

An-Najah National University

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EliteStay

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Presented in partial fulfilment of the requirements for
Bachelor degree in Computer Engineering

Dedication

First, we thank God for the blessings and guidance that have accompanied us throughout our years of study. We dedicate this work to our beloved families, whose prayers and support have been instrumental in reaching this stage. We also dedicate this work to our valiant prisoners and martyrs, to the steadfast in the camps, and to our resilient people in Gaza.



Acknowledgement

We would like to extend our sincere thanks and appreciation to everyone who contributed to the success of our project. First, we would like to thank our families for their support. We are extremely grateful to Dr. Suleiman Abu Kharmeh for his guidance. His expertise, assistance, and support were instrumental in helping us overcome challenges and achieve our goals.



Disclaimer Statement

This project was developed by Fatima Al-Zahraa Saeedi and Lana Al-Hassan, students in the Computer Engineering Department, Faculty of Engineering, at An-Najah National University. Other than minor editorial adjustments, the content remains unchanged from its original form. As such, the report may include errors in language or content.

The views, conclusions, and recommendations presented in this document reflect the work and perspective of the authors alone. An-Najah National University bears no responsibility for any outcomes or implications resulting from the use of this project for purposes beyond its intended scope.



Abstract

EliteStay is a modern electronic platform aimed at revolutionizing the hotel reservation and exploration process while aiding in the advancement and progress of the tourism industry in Palestine. This groundbreaking platform enables users to effortlessly find and book lodging from the comfort of their homes, using an easy-to-navigate mobile app that is available to all.

EliteStay seeks to transform convenience through an easy-to-use interface that enables customers to discover a variety of hotels, access comprehensive descriptions, check amenities, compare rates, and complete bookings with a few taps. The platform not only streamlines the planning process but also enhances sustainability and encourages economic development by highlighting local hospitality enterprises and backing the domestic tourism sector.

Prioritizing accessibility and inclusivity, EliteStay guarantees that travelers of diverse backgrounds can discover accommodations suited to their preferences and financial capacities. Regardless of whether the trip is for leisure, business, or family, the platform offers a tailored experience by linking users to hotels that align with their preferences.

EliteStay serves as a crucial link between tourists and the local tourism network, enhancing community connections, supporting local enterprises, and highlighting the vibrant cultural heritage and distinct hospitality of Palestine.

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1 Chapter One: Introduction

1.1 Motivation:

EliteStay is driven by the necessity to update and simplify the hotel booking and discovery process, while also fostering the development of the tourism sector in Palestine. Even with the worldwide advancement of travel and hospitality services, the local industry frequently struggles to compete with global platforms. EliteStay seeks to close this divide by offering a groundbreaking platform that not only streamlines booking processes but also highlights the distinct features of Palestinian hospitality. By enabling local hotels and lodgings to connect with a wider audience, EliteStay promotes economic development and supports the sustainability of the local tourism industry .

1.2 Objectives :

Transform hotel booking experiences: Offer a smooth and effective platform for finding and securing lodging.

Encourage local tourism: Showcase the distinctive cultural and hospitality experiences of Palestine to visitors from both local and foreign regions.

Improve accessibility and usability: Create a mobile and web application that is easy to use and accessible to everyone.

- Foster economic growth: Enhance the local tourism industry by generating prospects for hotels and lodging to prosper.

1.3 Scope of the Work :

The aim of EliteStay involves creating a user-friendly platform that serves the needs of users and service providers alike:

- Hotel Exploration and Finding: Allow users to explore an extensive selection of places to stay with comprehensive descriptions, images, and feedback.
- Reservation System: Offer an easy method for users to book hotels with adaptable choices and immediate confirmations.
- Mobile and Web Compatibility: Make sure the platform can be accessed on different devices for ease of use.
- User Accounts: Enable users to oversee reservations, preferences, and travel records within customized profiles.
- Assistance for Local Enterprises: Provide resources for hotels to oversee listings, monitor bookings, and interact with clients.

Multilingual and Inclusive Design: Make certain the platform meets various user requirements by integrating several languages and a user-friendly interface.



2 Chapter Two: Constraints, Standards and Earlier Coursework

2.1 Constraints Limitations

1. **Technical Limitations:** Restricted by the accessibility and compatibility of technologies essential for creating a strong and scalable control panel for managing hotels. Difficulties also involve guaranteeing compatibility with the EliteStay platform and external services such as payment processors and booking APIs.
2. **Budget Limitations:** Funding constraints hinder the integration of advanced analytics, AI-driven suggestions, and other high-end functionalities during the initial development stage.
3. **Time Limitations:** Tight deadlines impacted the focus on essential features rather than advanced options, limiting the opportunity for thorough testing and ongoing improvements.

