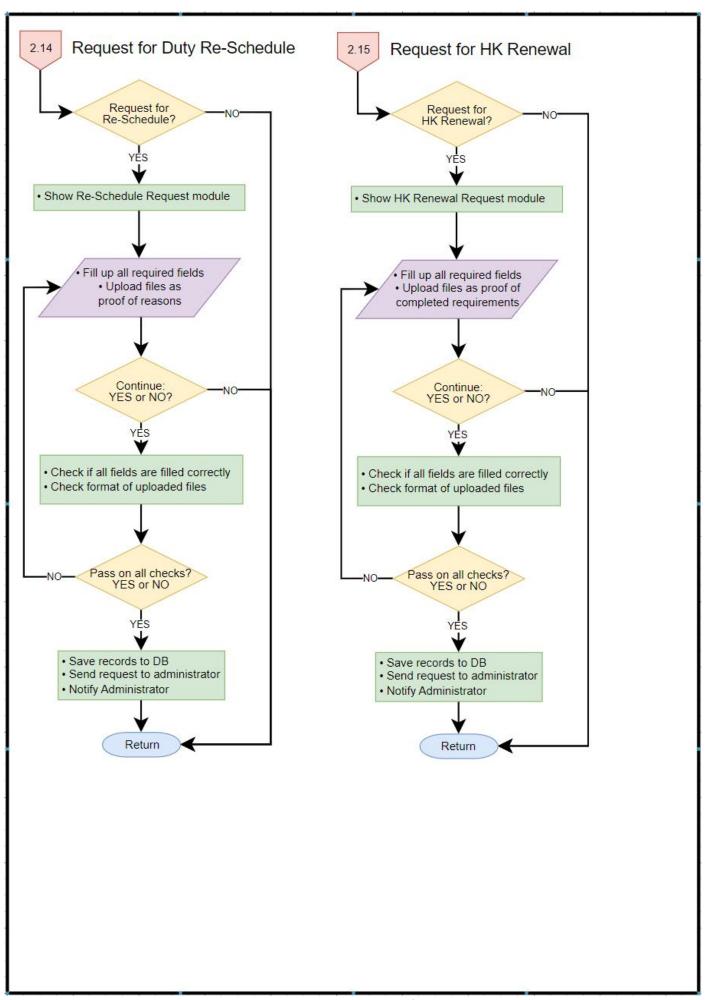


Image 2.0.9 - The image above shows the data flow requesting Duty Rescheduling and Scholar Renewal for HK Users of the web system.

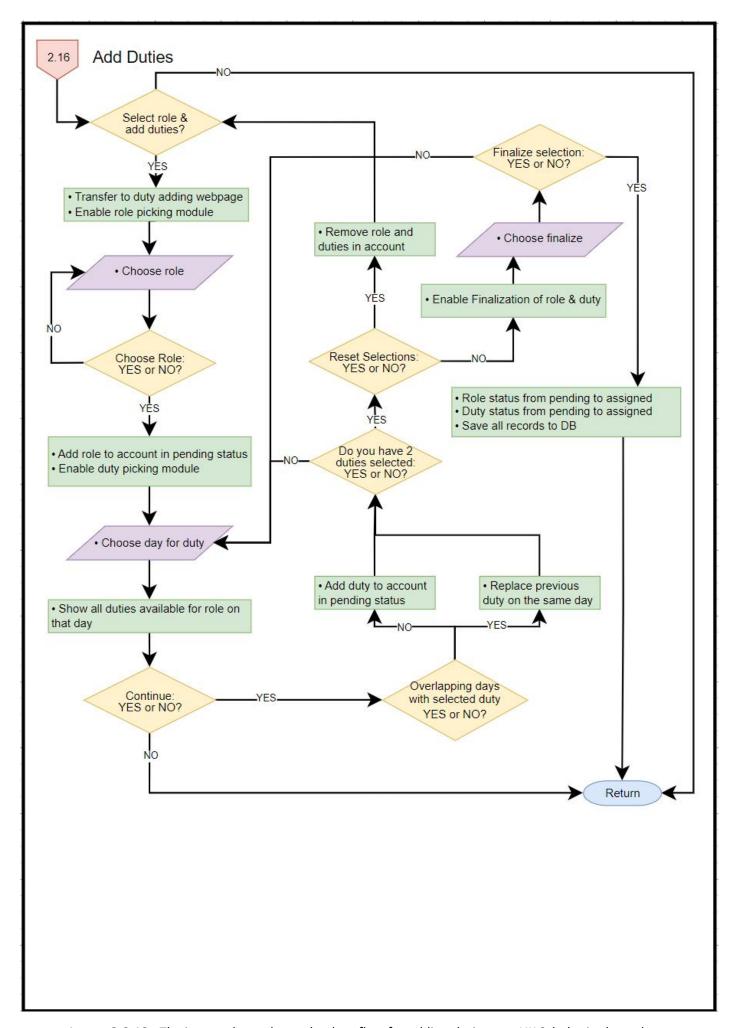


Image 2.0.10 - The image above shows the data flow for adding duties as a HK Scholar in the web system.

