

# Misr International University

## Faculty of Computer Science

Software Engineering Department

# Tourism System

### Team Members

Name & ID	Assigned Tasks	Status
<b>Sara Yasser (2021/00416)</b>	Interview Problem Description Event Table Use Case Diagram Gantt Chart Implementation Documentation	Done
<b>Sara Mostafa (2021/10262)</b>	Interview Functional and Non-functional Requirements DFD Use Case Description Sequence Diagram Implementation Documentation	Done
<b>Mariam Mahmoud (2021/10440)</b>	Interview CRUD Analysis Activity Diagram Decision Tree ER Diagram Implementation Class Diagram Documentation	Done
<b>Jana Ibrahim (2021/10443)</b>	Interview Context diagram Structured English State Machine Diagram Implementation Documentation	Done

**Supervised By:**

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Eng. Maha Sayed**

**2023/2024 (Spring2024)**

**Acknowledgments:**

First of all, we would like to express our gratitude and appreciation for our supervisor, Dr. Sahar Abdelrahman for her professional guidance and insightful advices.

Also we must all thank our. instructor Eng. Maha for her continuous assistance and support.

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# **ABSTRACT**

This documentation outlines the development of the tourism system. The platform aims to enhance tourists' experience of enjoying their trip and connect tourists with hidden gems offered by local businesses. Tourists can easily view hidden gems and historical places; they can also book hidden gems and book their transportation through the web application. In addition to that, it markets the hidden gems. Administrators oversee platform operations to ensure security and transaction success. The document details user requirements, including registration, authentication, service browsing, and bookings. Non-functional requirements address performance, security, usability, and scalability. Legal and compliance requirements include data protection regulations and terms of service. This documentation guides stakeholders, providing a comprehensive overview of the platform's features and constraints. It directs developers to create a secure, efficient, and user-friendly tourism platform for local business owners and tourists.

# PROJECT PLAN

The Gantt chart provides a comprehensive view of the project's schedule, including the start and end dates for each activity, dependencies between tasks, and critical milestones.

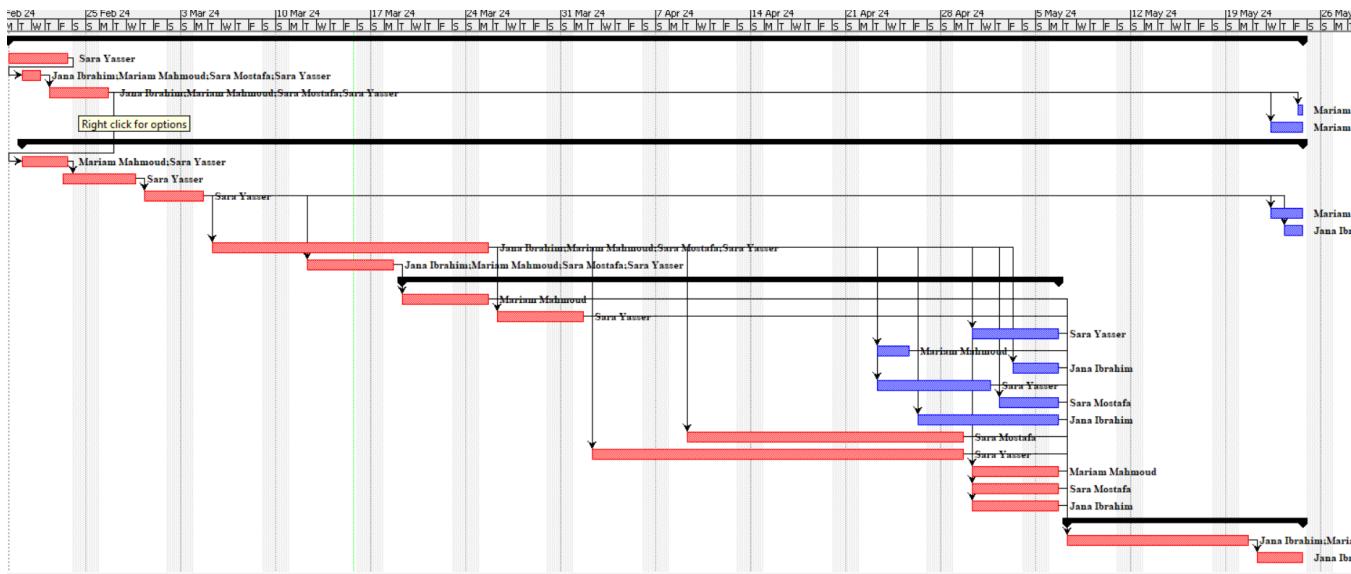


Figure 1: Gantt Chart

Name	Duration	Start	Finish	Predecessors	Resource Names
Planning and requirement	70 days	2/19/24 8:00 AM	5/24/24 5:00 PM		
Project Initiation	5 days	2/19/24 8:00 AM	2/23/24 5:00 PM		Sara Yasser
Conduct Interviews	2 days	2/20/24 8:00 AM	2/21/24 5:00 PM	2	Jana Ibrahim;Mariam Mahm...
Requirement Specification	3 days	2/22/24 8:00 AM	2/26/24 5:00 PM	3	Jana Ibrahim;Mariam Mahm...
Problem Description	1 day	5/24/24 8:00 AM	5/24/24 5:00 PM	4	Mariam Mahmoud;Sara Yasser
Develop Gantt Chart	3 days	5/22/24 8:00 AM	5/24/24 5:00 PM	4	Mariam Mahmoud;Sara Most...
Design	69 days	2/20/24 8:00 AM	5/24/24 5:00 PM		
Create Event Table	4 days	2/20/24 8:00 AM	2/23/24 5:00 PM	4	Mariam Mahmoud;Sara Yasser
Develop Use case Diagram	4 days	2/23/24 8:00 AM	2/28/24 5:00 PM	8	Sara Yasser
Develop Activity Diagram	3 days	2/29/24 8:00 AM	3/4/24 5:00 PM	9	Sara Yasser
Develop Sequential Diagram	3 days	5/22/24 8:00 AM	5/24/24 5:00 PM	10	Mariam Mahmoud
Develop State Machine Dia	2 days	5/23/24 8:00 AM	5/24/24 5:00 PM	10	Jana Ibrahim;Sara Mostafa
User Interface Design	15 days	3/5/24 8:00 AM	3/25/24 5:00 PM	10	Jana Ibrahim;Mariam Mahm...
Database Design	5 days	3/12/24 8:00 AM	3/18/24 5:00 PM	10	Jana Ibrahim;Mariam Mahm...
Development	35 days	3/19/24 8:00 AM	5/6/24 5:00 PM		
Database Implementation	5 days	3/19/24 8:00 AM	3/25/24 5:00 PM	14	Mariam Mahmoud
Develop User Authentication	5 days	3/26/24 8:00 AM	4/1/24 5:00 PM	16;13	Sara Yasser
Develop User Profile Manag	5 days	4/30/24 8:00 AM	5/6/24 5:00 PM	16;17;13	Sara Yasser
Develop Map Integration M	3 days	4/23/24 8:00 AM	4/25/24 5:00 PM	13	Mariam Mahmoud
Develop Tourist Registratio	2 days	5/3/24 8:00 AM	5/6/24 5:00 PM	16;13	Jana Ibrahim
Develop Tourist Booking Mo	7 days	4/23/24 8:00 AM	5/1/24 5:00 PM	16;17;13	Sara Yasser
Develop Tourist Payment M	3 days	5/2/24 8:00 AM	5/6/24 5:00 PM	21;13	Sara Mostafa
Develop Tourist Search Mo	7 days	4/26/24 8:00 AM	5/6/24 5:00 PM	19;13	Jana Ibrahim
Develop Local Business Ow	15 days	4/9/24 8:00 AM	4/29/24 5:00 PM	16;17;13	Sara Mostafa
Develop Admin Management	20 days	4/2/24 8:00 AM	4/29/24 5:00 PM	17;16;13	Sara Yasser
Develop Hidden Gems Mana	5 days	4/30/24 8:00 AM	5/6/24 5:00 PM	16;24;13	Mariam Mahmoud
Develop Historical Places M	5 days	4/30/24 8:00 AM	5/6/24 5:00 PM	25;16;13	Sara Mostafa
Develop Transportation Ma	5 days	4/30/24 8:00 AM	5/6/24 5:00 PM	25;16;13	Jana Ibrahim
Testing And Production	14 days	5/7/24 8:00 AM	5/24/24 5:00 PM		
Verify and Test	10 days	5/7/24 8:00 AM	5/20/24 5:00 PM	28;19;17;21;22;24;23;26;2...	Jana Ibrahim;Mariam Mahm...
Deployment	4 days	5/21/24 8:00 AM	5/24/24 5:00 PM	30	Jana Ibrahim;Mariam Mahm...