2.2 Standards

1. **Web Standards:** The control panel is created in accordance with W3C standards to guarantee compatibility across browsers, responsive design, and alignment with best practices in web development.
2. **Security Protocols:** Cutting-edge security measures such as SSL encryption, secure authentication, and role-based access control were established to protect user data and ensure system integrity.
3. **Usability Standards:** The design adheres to recognized UI/UX guidelines, emphasizing clarity, ease of use, and accessibility to cater to the varying requirements of hotel managers.



2.3 Earlier Coursework

Web Development: Essential skills in web technologies, including HTML, CSS, JavaScript, and frameworks such as React or Angular, played a key role in developing the control panel interface.

Database Management: Insights gained from database management coursework were utilized to create and enhance data models for efficiently storing hotel information, user accounts, and booking records.

Software Engineering: Concepts acquired from software engineering classes aided the project's planning, modular development, and quality assurance procedures.

Mobile Application Development: Previous experience in mobile app development guided choices to guarantee smooth integration of the control panel with the EliteStay mobile app, facilitating real-time updates and alerts.

3 Chapter Three: Literature Review

The literature review focuses on e-commerce platforms' collaboration with local businesses, assessing their impact on community and economic development. It highlights user experience design for intuitive navigation and secure, adaptable payment systems. Delivery tracking technologies and real-time communication tools are evaluated for enhancing customer satisfaction and operational efficiency. Emphasis is placed on inclusivity and diversity in digital marketplaces to support local businesses, promoting economic sustainability and broader product variety. Additionally, the review examines hotel management systems incorporating AI to meet customer needs, with a focus on user-friendly interfaces and electronic reservation systems. It stresses the importance of real-time communication for guest responsiveness and the integration of local and global hotels to enhance visitor experiences.



4 Chapter Four: Methodology

4.1 Tools, Methods and Programming Language

4.1.1 Programming Language

Frontend: JavaScript, React Native for mobile applications, and React for the admin panel.

Backend: asp.net with C# for server-side development.

Database: SQL for data storage.

4.1.2 Tools

Development Tools:

Visual Studio Code: Primary code editor for development of the admin panel.

Android Studio: Used for developing mobile applications.

Backend and Infrastructure:

Visual Studio: Utilized for building and developing the backend server.

SQL Server Management: Used for creating the database.

Collaboration and Testing:

Postman: Used for API testing throughout the development lifecycle.



4.1.3 Database

SQL: A SQL database is important for efficiently storing, retrieving, and managing large amounts of structured data.



Figure 1: diagram for database

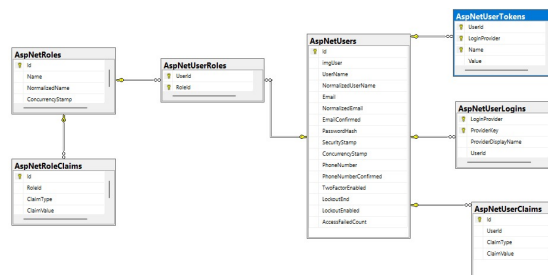


Figure 2: diagram for database uml



4.1.4 Database Collections

SQL: A SQL database is important for efficiently storing, retrieving, and managing large amounts of structured data.

AspNetRoles This table store Role for users. This for ensuring when user login processes.

AspNetTokens The AspNetTokens store token for user this use to ensure that the user token is made from the application and ensure secure user login process.

Hotels The main table in app its contain all detail about Hotel that Available in application

Rooms This table store information about rooms that available in Hotel in Mobile application.

Room Type This table contains all room type that have in hotels.

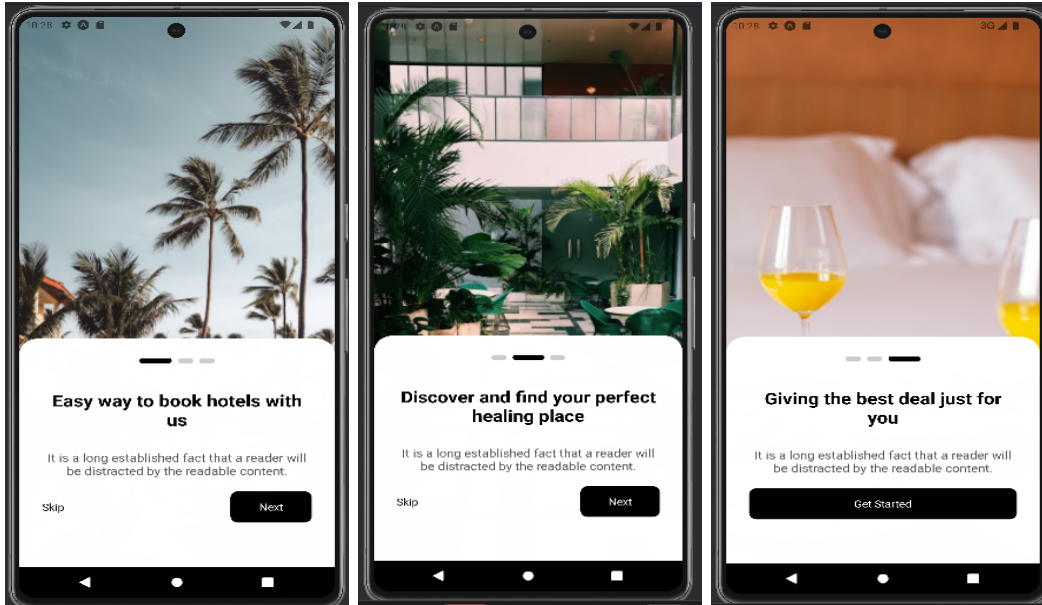
Bookings This table store information about Booking Room By user

