Security Service Management System

Assignment 2 - Project Progress Review

Sri Lanka Institute of Information Technology

IT2080 – Information Technology Project

Group ID: ITP24R_B1_W22

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Declaration

This project report is our original work, and the content is not plagiarized from any resource, References for all the content taken from external resources are correctly cited. To the best of our knowledge, this report does not contain any material published or written by third parties, expect as acknowledged in the text.

Authors:

Author SID	Author Name with Initials	Signature
IT22325228	Fernando K. K. C	
IT22907998	Sadisha R. M. M	
IT20145552	Dissanayaka D. M. S. M	
IT22257086	Randiw E. Y	
IT22293480	Jayodhya J. D. H	
IT22127082	Medawatte W. W. M. T. N. B	
IT22132628	Kusumsiri P. A. S. S	
IT22197146	Ranasinghe R. A. R. V. C	

Date: 22.09.2024

Contents

Section 01 - Progress

Table 1.1: Progress

High level user story / Function		Completion Level		Responsible Member
		Completed	Completed by Final	
User Management	User Registration	☑		IT22325228 Fernando K. K. C
	User Login	☑		
	Admin Login	☑		
	User Profile	☑		
	Filter	☑		
	Search	☑		
	Password Reset with OTP		☑	
	Generate Report		☑	
Training Management	Manage Training Course	☑		IT22907998 Sadisha R. M. M
	Search	☑		
	Generate Report		☑	
Client Management	Manage Client Inquiry	☑		IT20145552 Dissanayaka D. M. S. M
	Search	☑		
	Generate Report		☑	
Booking Management	Manage Bookings	☑		IT22257086 Randiw E. Y
	Search	☑		
	Generate Report		☑	
Payment Management	Manage Payments	☑		IT22293480 Jayodhya J. D. H
	Search	☑		
	Generate Report		☑	
Operation Management	Manage Operations	☑		IT22127082 Medawatte W. W. M. T. N. B
	Search	☑		
	Generate Report		☑	
Inventory Management	Manage Inventory	☑		IT22132628 Kusumsiri P. A. S. S
	Search	☑		
	Generate Report		☑	
Leave Management	Manage Leaves	☑		IT22197146 Ranasinghe R. A. R. V. C
	Search	☑		
	Generate Report		☑	

Repository: https://github.com/CharuniFernando/Security-Service-Management-System.git