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.

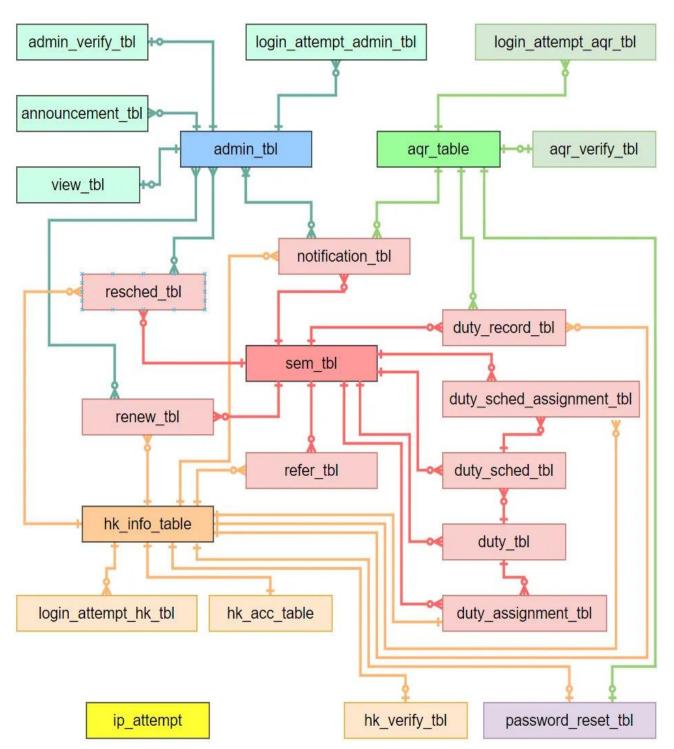


Image 3.0.1 - The figure above shows a graphical representation of the relationship of each table in the database of propose web application

admin_tbl	admin_verify	announcement_tbl	aqr_tbl	
admin_id	verify_id	ann_id	aqr_id	
admin_fname	admin_email	Title	aqr_fname	
admin_email	admin_code	Date	aqr_department	
admin_pass	exp_date	Publisher	aqr_email	
admin_status		AnnContent		
aqr_verify	duty_assignment_tbl	duty_record_tbl	duty_sched_ assignment_tbl	
aqr_verify_id	duty_assignment_id	duty_record_id	sched_assignment_id	
aqr_email	duty_id	std_id	sched_id	
aqr_code	std_id	sched_id	std_id	
exp_date	sem_ID	duty_hours	campus	
	campus	aqr_id	sem_ID	
	time_rendered	record_date	DutyDay	
		record_time	status	
		status	SlotCount	
		sem_ID		
		campus		
duty school thi	auty thi		□ bk acc tbl	
duty_scried_tbi	duty_tbi	hk_acad_info_tbl	TIK_acc_tbl	
sched_id	duty_id	std_id	std_id	
sched_day	duty_acronym	std_course	std_email	
sched_time_start	* duty_type	std_year_level	std_pass	
sched_time_end sched_time	duty_desc duty_req_hours	std_section		
sched_location	sem_ID	std_campus		
sched_subject	*	std_status		
sched_class_dep		std_en_status		
sched_class_yl		std_hk_status		
sched_slot	*	id		
sched_campus sem_ID duty_id				
login_attempt_aqr	login_attempt_hk	notification_tbl	password_reset_tbl	
id	id	notification_id	pass_reset_id	
uname	std_id	notification_title	email	
ip_add	time_count	notification_content	reset_key	
time_count		sender	key_exp_date	
		reciever		
		sender_type		
		receiver_type		
		status		
		date		
		44.0		

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

hk_info_tbl	hk_verify	ip_attempt	=login_attempt_admin	
id	hk_verify_id	id	id	
std_id	hk_email	ip	uname	
std_fname	hk_code	time_count	time_count	
std_mname	exp_date			
std_Iname				
std_email				
std_contact				
std_add				
std_bdate				
std_type_hk				
std_year_s				
refer_tbl	renew_tbl	resched_tbl	■ sem_tbl	
refer_id	renew_id	resched_id	sem_ID	
std_id	std_id	std_id	SYear	
refer_name	renew_slink	reason	STerm	
refer_lvl	renew_sdoc	document	status	
refer_sch	num_ref	request_date		
refer_num	renew_admin	Sem_ID		
refer_email	status	status		
sem_ID	request_type	sched_first		
	sem_ID	sched_sec		
	request_date	request_type		
	date_accepted	admin		
view_tbl				
view_id				
admin_id				
campus				

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

campus

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.