Guests This table store user that have booking in application



4.2 System Features Implementation (Mobile Application)

4.2.1 Start Up Screen [before login user]



4.2.2 Hotel screen

The Hotel Screen display all available hotel on mobile application. Have many feature and action on this screen. Filter the display hotel by location or Tague that chosen by user.

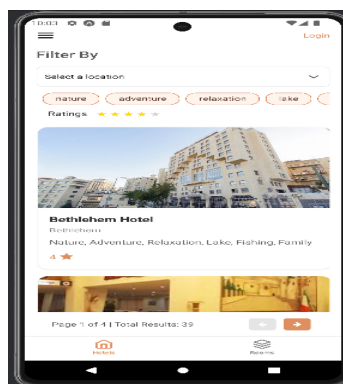
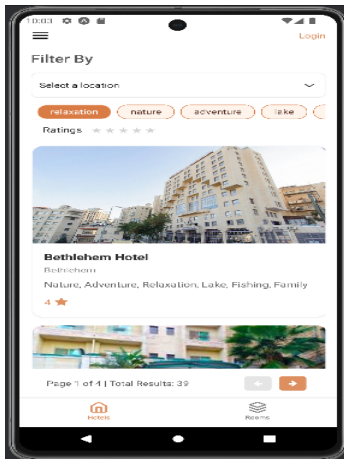
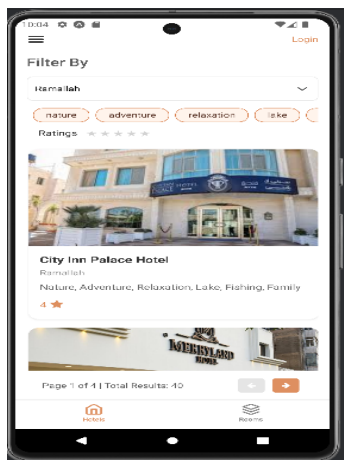


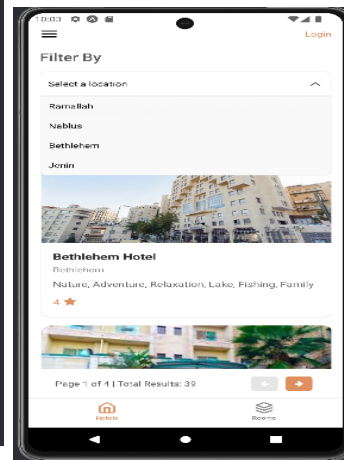
Figure 3: Hotel Screen



Filter hotel by word in tag .



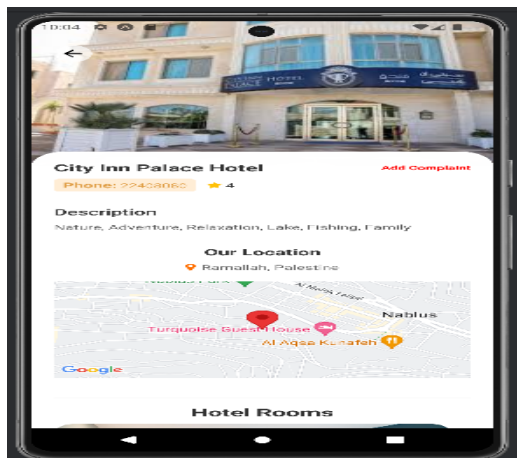
Filter hotel by location result



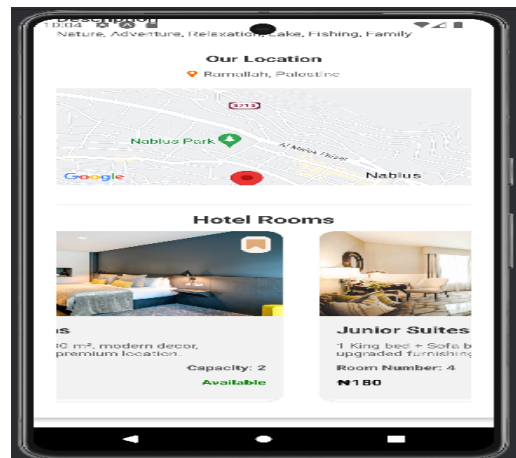
Filter hotel by location

4.2.3 profile hotel

The Hotel Profile screen allows user to view more detail about hotel like Name, image, Location, Add Complaint it available for Login user, can display all Room in this hotel