Section 02
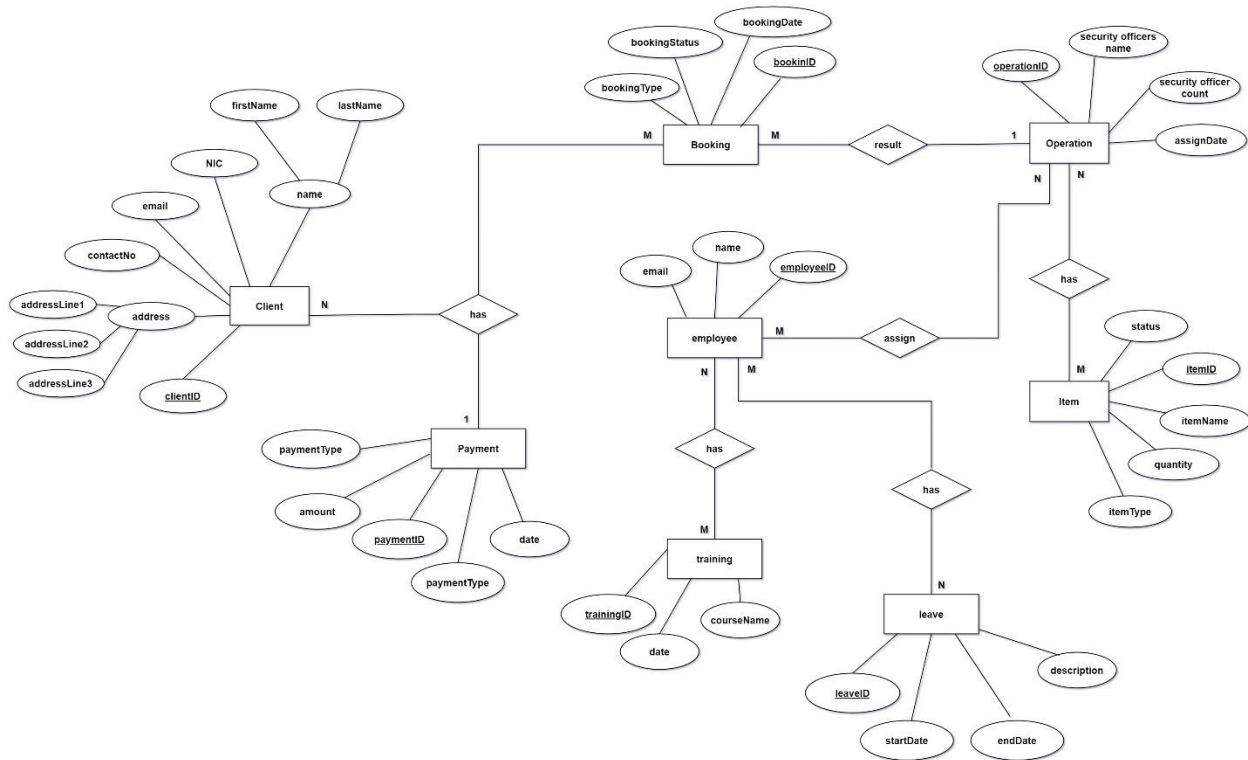
2.1. ER Diagram

Figure 2.1.1: ER Diagram

2.2. Normalized Schema

Client (clientID, first name, last name, nic, email, contactNo, address)

Payment (paymentID, paymentType, amount, date, *clientID*)

Booking (bookingID, bookingDate, bookingStatus, bookingType, *clientID*)

Employee (employeeID, name, email)

Operation (operationID, securityOfficerCount, assignDate, *bookingID*)

Item (itemID, itemName, quantity, itemType, status, *operationID*)

Training (trainingID, courseName, date, *employeeID*)

Leave (leaveID, description, startDate, endDate, *employeeID*)

2.3. Test Case Design

Table 2.3.1: Test Case Design

| Function	Test Case ID	Description	Precondition
User Management	UM01	Verify user registration	User must be on the registration page.
	UM02	Verify login functionality	Registered user exists in the database.
Training Management	TM01	Verify course creation by the manager	Manager must be logged in.
	TM02	Verify course assignment to security officers	Courses and security officers must exist in the system.
Client Management	CM01	Verify client feedback submission	Client must be logged in.
	CM02	Verify that an admin can view client inquiry	Client inquiries must exist in the system.
Booking Management	BM01	Verify booking of security officers by the client	Client must be logged in.
	BM02	Verify cancellation of booking	A booking must exist.
Payment Management	PM01	Verify invoice generation after booking completion	A completed booking exists.
	PM02	Verify payment processing for a booking	An invoice must be generated.
Operation Management	OM01	Verify assignment of security officers to a location	Security officers and a client location must exist.
	OM02	Verify notifications for assigned security officers	Security officers must be assigned to a location.
Inventory Management	IM01	Verify adding inventory items by admin	Admin must be logged in.
	IM02	Verify inventory item assignment to security officers.	Inventory items and security officers must exist.
Leave Management	LM01	Verify security officer leave application submission	Security officer must be logged in.
	LM02	Verify leave approval by the manager	A leave request must exist