## **SYSTEM REQUIREMENTS**

### **1.1 SYSTEM SCOPE:**

The Hidden Gem Tourism System aims to unveil lesser-known destinations to a global audience. This digital platform will facilitate the discovery, exploration, and reservation of experiences at these hidden locations, promoting tourism diversification and supporting local economies.

## 1.2 BUSINESS OBJECTIVES:

Our project covers a wide scope designed to implement computerized system for the following Requirements:

### 1. Functional Requirements

- i. Authentication
  - The system shall provide secure login functionality with user authentication (email and password).
- ii. User Profile Management
  - Users should have profiles where they can manage their information
- iii. Role-Based Access Control:
  - The system shall provide different user roles (tourist, local business owner, admin, accommodation providers) access to specific functionalities based on their permissions.
- iv. Navigation and Maps
  - The system shall offer map integration for directions to the selected places.
- v. Tourists
  - The system shall allow tourists to:
    1. Register for an account with basic information like name, email, and password. (T01)
    2. Login into the account with username and password. (T02)
    3. Book reservations for transportation. (T03)
    4. Cancel reservations for transportation. (T04)
    5. Book reservations for hidden gems. (T05)
    6. Cancel reservations for hidden gems. (T06)
    7. Pay deposit for their reservations. (T07)
    8. View location for the places. (T08)
    9. Search for hidden gems and historical places based on a specific location. (T09)
    10. View their bookings. (T10)
    11. View historical places. (T11)
    12. View hidden gems. (T12)
- vi. Local Business Owners
  - The system shall allow local business owners to:
    1. Add Hidden Gem Details. (B01)
    2. View Hidden Gem Details. (B02)
    3. Edit Hidden Gem Details. (B03)
    4. Delete Hidden Gem Details. (B04)

5. View tourists' bookings for hidden gems. (B05)
6. View Business Owner Profile. (B06)
7. Edit Business Owner Profile. (B07)
8. Delete Business Owner Profile. (B08)

vii. Admin

- The system shall allow admins to:
  1. Add local business owners. (A01)
  2. View local business owners. (A02)
  3. delete local business owners. (A03)
  4. Add the historical places. (A04)
  5. View the historical places. (A05)
  6. Edit the historical places. (A06)
  7. Delete the historical places. (A07)
  8. Add transportation details. (A08)
  9. View transportation details. (A09)
  10. Edit transportation details. (A10)
  11. Delete transportation details. (A11)
  12. View tourists' information. (A12)
  13. View tourists' bookings. (A13)
  14. View hidden gems. (A14)
  15. View Admin Profile. (A15)
  16. Edit Admin Profile. (A16)
  17. Delete Admin Profile. (A17)

## 2. Nonfunctional Requirements

i. Usability

- The user interface should be intuitive and easy to navigate for users with different levels of technical skills.

ii. Reliability

- The system shall be operational and available for use 24/7, with an uptime of 99.9%

iii. Performance

- The platform should ensure fast loading times for web pages and search results under normal load conditions.

iv. Security

- The system shall enforce strong password policies, secure user authentication mechanisms and implement encryption for the data.

v. Maintainability

- The system code should be well-documented to facilitate future maintenance and modifications

# 1.3 FACTS FINDING

## 1.3.1 Interviews

### Interview Agenda

Discussion and Interview Agenda																							
<b>Setting</b>																							
Objective of Interview <i>Understanding client needs</i>																							
Date, Time, and Location <i>February 23, 2024, 9 a.m., at their company</i>																							
User Participants <i>The company's CEO and marketing director</i>																							
Project Team Participants <i>Jana Ibrahim, Mariam Mahmoud, Sara Mostafa and Sara Yasser</i>																							
<b>Interview Questions/Discussions</b>																							
<ol style="list-style-type: none"><li>1. What problem are you trying to solve with this software system?</li><li>2. What are the key objectives we're trying to achieve?</li><li>3. What are the essential features and functionalities the system must have?</li><li>4. What are your expectations regarding the user interface of the software?</li><li>5. Do you have a preferred timeline for development and deployment?</li><li>6. What are your expectations for our communication and collaboration?</li><li>7. Is the project scope well-defined or likely to change?</li><li>8. How comfortable are you with adapting plans and responding to changes during a project?</li></ol>																							
<b>Follow-Up</b>																							
Important Decisions <i>Deadline: maximum of 2 months</i> <i>Project Scope: likely to change, flexible(Agile)</i>																							
Open Items List																							
<table border="1"><thead><tr><th>Issue Title</th><th>Date Identified</th><th>Target end date</th><th>Responsible project person</th><th>User Contact</th><th>Comments</th></tr></thead><tbody><tr><td>Market analysis report</td><td>23-2-2024</td><td>23-5-2024</td><td>Marketing Director</td><td>Marketing Director</td><td>Pending market analysis report</td></tr><tr><td>budget proposals</td><td>23-2-2024</td><td>23-3-2024</td><td>Finance Manager.</td><td>Finance Manager.</td><td>budget approval.</td></tr></tbody></table>						Issue Title	Date Identified	Target end date	Responsible project person	User Contact	Comments	Market analysis report	23-2-2024	23-5-2024	Marketing Director	Marketing Director	Pending market analysis report	budget proposals	23-2-2024	23-3-2024	Finance Manager.	Finance Manager.	budget approval.
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budget proposals	23-2-2024	23-3-2024	Finance Manager.	Finance Manager.	budget approval.																		
Date and Time of the next meeting <i>March 1, 2024, 9 a.m.</i>																							

**Figure 2: Interview Agenda**

## **Interview Summary:**

The interview session commenced at 9 a.m., with each participant introducing themselves and detailing their involvement with the Hidden Gem Tourism System project. The discussion was primarily aimed at identifying the critical objectives, addressing the system's potential to unveil lesser-known destinations. The dialogue revolved around several focal areas:

Identifying user needs and system objectives

Essential features and functionalities required for the system

Expectations regarding the user interface design

Discussion of timelines, collaboration methods, and adaptability to project changes

The meeting concluded, summarizing the main points discussed and outlining the next steps. These include the preparation of a detailed project scope and continuing the iterative design and feedback process as per the agile methodology agreed upon.

## 1.3.2 Problems of the Current System

The current landscape for exploring lesser-known destinations often requires solo adventurers to rely on multiple disparate sources for information, which presents several challenges that the Hidden Gem Tourism System aims to resolve.

### Limited Awareness of Hidden Gems:

- **Problem:** Many potential destinations remain unknown to travelers due to lack of visibility and promotion, causing these spots to miss out on tourism benefits.
- **Solution:** The Hidden Gem Tourism System highlights these lesser-known destinations through a user-friendly interface that features in-depth profiles, including historical information, cultural significance, and visitor testimonials to boost awareness and attract visitors.

### Difficulty in Accessing Local Services:

- **Problem:** Tourists in lesser-known areas struggle to find reliable and quality local services like dining, accommodation, or guided tours.
- **Solution:** We partner with local businesses to vet and list services directly on our platform, offering users reliable options and supporting local economies.

### Lack of Real-Time Information:

- **Problem:** Travelers to less-known destinations often encounter outdated information about local attractions, and transport services, which can disrupt their travel plans.
- **Solution:** The Hidden Gem Tourism System integrates dynamic updates, allowing business owners to provide real-time information on their services, and any changes, ensuring that the information travelers receive is current and reliable.

### Barrier to Local Business Engagement:

- **Problem:** Local businesses in lesser-known areas often struggle with digital presence and marketing, limiting their visibility to potential tourists.
- **Solution:** We offer an onboarding tool for local businesses to create and manage their profile.

### **1.3.3 Forms & Reports of the Current System**

#### **Current forms:**

User registration form:

Fields: full name, user name, phone number, email, password, confirm password

Purpose: to collect user details for creating a new account on the travel platform.

User login form:

Fields: email, password

Purpose: to authenticate users and grant access to the platform.

Hidden gem booking form:

Fields: day, time, number of people

Purpose: to collect necessary details for booking hidden gem.

#### **Current reports:**

Users report:

Contents: list of registered users and their bookings.

Purpose: to monitor user engagement.

Booking report:

Contents: details of all bookings made for hidden gems and transportation through the platform, including user information.