Profile Hotel 1



Profile Hotel 2



4.2.4 Profile Room

The Room Profile screen allows user to view more detail about room like Name, image, price per night Add Booking it available for Login user

4.2.5 Room Screen

The Room Screen display all available room on mobile application. Have many feature and action on this screen, Have many features and action on this screen.

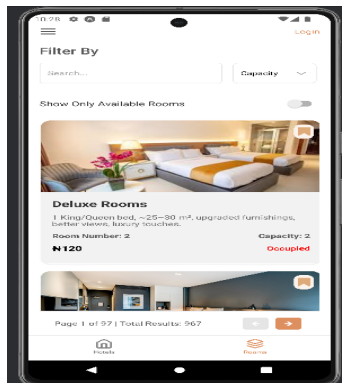


Figure 4: Room screen

Display Only Available Room

This functionality displays only the rooms that are currently available.

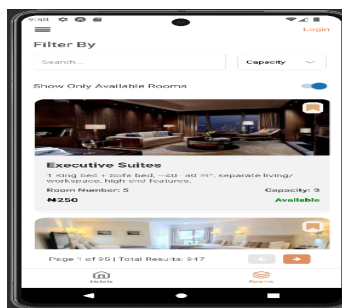


Figure 5: Display Only Available Room



Filter Room by Capacity

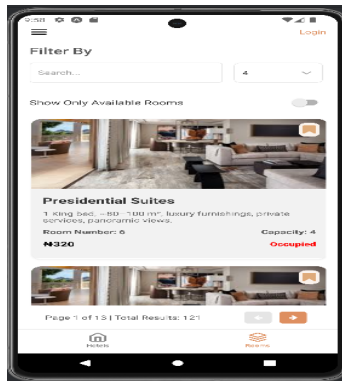


Figure 6: Filter Room by Capacity

Search on room

Can provide to search on room by string, the functionality provide recommendation type [content based] based on description room.

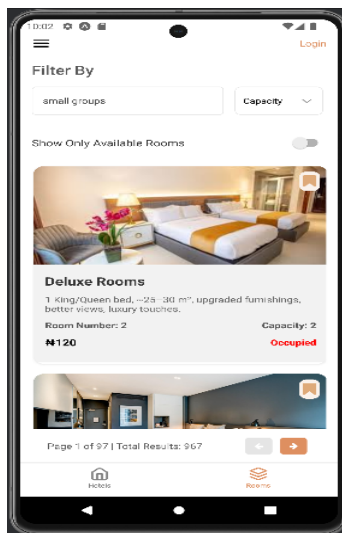


Figure 7: search on room based on description room



4.2.6 User Login

Implementation using AspNetToken for secure Login process. This ensures secure sessions user and authentication is efficiently handled.

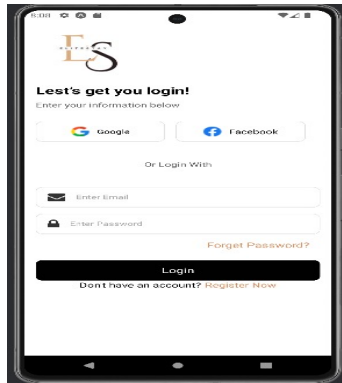


Figure 8: User Login

4.2.7 User Sign Up

The user sign-up process to recorded information about user like: Phone, Email, password, This design is developed to record the basic information to be user-friendly, with validation to ensure correct data.

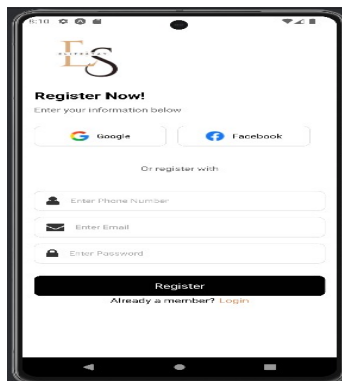


Figure 9: User Sign Up

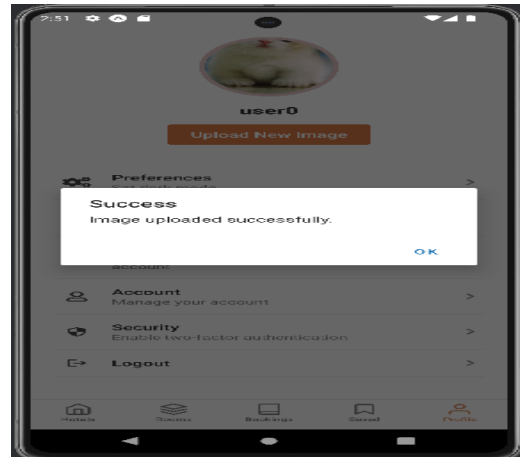


User Profile Screen

The user Profile allow user to upload image profile, and managing its account.