2.4. High-level System Design
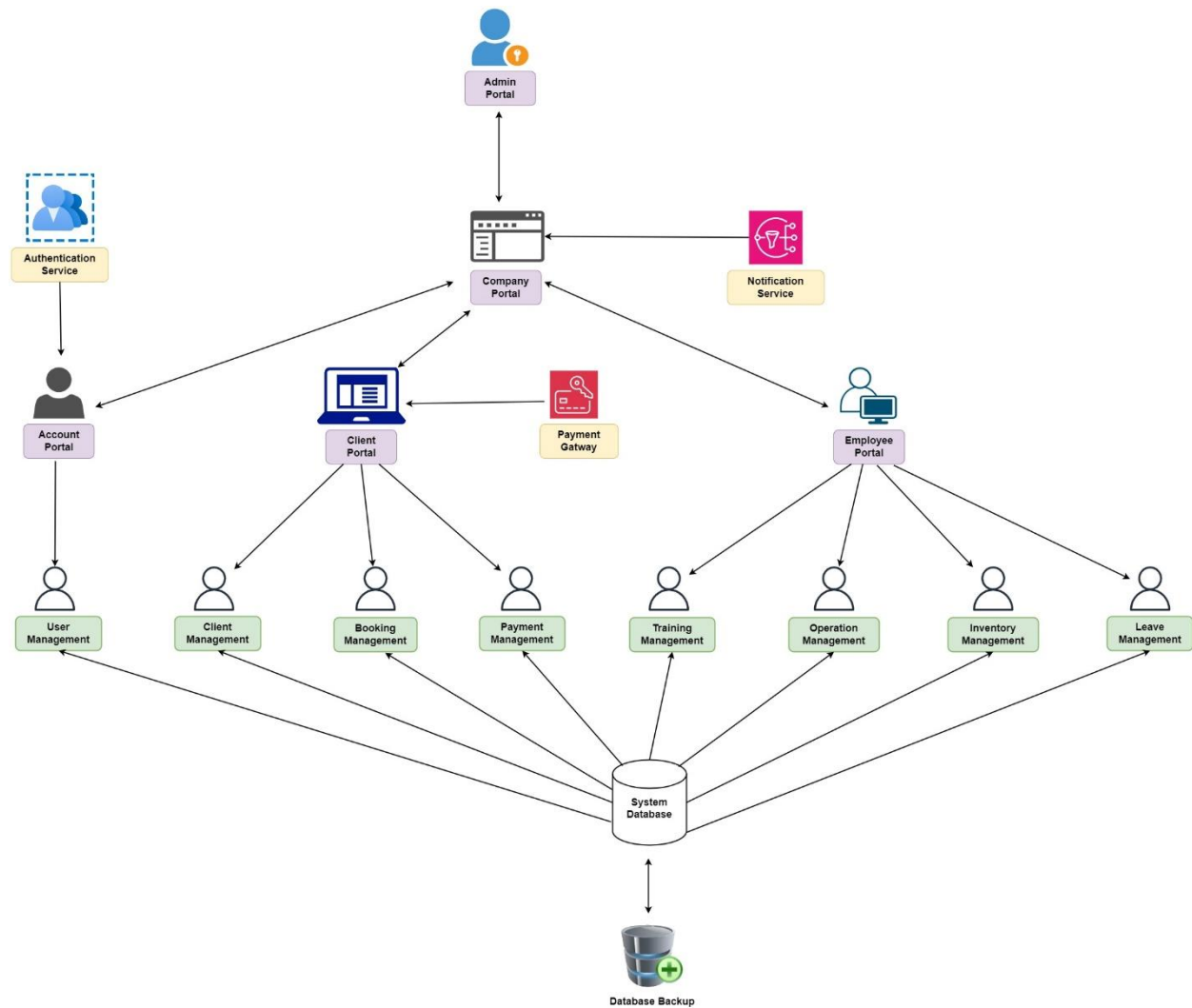
Figure 2.4.1: High-level System Design

Section 03

3.1. Module of the Group Members working

Table 3.1.1: Module of the Group Members working

Responsible Member	Module	Description
IT22325228 Fernando K. K. C	Home Page and Navigation	Home and Navigation is Completed in the web Application
	User Management	User Registration
		User Login
		Admin Login
		User Profile
		Filter
		Search
		Password Reset with OTP
		Generate Report
IT22907998 Sadisha R. M. M	Training Management	Manage Training Course
		Search
		Generate Report
IT20145552 Dissanayaka D. M. S. M	Client Management	Manage Client Inquiry
		Search
		Generate Report
IT22257086 Randiw E. Y	Booking Management	Manage Bookings
		Search
		Generate Report
IT22293480 Jayodhya J. D. H	Payment Management	Manage Payments
		Search
		Generate Report
IT22127082 Medawatte W. W. M. T. N. B	Operation Management	Manage Operations
		Search
		Generate Report
IT22132628 Kusumsiri P. A. S. S	Inventory Management	Manage Inventory
		Search
		Generate Report
IT22197146 Ranasinghe R. A. R. V. C	Leave Management	Manage Leaves
		Search
		Generate Report

3.2. Completion Level of the Features

IT22325228 – Fernando K. K. C

User Management

Completion Level: 90%

Table 3.2.1: User Management

Features	Completion Level	Description
User login and Registration	Completed	Users (clients and employees) can register and log in to the system.
Admin Login	Completed	Managers (admins) can log in but cannot register themselves. Their accounts are created and managed solely by the admin with user access control.
User Access Control	Completed	User Manager (Admin) can manage user roles and permissions.
User Profile with CRUD Operation	Completed	Users (clients and employees) can create, view, update, and delete their profiles.
Notification	Completed	Users receive notifications upon registration, login, and other system events.
Search and Filter	Completed	Search and filtering functionalities enable easy management of users and other system entities.
Password Reset with OTP	Ongoing	Basic password reset function is implemented, and the OTP mechanism is currently being developed for enhanced security.
Report Generation	Ongoing	Basic report generation is completed. But the report details are still being enhanced. Adding the company logo and further customizations are in progress.