Purpose: to track bookings and manage reservations effectively.

Local business owner report:

Contents: details of all local business owners registered in the system.

Purpose: to manage their account.

## **1.4 DEVELOPMENT PROCESS**

We decided to apply the Waterfall development technique because it provides a structured and sequential approach to project management, allowing for clear definition of each phase and ensuring that each stage is completed before the next one begins. This method offers several key advantages:

### **1. Clear Phases and Milestones:**

- The Waterfall model divides the project into distinct phases: requirements, design, implementation, testing, deployment, and maintenance.
- Each phase has specific deliverables and milestones, making it easier to track progress and ensure all aspects of the project are addressed systematically.

### **2. Thorough Documentation:**

- Detailed documentation is a cornerstone of the Waterfall approach. Each phase generates comprehensive documents that serve as a reference for the entire project lifecycle.

### **3. Predictable Timelines and Budgets:**

- With clearly defined phases and deliverables, the Waterfall model allows for accurate estimation of timelines and budgets at the outset of the project.
- This predictability helps in managing stakeholder expectations and securing necessary resources in advance, reducing the risk of budget overruns and delays.

### **4. Early Detection of Issues:**

- By completing each phase fully before moving on to the next, the Waterfall approach allows for early detection and resolution of issues within each phase.

### **5. Well-Defined Roles and Responsibilities:**

- The Waterfall model promotes a clear assignment of roles and responsibilities, ensuring that each team member knows their tasks and deliverables at each phase.
- This clarity enhances coordination and collaboration among team members, leading to more efficient project execution.

### **6. Ease of Management and Control:**

- Project managers benefit from the linear structure of the Waterfall model, which simplifies project planning, scheduling, and control.

- Progress can be measured against the planned timeline and milestones, making it easier to identify deviations and take corrective actions.

## 7. Comprehensive Testing and Quality Assurance:

- The dedicated testing phase ensures that the final product is thoroughly tested against the initial requirements before deployment.
- This systematic approach to testing enhances the overall quality and reliability of the final product.

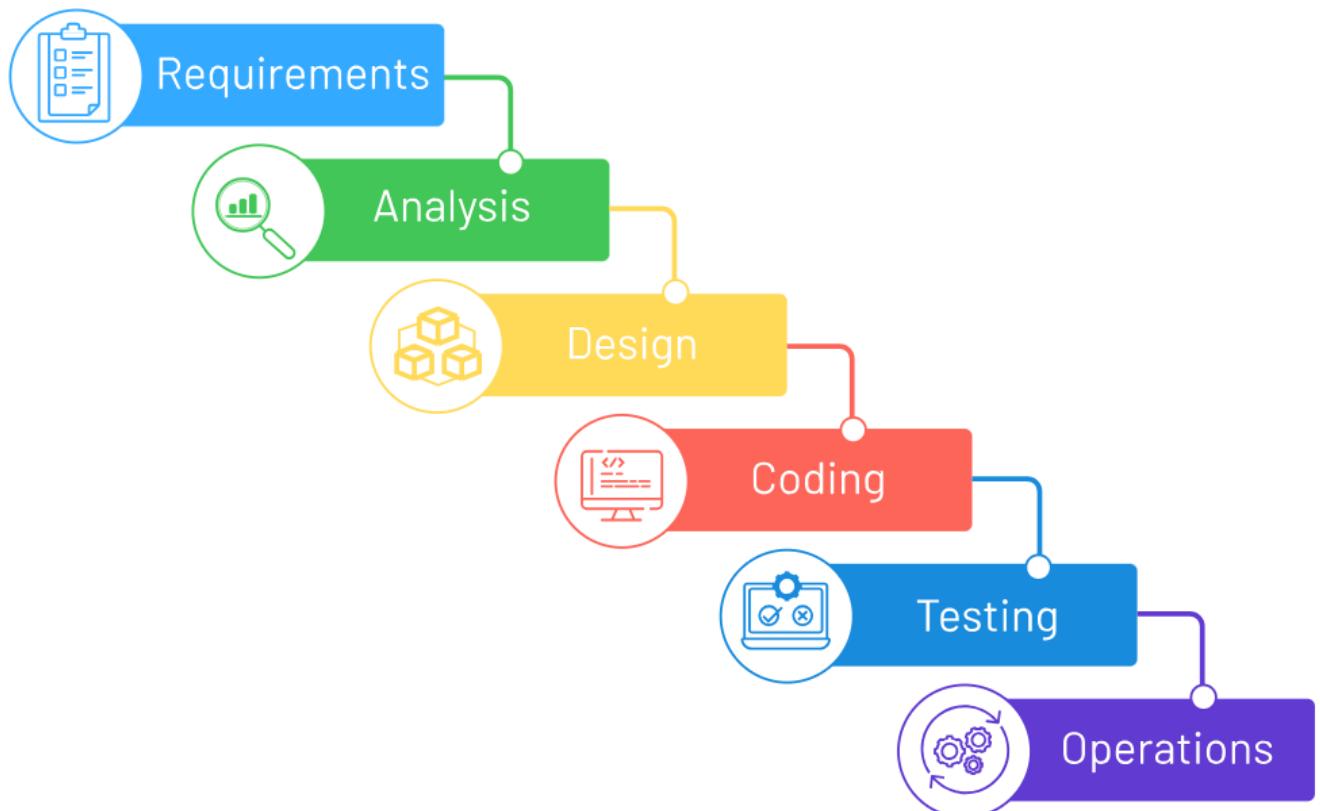


Figure 3- Waterfall Model

## SYSTEM ANALYSIS

### 2.1 USED METHODOLOGY:

We decided to use the object-oriented approach because it allows us to model our system in a more intuitive and scalable way. By encapsulating data and behavior within objects, this approach promotes several key advantages:

#### 1. Code Reusability:

- Objects and classes can be reused across different parts of the application or even in different projects, reducing redundancy and development time.

#### 2. Maintainability:

- Object-oriented programming (OOP) makes the code easier to maintain and modify. Since the data and functions are bundled into objects, changes in one part of the system can be made with minimal impact on others..

#### 3. Flexibility and Scalability:

- OOP supports inheritance, which allows new classes to inherit properties and methods from existing ones, promoting code reuse and logical hierarchy.
- Polymorphism enables objects to be treated as instances of their parent class rather than their actual class, allowing for flexible and interchangeable code.

#### 4. Encapsulation:

- Encapsulation hides the internal state of objects and only exposes a controlled interface, protecting the integrity of the data and preventing unintended interference.
- This allows us to expose only the necessary components of an object while keeping the rest private, leading to a more secure and robust application.

## **5. Improved Collaboration and Communication:**

- OOP facilitates a clear modular structure, making it easier for team members to collaborate. Each team member can work on different objects or classes independently, leading to better parallel development.
- With a well-defined class structure, it becomes easier to understand and communicate the design and functionality of the system among team members

## 2.2 ANALYSIS MODELS

Event Table

Tourism System Event Table					
Event	Trigger	Source	Use Case	Response	Destination
Tourist books a hidden gem	Booking request	Tourist	Book a hidden gem	Booking request sent to local business owner  Redirect the tourist to payment process	Local business owner  Tourist
Local business owner adds their offerings	Offering submission	Local business owner	Add hidden gem offerings	Offering is added and a confirmation message is sent to the local business owner	Local business owner
Local business owner edits their offerings	Offering modification request	Local business owner	Edit hidden gem offering information	The offering information is updated	Local business owner
Local business owner deletes their offerings	Deletion offering request	Local business owner	Delete hidden gem offering information	The offering information is deleted	Local business owner
Tourist searches for a hidden gem	Searching request	Tourist	Search a hidden gem	List of hidden gem details is displayed	Tourist
Views a hidden gem details	More details request	Tourist or Admin or local business owner	View hidden gems details	Detailed information about the selected hidden gem is displayed	Tourist or Admin or local business owner
View a historical place details	More details request	Tourist or Admin	View historical places	Detailed information about the selected historical place is displayed	Tourist or Admin
Tourist views a hidden gem location	Navigation directions request	Tourist	View a hidden gem location	Navigation directions to the selected hidden gem is provided	Tourist
Tourist views a transportation details	Transportation details request	Tourist	View transportation details	Detailed information about the selected transportation option	Tourist
Admin views tourist details	Tourist details request	Admin	View tourist details	A list of tourist details is displayed	Admin
Tourist books a transportation	Booking request	Tourist	Book a transportation	Booking request sent to admin  Confirmation or rejection sent to tourist.	Admin  Tourist