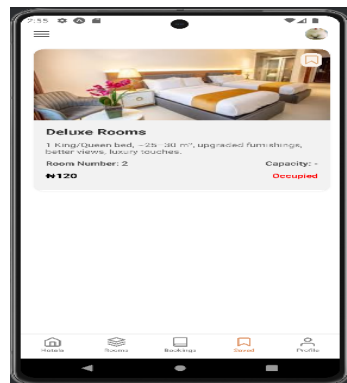
User profile



Upload new image profile

User Select a Room and Add Bookin

The user can select a room, view detailed information about the room, and add a booking from the Room Screen. This process allows the user to easily add a booking if the room status is "Available."



save room screen

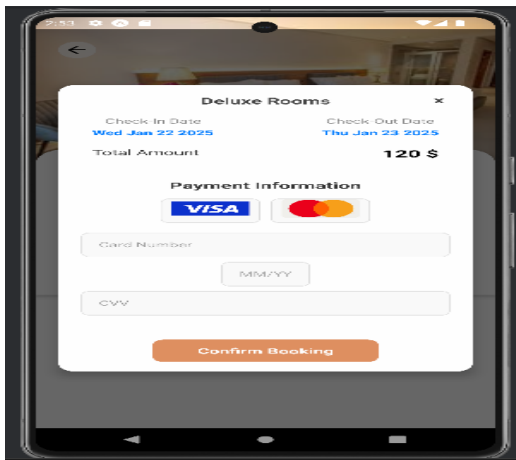


User Payment Information

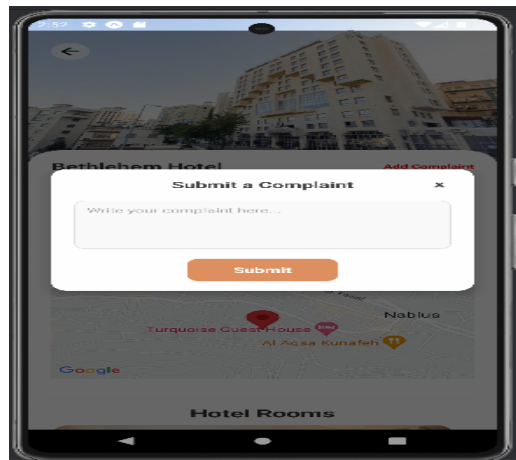
This process allows the user to add payment information for booking a room.

User Booking History

This section displays the user's past bookings. The booking history provides detailed information about the user's previous bookings.



Add Booking



Add Complaint



4.3 System Features Implementation (Web)

4.3.1 Admin Panel

Have two levels of users [Admin & Admin Hotel] in the admin panel.

Admin panel:

The admin panel provides information and data points in the mobile application, including details about users, hotels, rooms, bookings, and payments. This panel gives the admin a quick and clear display of data. The allow action section that

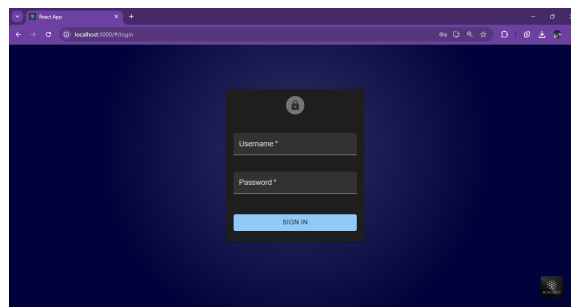


Figure 10: Admin Login

allows admin to manage and control the data

Features:

Add Hotel : this screen allows the admin to create and add Hotel in application.

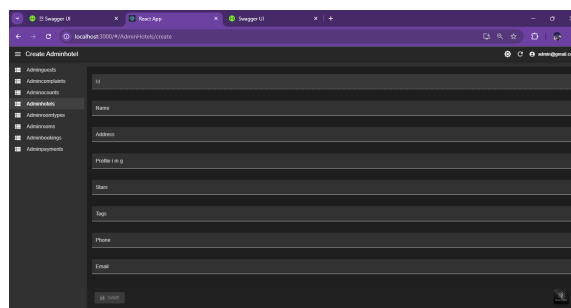


Figure 11: Add Hotel



Also: Can Edite and Delete Hotel .