IT22907998 – Sadisha R. M. M

Training Management

Completion Level: 90%

Table 3.2.2: Training Management

Features	Completion Level	Description
Course Management With CRUD operations	Completed	System can create, read, update and delete training courses.
Search	Completed	User can search for training courses within the system to quickly find relevant courses.
Notification	Completed	Notification is sent to users regarding course updates, new course additions.
Report Generation	Ongoing	Basic report generation for training management is functional, but enhancements to display detailed information are still in progress.

IT20145552 – Dissanayaka D. M. S. M

Client Management

Completion Level: 90%

Table 3.2.3: Client Management

Features	Completion Level	Description
Client Inquiry With CRUD Operations	Completed	Clients can submit inquiries, and the system supports creating, viewing, updating, and deleting these inquiries.
Inquiry Resolve	Completed	The Client Manager can view and resolve client inquiries, providing solutions and feedback directly through the system.
Notification	Complete	Notifications for client-related activities such as client feedback responses, and inquiry updates are fully functional.
Search	Complete	Client can search client details.
Report Generation	Ongoing	Report generation is operational, but enhancements for detailed display, including company logo, are still being worked on.

IT22257086 – Randiw E. Y

Booking Management

Completion Level: 90%

Table 3.2.4: Booking Management

Features	Completion Level	Description
Booking System With CRUD Operations	Completed	The system supports creating, reading, updating, and deleting booking records.
Notification	Complete	Notifications for booking confirmations, updates, and cancellations are functional.
Search	Complete	Client can search booking details.
Report Generation	Ongoing	Basic report generation is implemented, with additional enhancements in progress.

IT22293480 – Jayodhya J. D. H

Payment Management

Completion Level: 90%

Table 3.2.5: Payment Management

Features	Completion Level	Description
Payment System With CRUD Operations	Completed	The system supports creating, reading, updating, and deleting payment records.
Notification	Complete	Notifications for payment confirmations, updates, and reject.
Search	Complete	Client can search payment details.
Report Generation	Ongoing	Basic report generation is implemented, with additional enhancements in progress.

IT22127082 – Medawatte W. W. M. T. N. B

Operation Management

Completion Level: 90%

Table 3.2.6: Operation Management

Features	Completion Level	Description
Security Officers Assign With CRUD Operations	Completed	The system allows creating, updating, and managing security officer assignments.
Notification	Complete	Notifications for Operation adding, updates, and delete.
Search	Complete	Users can search for assigned operations.
Report Generation	Ongoing	Basic report generation is implemented, with additional enhancements in progress.

IT22132628 – Kusumsiri P. A. S. S

Inventory Management

Completion Level: 90%

Table 3.2.7: Inventory Management

Features	Completion Level	Description
Inventory Control With CRUD Operations	Completed	The system supports creating, reading, updating, and deleting inventory items.
Notification	Complete	Notifications for items adding, updates, and delete.
Search	Complete	Users can search inventory items.
Report Generation	Ongoing	Basic report generation is implemented, with additional enhancements in progress.

IT22132628 – Kusumsiri P. A. S. S

Leave Management

Completion Level: 90%

Table 3.2.8: Leave Management

| Features	Completion Level	Description
Manage Leaves With CRUD Operations	Completed	The system supports creating, read, update, and delete employee leave records.
Notification	Complete	Notifications for leave approvals, rejections.
Search	Complete	Users can search leave records.
Report Generation	Ongoing	Basic report generation is implemented, with additional enhancements in progress.