Tourist cancels reservation	Canceling an existing reservation	Tourist	Cancel reservation	Cancelation is sent to the admin or local business owner  Confirmation message is sent to the tourist	Admin or Local business owner  Tourist
Tourists pays a deposit	Deposit payment request	Tourist	Pays deposit	Deposit is successfully transacted and the booking is confirmed to the local business owner  Tourist receives a booking confirmation message and is redirected to his booking details	Local business owner  Tourist
View tourists booking details	Booking details request	Local business owner or Admin	View booking details	A list is displayed showcasing relevant booking details	Local business owner or Admin
Admin adds local business owner	Local business owner details addition request	Admin	Add local business owner	Local business owner is added	Admin
Admin adds historical places information	Historical places information addition request	Admin	Add historical places information	Historical places information is added	Admin
Admin edits historical places information	Details modification request	Admin	Edit historical places information	The historical place information is updated	Admin
Admin deletes historical places information	Deletion request	Admin	Delete historical places information	A list of the current historical places information is displayed to the admin	Admin
Admin deletes local business owner	Deletion request	Admin	Delete local business owner	The local business owner account is permanently deleted  A list of the current business owners is displayed to the admin	Local business owner  Admin

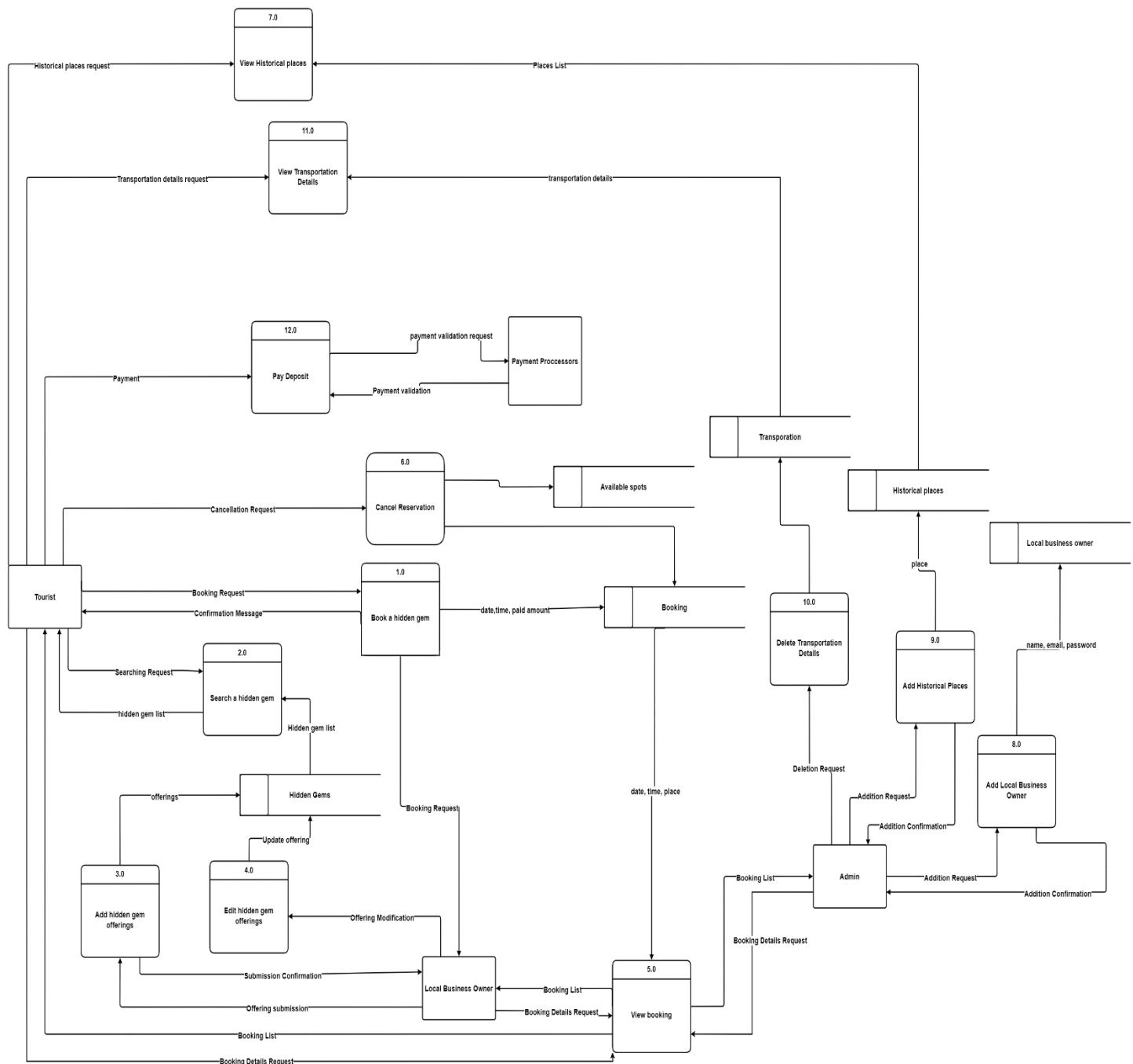
Admin adds transportation details	Transportation details addition request	Admin	Add transportation details	Transportation details is added	Admin
Admin edits transportation details	Details modification request	Admin	Edit transportation details	Transportation details is updated	Admin
Admin deletes transportation details	Deletion request	Admin	Delete transportation details	A list of the current transportation details is displayed to the admin	Admin
User updates their profile information	Information modification request	Tourist or Admin or local business owner	Edit profile information	Profile information is updated	Tourist or Admin or local business owner
User deletes their profile	Deletion request	Tourist or local business owner	Delete profile	Profile is deleted	Tourist or local business owner