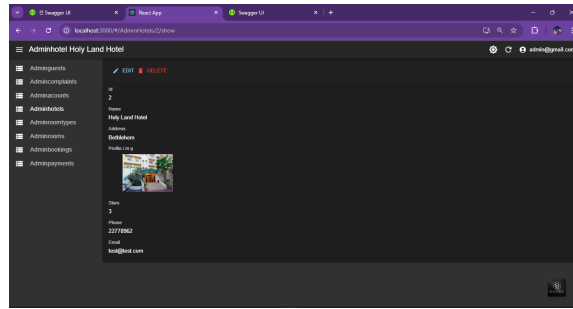


Figure 12: Edit and Delete Hotel

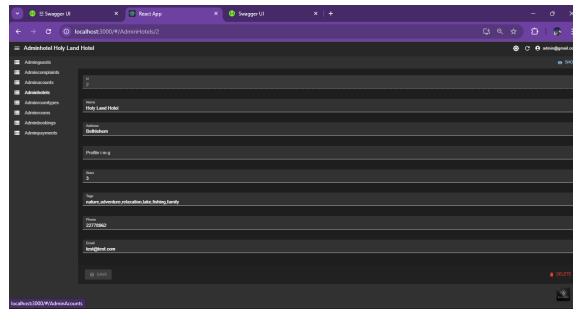


Figure 13: Edit Screen

Guest Table: Displays the total number of registered guests in the application and provides detailed information for each guest.

Id	Name	Email	Phone	Img user
1	user0	user0@gmail.com	8903004398	imageprofilexak24kz9-3c14-4161-8603-ed6b79d7f704.jpg
2	user1	user1@gmail.com	681-220-0326	
3	user2	user2@gmail.com	303-995-2081	
4	user5	user5@gmail.com	200-279-1506	
5	user4	user4@gmail.com	642-602-5813	
6	user3	user3@gmail.com	269-239-8920	
7	user6	user6@gmail.com	843-120-2659	
8	user7	user7@gmail.com	685-445-1705	
9	user8	user8@gmail.com	517-136-5079	
10	user11	user11@gmail.com	176-131-8227	

Figure 14: Guest Table



Payment Table: Displays payment information for all hotels in the application, including: - Booking ID - Hotel Name - Amount - Payment Date.

Booking ID	Hotel name	Amount	Payment Date	Status
2	Buthayeen Hotel	1,800	01/10/2024	YES
4	Al Sultan Hotel	720	01/10/2024	YES
5	Buthayeen Inn	1,200	02/10/2024	YES
6	House Of Peace	2,200	01/10/2024	YES
7	Moudh Dashed Hotel	1,200	01/10/2024	YES
8	Soukha Masha Hotel	720	01/10/2024	YES
9	Moudh Dashed Hotel	1,200	01/10/2024	YES
10	Nadiyah Babu Hotel	2,200	01/10/2024	YES
11	Nadiyah Hotel	1,200	01/10/2024	YES
12	St. Gabriel Hotel	720	01/10/2024	YES

Figure 19: Payment Table

Admin Account Table : Displays all admin and its hotel in application. Its show name hotel, name admin, and id hotel.

Username	Hotel	Hotel name
Admin001	1	Buthayeen Hotel
Admin002	2	Al Sultan Hotel
Admin003	4	Buthayeen Inn
Admin004	3	House Of Peace
Admin005	6	Moudh Dashed Hotel
Admin006	7	Plowden Hotel
Admin007	8	Soukha Masha Hotel
Admin008	9	Moudh Dashed Hotel
Admin009	10	Nadiyah Babu Hotel
Admin010	11	Nadiyah Hotel
Admin011	12	Stephane House Hotel
Admin012	13	St. Gabriel Hotel
Admin013	14	St. Gabriel Hotel
Admin014	15	St. Michael Hotel
Admin015	16	Stephane House Hotel
Admin016	17	Plowden Hotel
Admin017	18	Stephane House Hotel
Admin018	19	House Of Peace Hotel
Admin019	20	Moudh Dashed Hotel
Admin020	21	House Of Peace Hotel
Admin021	22	Al Sultan Hotel

Figure 20: Admin and id for Hotel



4.3.2 Admin Hotel panel

The admin Hotel panel provide information and data point in mobile application, including information about it hotel like user, hotels, room, booking, payment. This panel give the admin Hotel a quick and clear understanding display data.

This screen includes the following features:

Guest Table: display the total number of registered guests in it hotel on application, And display information for each guest. .