3.3. MongoDB Database
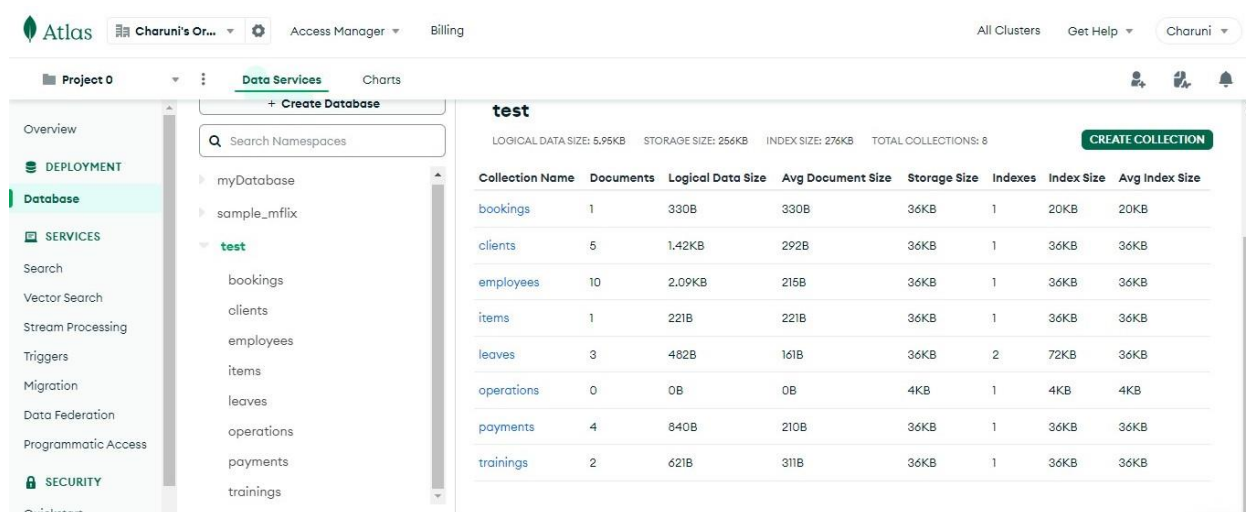
Figure 3.3.1: MongoDB Database

3.4. Algorithms

Table 3.4.1: Algorithms

Function	Algorithms	Description
User Management	Password reset Algorithm	• Request password reset • Generate OTP • Verify OTP • Reset password
Training Management	Training management Algorithm	• Create training course • Update training course • Delete training course • Enroll security officers in course
Client Management	Client inquiry management Algorithm	• Client submits inquiry • Store inquiry in the database • Notify manager • Manager responds inquiry • Update inquiry status
Booking Management	Booking management Algorithm	• Create booking request • Notify operation manager • Review booking • Modify booking • Cancel booking • Complete booking
Payment Management	Payment management Algorithm	• Generate invoice • Notify client for payment • Process payment • Update payment status • Send payment confirmation
Operation Management	Notification system Algorithm	• Define system event • For each event, identify recipients and prepare a notification • Send notification
Inventory Management	Resource allocation Algorithm	• Add new inventory item • Update inventory level • Remove inventory item • Generate inventory report
Leave Management	Leave management Algorithm	• Submit leave request • Update leave request • Notify manager • Track leave history

Section 04 - Individual Contribution

Table 4.1: Individual Contribution

Student ID	Name with Initials	Tasks
IT22325228	Fernando K. K. C	- Section 1 - Section 2 3.2 - Completion level of the features – User Management 3.3 – MongoDB Database 3.4 – Algorithms - Section 4 - Section 5
IT22907998	Sadisha R. M. M	3.2 - Completion level of the features – Training Management
IT20145552	Dissanayaka D. M. S. M	3.1 – Module of the group members working 3.2 - Completion level of the features – Client Management
IT22257086	Randiw E. Y	3.2 - Completion level of the features – Booking Management
IT22293480	Jayodhya J. D. H	3.2 - Completion level of the features – Payment Management
IT22127082	Medawatte W. W. M. T. N. B	3.2 - Completion level of the features – Operation Management
IT22132628	Kusumsiri P. A. S. S	3.2 - Completion level of the features – Inventory Management
IT22197146	Ranasinghe R. A. R. V. C	3.3 - Completion level of the features – Leave Management

Section 05 - Appendix

Table 1.1: Progress – Progress of the System

Figure 2.1.1: ER Diagram – System ER Diagram

Table 2.3.1: Test Case Design – System Test Case Design

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Table 3.1.1: Module of the Group Members working – Group members parts of the System

Table 3.2.1: User Management – Completion level

Table 3.2.2: Training Management – Completion level

Table 3.2.3: Client Management – Completion level

Table 3.2.4: Booking Management – Completion level

Table 3.2.5: Payment Management – Completion level

Table 3.2.6: Operation Management – Completion level

Table 3.2.7: Inventory Management – Completion level

Table 3.2.8: Leave Management – Completion level

Figure 3.3.1: MongoDB Database – System Database

Table 3.4.1: Algorithms – Used Algorithms for System

Table 4.1: Individual Contribution – Work Distribution for this Report