## Actors

- Admin
- Local Business Owner
- Tourist

# Models

## DFD



**Figure 4 - DFD Level 1**

## Class Diagram

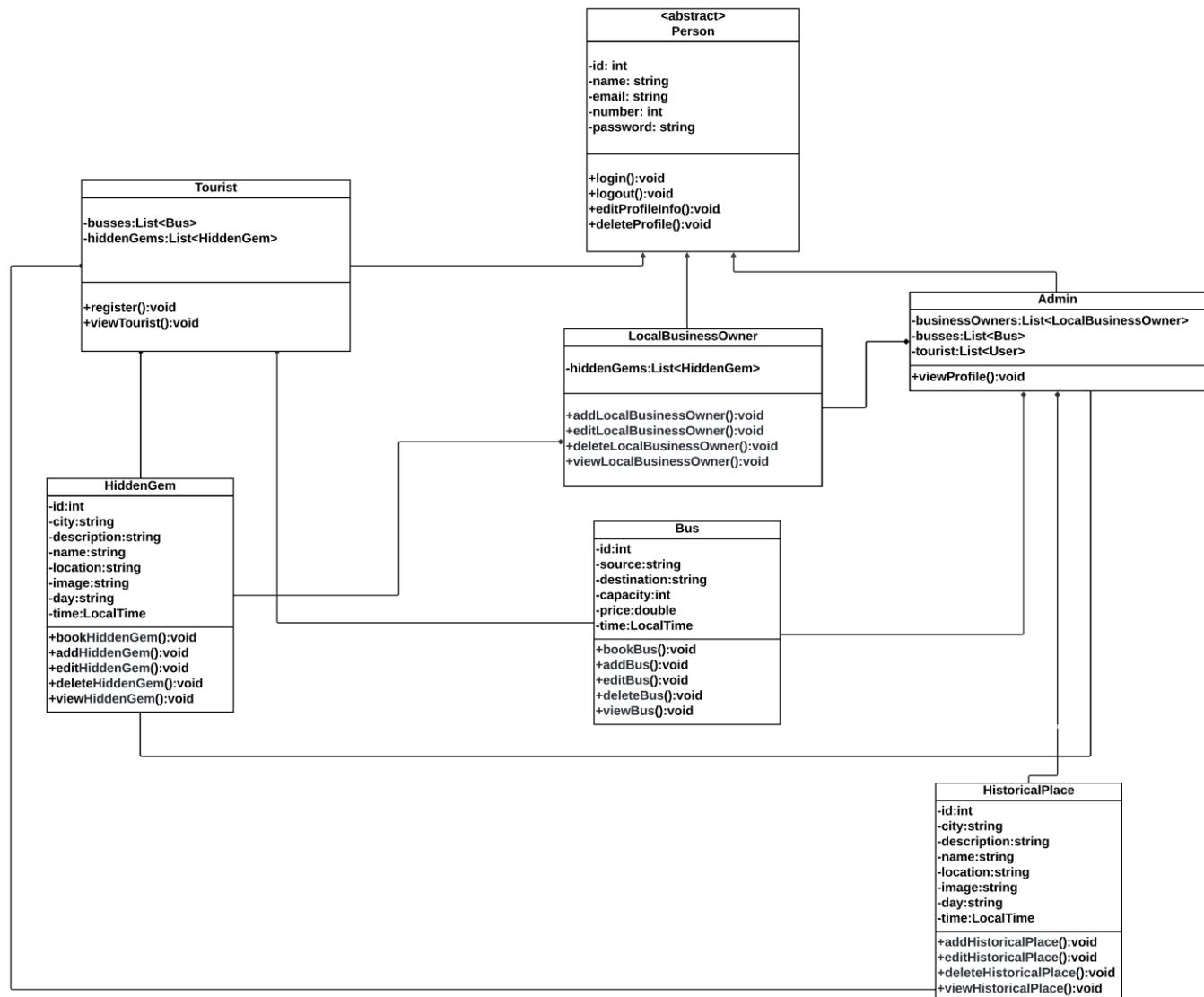


Figure 5: Class Diagram