Id	Name	Email	Phone	img user
1	user0	user0@gmail.com	803304358	images/profiles/ea245a29-3a14-4161-8a62-ea8b7946754.jpg
2	user1	user1@gmail.com	881-229-9326	
12	user9	user9@gmail.com	620-670-8756	
15	user14	user14@gmail.com	241-837-9235	
18	test	test@gmail.com	020654896	images/profiles/c40006539-5d7f4-438c-b0ab-7a8d5d005198.jpg
20	user119	user119@gmail.com	230-484-6182	images/profiles/8a5d5d013-7586-488c-8216-8a645327895d.jpg
21	user34	user34@gmail.com	937-444-3713	images/profiles/615c5aa7-78bc-4704-8a4f-6725b78794a.jpg

Figure 21: Guest Table

Complaint table : display the Complaint from guest for each hotel.

Id	Name user	img user	hotel name	Email user	Content	Created At
1	user0	images/profiles/ea245a29-3a14-4161-8a62-ea8b7946754.jpg	test@gmail.com	test@gmail.com	The room was not clean upon arrival.	1/20/2020
2	test	images/profiles/c40006539-5d7f4-438c-b0ab-7a8d5d005198.jpg	test@gmail.com	test@gmail.com	The air conditioning was not working.	1/20/2020
3	user16	images/profiles/c40006539-5d7f4-438c-b0ab-7a8d5d005198.jpg	user16@gmail.com	user16@gmail.com	The noise from the construction next door was unbearable.	1/20/2020

Figure 22: admin hotel complaint



Add Room Table: this screen allows the admin to create and add room in its hotel.

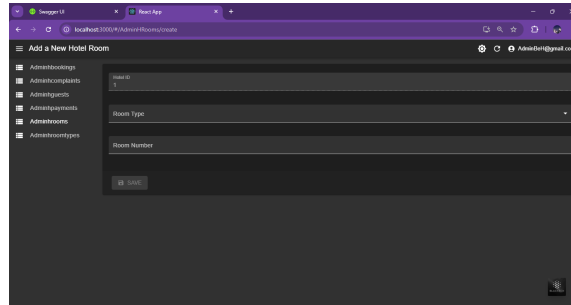


Figure 23: Add Room

Also, Can Edite and Delete Room in its hotel.

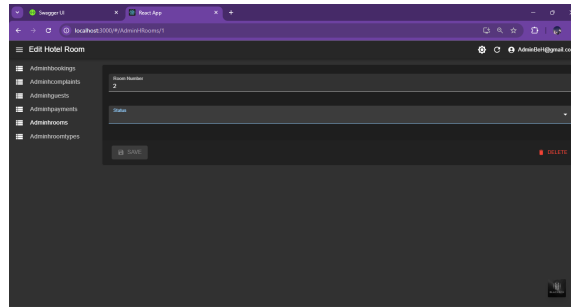


Figure 24: Edit and Delete Room

Add Room Type : This screen allows the admin to create and add room types in their hotel.

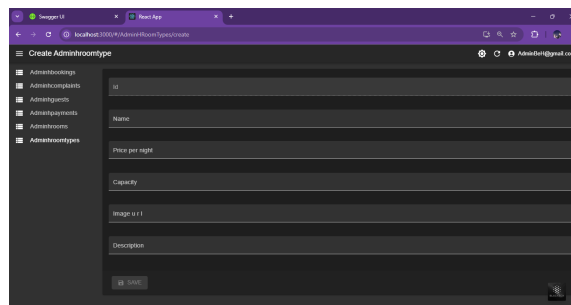


Figure 25: Add Room Type



Also, the admin can edit and delete room types in their hotel.

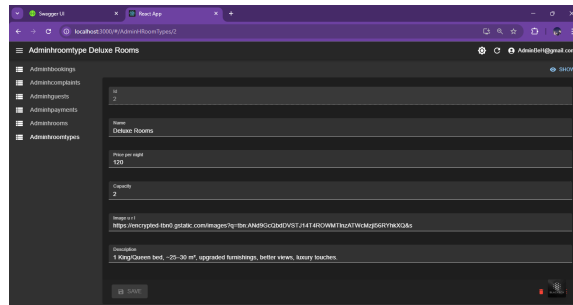


Figure 26: Edit Room Type

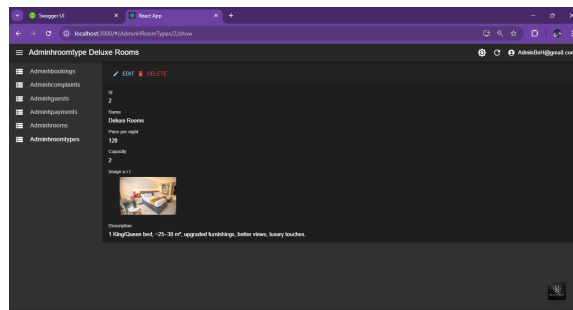


Figure 27: Edit or Delete Room Type



Room Type Table: Displays information for all room types in the hotel in the application. The table shows:

- Name of Hotel
- Price per Night
- Image URL
- Capacity
- Description

ID	Name	Room Name	Price per night	Capacity	Description
1	Deluxe Room	Deluxe Room	100	2	1 King/Queen bed, 25-30 sq ft, hardwood floors, full bath, room service.
2	Deluxe Room	Deluxe Room	100	2	1 King/Queen bed, 25-30 sq ft, hardwood floors, full bath, room service.
3	Super Room	Super Room	140	2	1 King/Queen bed, 30 sq ft, extra wide, wood floors, premium linens.
4	Junior Suite	Junior Suite	100	2	1 King bed + sofa bed, 35-40 sq ft, wood, upgrade linens.
5	Executive Suite	Executive Suite	200	2	1 King bed + sofa bed, 45-50 sq ft, wood, upgrade linens, full bath.
6	Presidential Suite	Presidential Suite	300	4	1 King bed, 60-80 sq ft, luxury wood, upgrade linens, full bath.
7	Family Room	Family Room	150	4	2 Queen beds or 1 Queen + 1 King bed, 35-40 sq ft, family friendly bed.
8	Triple Room	Triple Room	100	3	3 Single beds or 1 Double + 1 Single, 30 sq ft, suitable for small groups.

Figure 28: Room Type Table

Booking Table: show details for users booking in it hotels like : - Guest Name - Hotel Name - Room Name - Image URL.

ID	Guest Name	Guest Email	Room Name	Room	Check In	Check Out	Rate	Total Price
1	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
2	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
3	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
4	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
5	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
6	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
7	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
8	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
9	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
10	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
11	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100
12	user	user	Deluxe Room	Room	1/1/2024	1/1/2024	100	100

Figure 29: Booking Table



Payment Table: : show the information for all payment for it hotel in app, display : - Booking ID - Hotel Name - Amount - Payment Date.

The screenshot shows a web browser displaying a table of payment records. The table has the following columns: Booking ID, Hotel name, Amount, Payment date, and Status date. The data is as follows:

Booking ID	Hotel name	Amount	Payment date	Status date
2	Subham Hotel	1200	01/02/2024	Yes
30	Subham Hotel	90	01/02/2024	Yes
31	Subham Hotel	450	01/02/2024	Yes
194	Subham Hotel	200	01/02/2024	Yes
276	Subham Hotel	150	01/02/2024	Yes
304	Subham Hotel	150	01/02/2024	Yes
330	Subham Hotel	150	01/02/2024	Yes
345	Subham Hotel	150	01/02/2024	Yes
351	Subham Hotel	150	01/02/2024	Yes
303	Subham Hotel	200	01/02/2024	Yes

Figure 30: Payment Table



5 Chapter Five: Results and Discussion

The creation of **EliteStay** has resulted in a user-friendly platform that integrates local hospitality businesses into the contemporary tourism framework. The platform has effectively improved the travel planning and hotel booking experience by providing a variety of accommodation options and promoting the development of the local tourism industry.

Important aspects such as detailed hotel descriptions, amenities comparisons, and clear pricing have greatly enhanced customers' decision-making processes. The intuitive interface has made it easier to reach a variety of users, while the smooth operation of the mobile app has simplified the booking process.

The integration of different payment methods has served different user preferences, enhancing the convenience and efficiency of transactions. In addition, **EliteStay**'s ability to connect travelers with nearby hotels has enhanced community engagement, showcased cultural heritage, and strengthened the local tourism framework.

The admin dashboard has proven effective in streamlining hotel management tasks, allowing hotels to efficiently handle reservations, review information, and interact directly with guests. This feature has enhanced operational efficiency and increased customer satisfaction.

Ultimately, **EliteStay** has succeeded in establishing itself as a leading resource for promoting tourism in Palestine by combining innovation, accessibility, and assistance to local businesses.

6 Chapter Six: Conclusion

6.1 Summary

EliteStay is a revolutionary digital platform designed to enhance hotel reservations and boost Palestine's tourism sector. Its user-friendly mobile app enables seamless accommodation searches, comparisons, and bookings. The platform promotes sustainability by showcasing local hospitality, supports economic growth, and fosters inclusivity, ensuring diverse travelers find suitable lodging while connecting with local enterprises and experiencing Palestine's rich culture.



6.2 Future Work

Enhance offerings:

Integrate additional services such as car rentals, organized tours, and regional activities to provide users with a comprehensive travel option.

AI-driven recommendations:

Use advanced AI algorithms to provide personalized recommendations for hotels and activities based on individual preferences, search patterns, and previous bookings.

Multi-language support:

Increase the platform's reach by offering support for different languages to serve a wider audience, including visitors from abroad.

Sustainability aspects:

Emphasize eco-friendly accommodations and promote sustainable travel by partnering with hotels that implement eco-friendly methods.



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