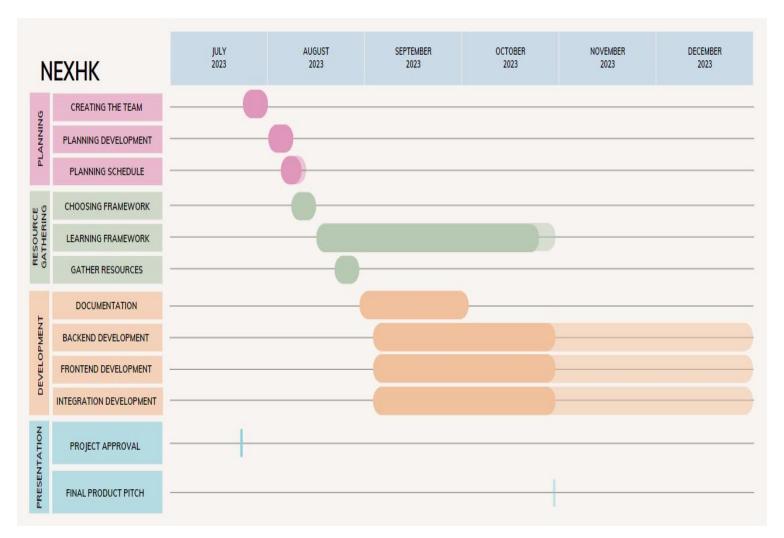


Image 4.0.1 - The figure above shows the GANTT Chart for the project NexHK showcasing the status of each segment of the study.

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.

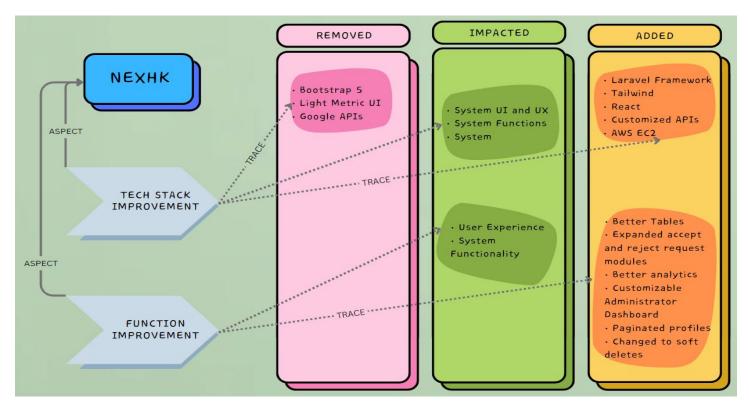


Image 5.0.1 - The figure above shows the Project Context Diagram for NexHK which shows the context of the current package.

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.

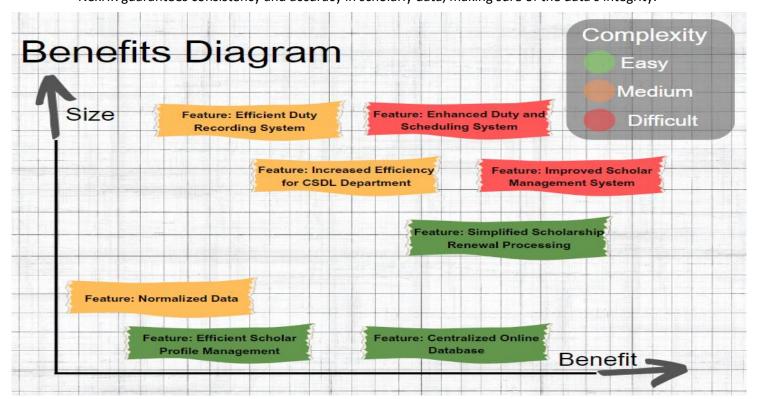


Image 6.0.1 - The figure above shows the Benefits Diagram for NexHK which shows the proposed benefits of the web system.