# Use Case

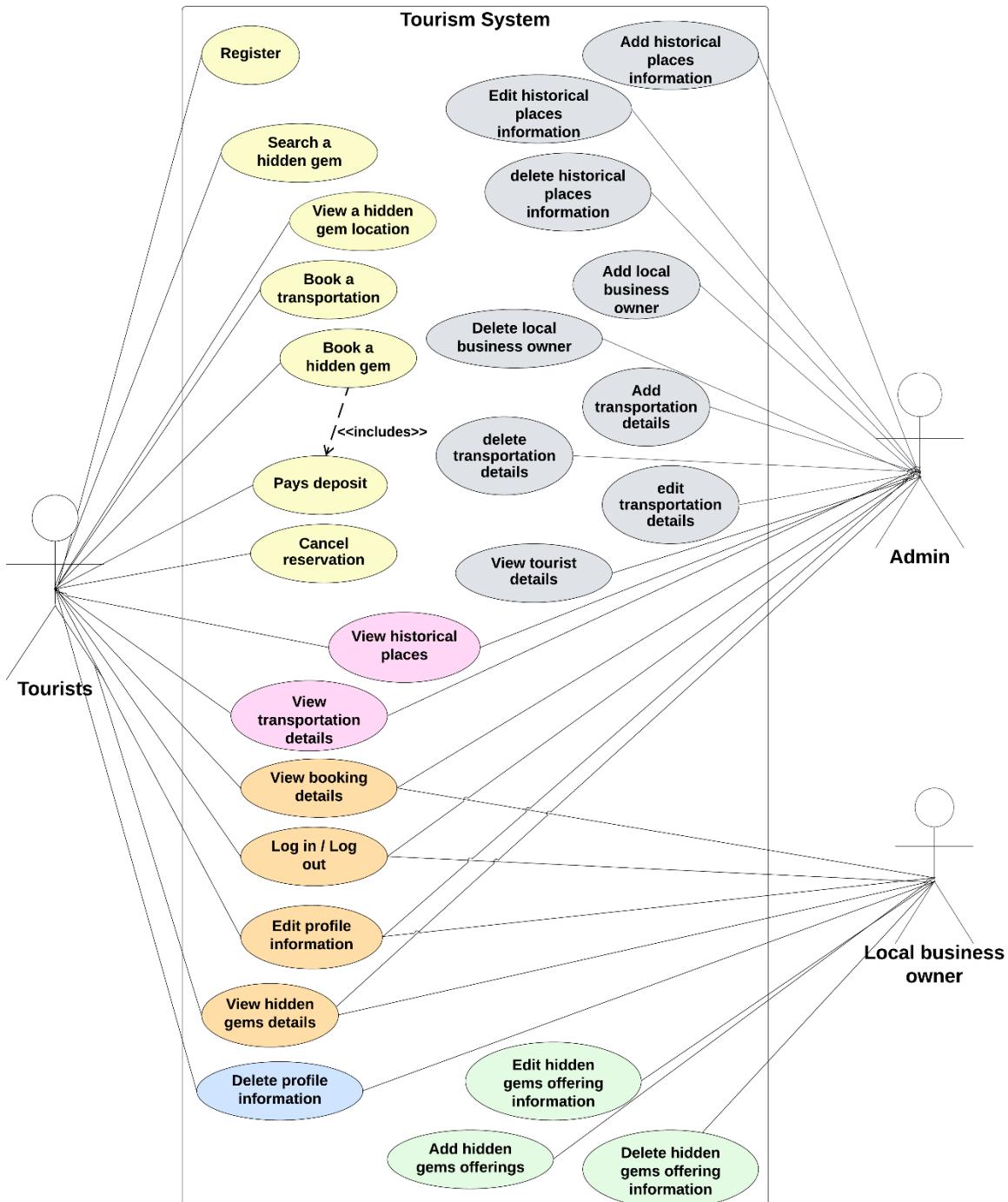


Figure 6: Use Case Diagram

# Sequence Diagram

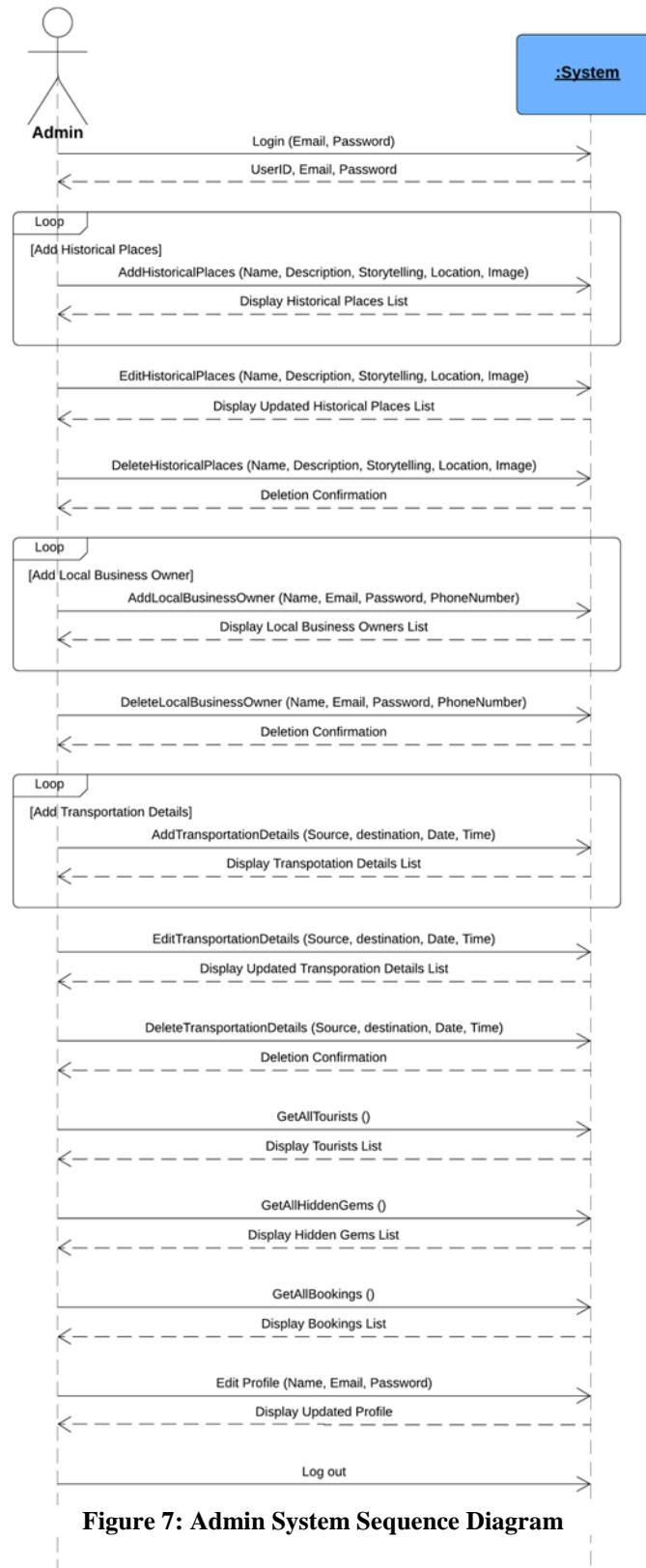
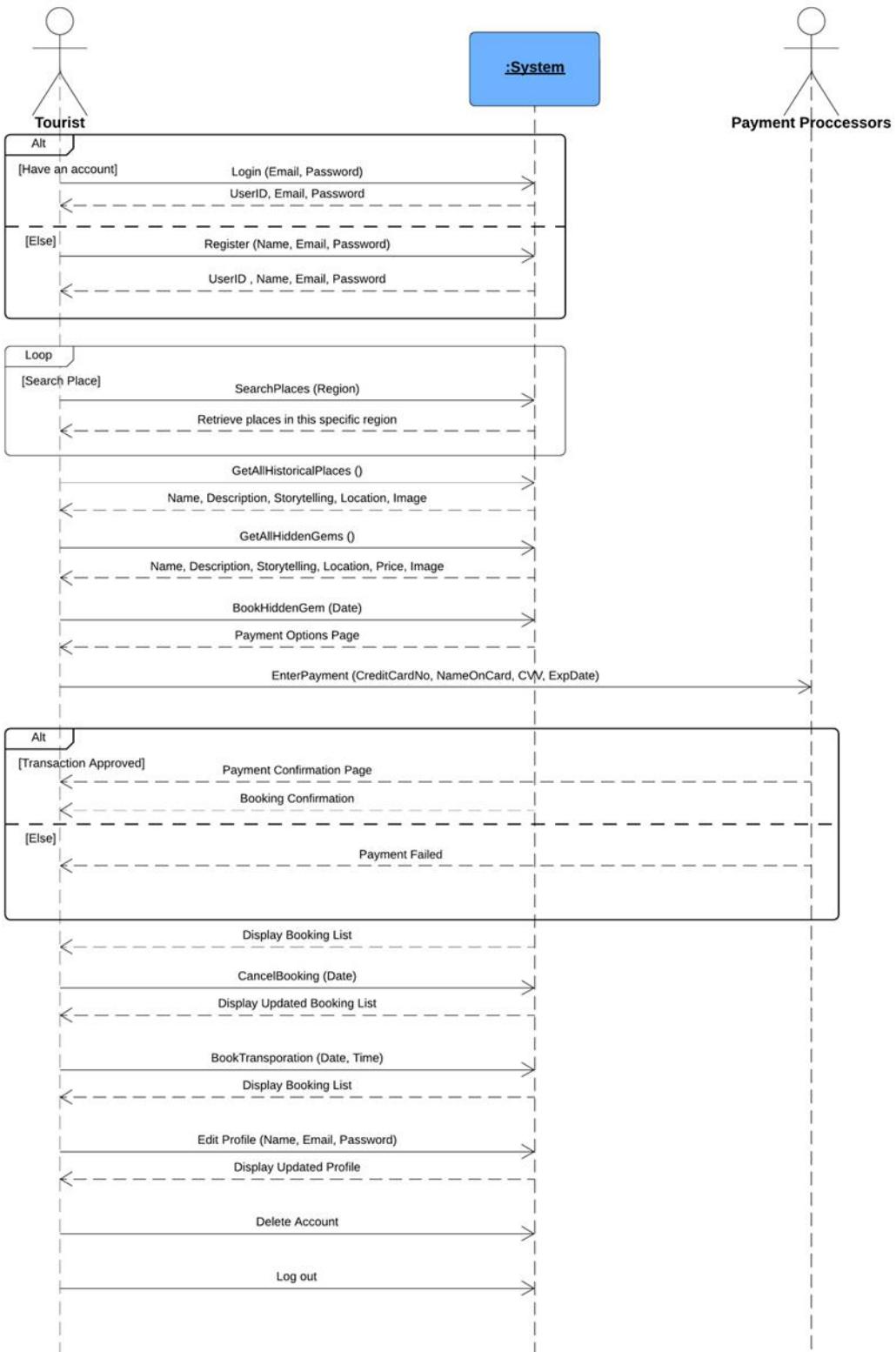


Figure 7: Admin System Sequence Diagram



**Figure 9: Tourist System Sequence Diagram**

# Activity Diagram

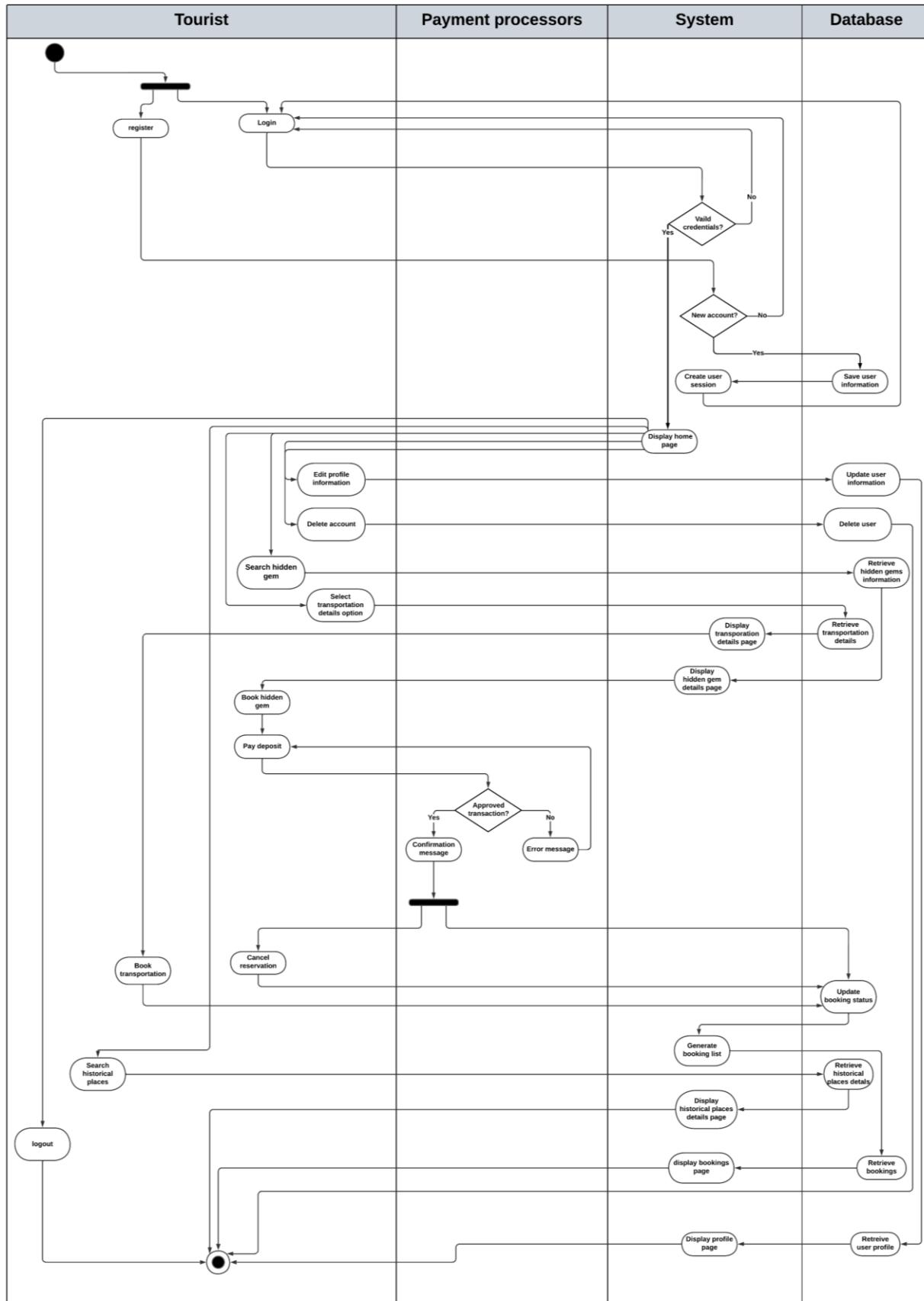
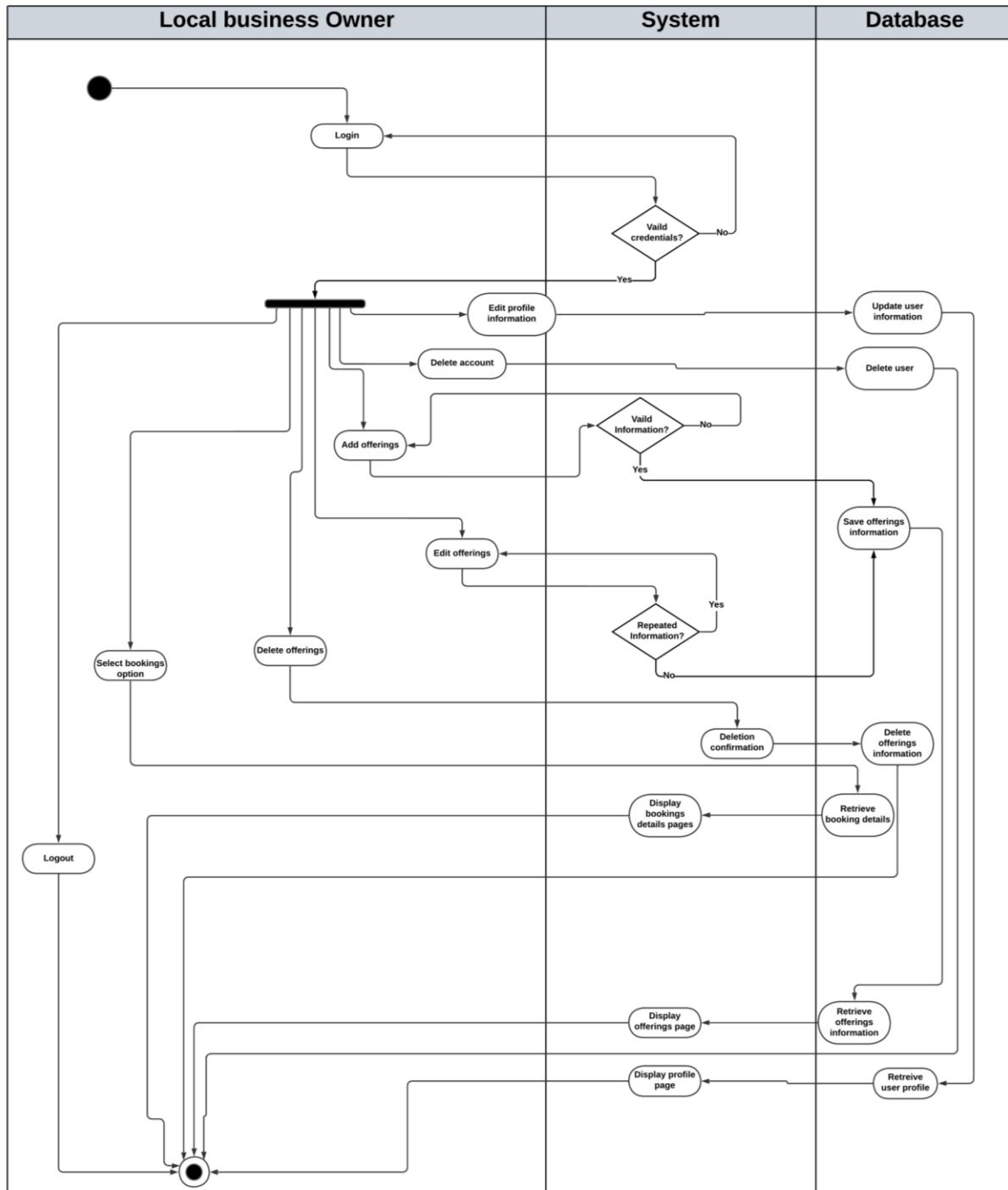
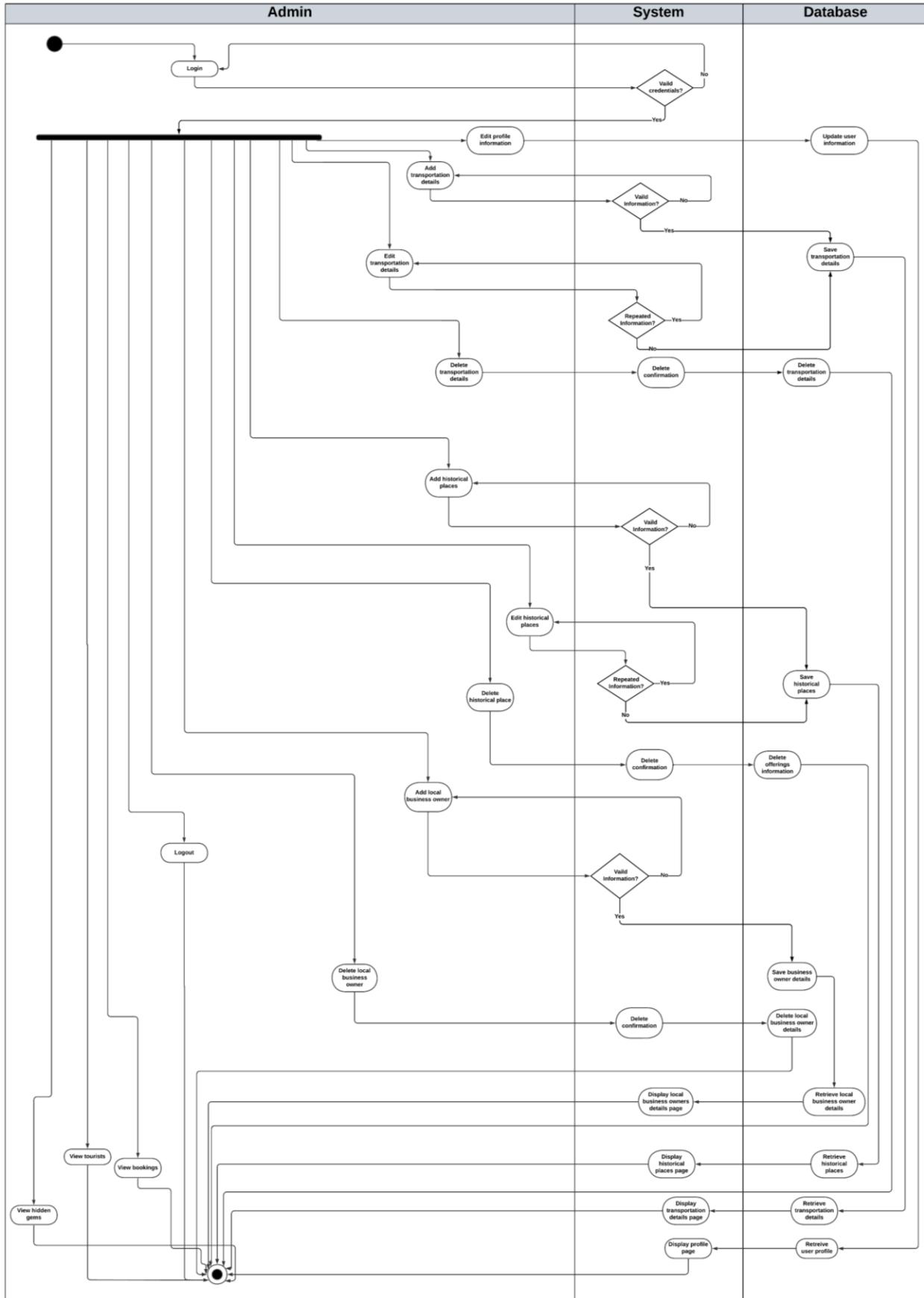


Figure 10: Tourist Activity Diagram



**Figure 11: Local Business Owner Activity Diagram**



**Figure 12: Admin Activity Diagram**

## 2.3 PROCESSES LOGIC

### Structured English

RECEIVE user want to create account

BEGIN IF

IF user provides all required information for account creation

THEN user signup successfully

ELSE

SEND validation error and allow user to retry

END-IF

RECEIVE user want to login

BEGIN IF

IF email not exists

THEN email stored successfully

ELSE IF email already exists

THEN enter another email

END-IF

BEGIN IF

IF password match

THEN registered successfully

CREATE session for user

ELSE password doesn't match and allow user to retry

END-IF

RECEIVE user books a hidden gem

BEGIN IF

IF user selects "hidden gem" category

THEN Display list of available hidden gem books

WHILE user has not made a selection

DO Allow user to browse or search hidden gem books

END WHILE

IF user book a place

THEN Display booking details

IF user confirms booking

THEN user want to pay the deposit

IF user pay the deposit amount successfully

THEN Display confirmation message

ELSE Display error message and allow user to retry

ELSE IF

Display confirmation message

IF user decided not to book a place

THEN Exist booking process

END-IF

END PROCESS

RECEIVE user want to cancel reservation

BEGIN IF

IF user requests to cancel reservation

THEN

SEND the cancelation to the local business owner

SEND confirmation message to the user

Display booking pages

ELSE Display booking pages

END-IF

RECEIVE Local business owners wants to add offerings

BEGIN IF

IF offerings does not already exist in the system

THEN

Add offerings to the system

Display offerings pages

ELSE

Display error message and allow Local business owners to add again

END-IF

RECEIVE Admin wants to deletes historical places information

BEGIN IF

IF Admin wants to deletes historical places information

THEN

Delete historical places information

Display a list of the current historical places information

END-IF

## SYSTEM DESIGN

### 3.1 SYSTEM DATABASE DESIGN:

#### 3.1.1 ENTITY RELATIONSHIP DIAGRAM (ERD):

The ER-Diagram represents the overall logical structure of a database, which is independent of any software or data storage structure. The database of our system is shown in figure 3.1. This model describes the relationship among the tables.

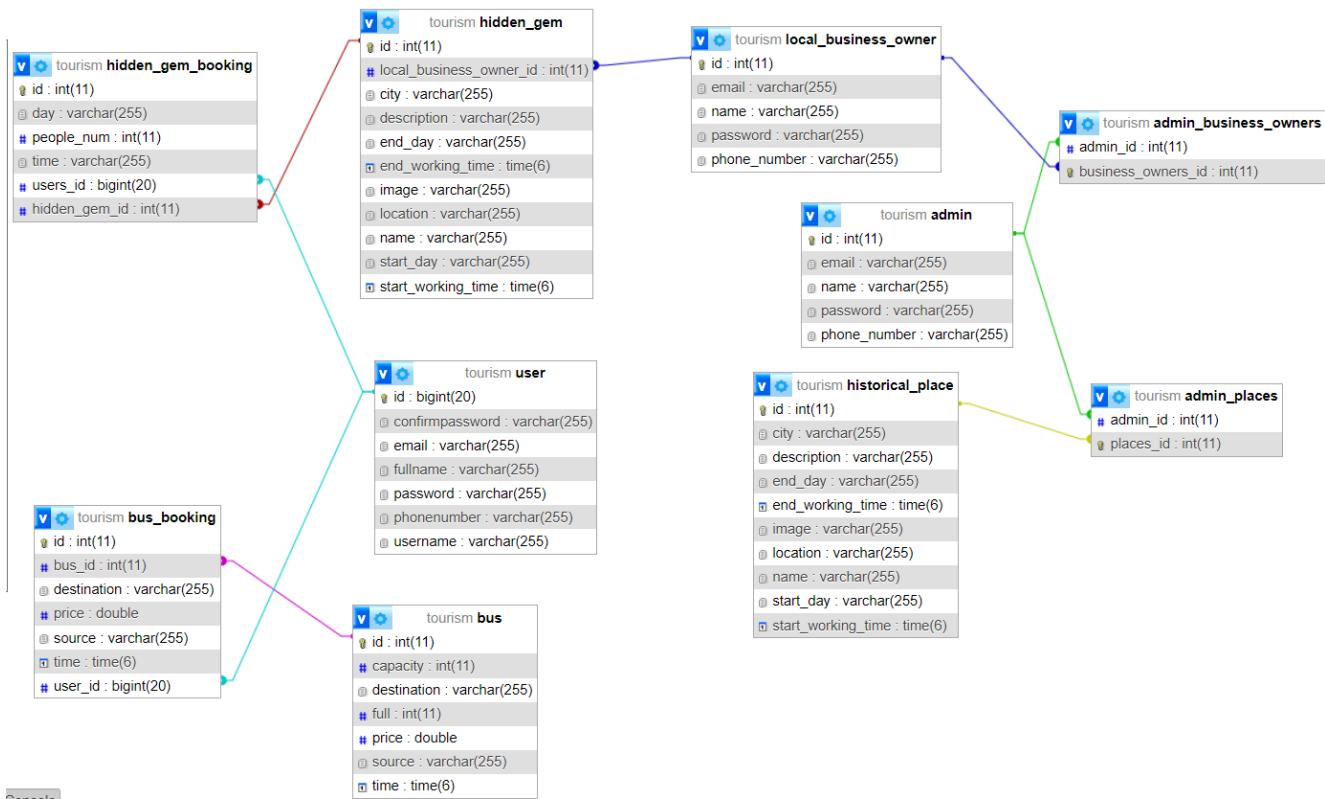


Figure 13: ER Diagram

### 3.1.2 TABLES DESIGN:

#### 1-AdminsTable:

tourism admin	
id : int(11)	
email : varchar(255)	
name : varchar(255)	
password : varchar(255)	
phone_number : varchar(255)	

Figure 14: Admin Table

- a- ID: This is the number given to admins.
- b- email: This is the email that admin has to choose.
- c- name: This is the name that the admin choose it.
- d- password: This is the password that the admin choose it.
- e- Phone-number: This is the admin's phone number.

#### 2. Local Business Owners Table

tourism local_business_owner	
id : int(11)	
email : varchar(255)	
name : varchar(255)	
password : varchar(255)	
phone_number : varchar(255)	

Figure 15: Local Business Owner Table

- a- ID: This is the number given to local business owners.
- b- email: This is the email that the admin assign it to the local business owner.
- c- name: This is the name of the local business owner.
- d- password: This is the password that the admin assign it to the local business owner.
- e- Phone-number: This is the local business owner's phone number

### 3. Historical Places Table

v tourism historical_place	
id : int(11)	
city : varchar(255)	
description : varchar(255)	
end_day : varchar(255)	
end_working_time : time(6)	
image : varchar(255)	
location : varchar(255)	
name : varchar(255)	
start_day : varchar(255)	
start_working_time : time(6)	

Figure 16: Historical Places Table

- a. ID: This is the number given to historical places
- b. city: This is the city where the historical places belong
- c. description: This is the historical place description
- d. end\_day: The last day that place can be
- e. start\_day: The first day that place can be visited
- f. end-working\_time: The time that the place closes
- g. start\_working\_time: The time that the place opens
- h. image: This is the image of the place
- i. location: The location of the place
- j. name: The name of the historical place

#### 4. Hidden Gem Table

The screenshot shows the MySQL Workbench interface with the schema for the 'hidden\_gem' table. The table has the following columns:

	Column Name	Type
1	<code>id</code>	<code>int(11)</code>
2	<code># local_business_owner_id</code>	<code>int(11)</code>
3	<code>city</code>	<code>varchar(255)</code>
4	<code>description</code>	<code>varchar(255)</code>
5	<code>end_day</code>	<code>varchar(255)</code>
6	<code>end_working_time</code>	<code>time(6)</code>
7	<code>image</code>	<code>varchar(255)</code>
8	<code>location</code>	<code>varchar(255)</code>
9	<code>name</code>	<code>varchar(255)</code>
10	<code>start_day</code>	<code>varchar(255)</code>
11	<code>start_working_time</code>	<code>time(6)</code>

Figure 17: Hidden Gem Table

- a. ID: This is the number given to hidden gems
- b. Local\_business\_owner\_ID: This is the id that belongs to the owner of the hidden gem
- c. city: This is the city where the hidden gem belong
- d. description: This is the hidden gem description
- e. end\_day: The last day that place can be
- f. start\_day: The first day that place can be visited
- g. end-working\_time: The time that the place closes
- h. start\_working\_time: The time that the place opens
- i. image: This is the image of the place
- j. location: The location of the place
- k. name: The name of the hidden gem.

#### 5. Hidden Gem Booking Table

The screenshot shows the MySQL Workbench interface with the schema for the 'hidden\_gem\_booking' table. The table has the following columns:

	Column Name	Type
1	<code>id</code>	<code>int(11)</code>
2	<code>day</code>	<code>varchar(255)</code>
3	<code># people_num</code>	<code>int(11)</code>
4	<code>time</code>	<code>varchar(255)</code>
5	<code># users_id</code>	<code>bigint(20)</code>
6	<code># hidden_gem_id</code>	<code>int(11)</code>

Figure 18: Hidden Gem Booking Table

- a. ID: This is the number given to hidden gem booking

- b. hidden\_gem\_ID: This is the id of the hidden gem.
- c. users\_ID: This is the id of the user who booked the hidden gem.
- d. day: The chosen day for the hidden gem booking
- e. people\_num: The number of people booking
- f. time: The time of the hidden gem booking

## 6. Users Table

tourism user	
id	: bigint(20)
confirmpassword	: varchar(255)
email	: varchar(255)
fullname	: varchar(255)
password	: varchar(255)
phonenumber	: varchar(255)
username	: varchar(255)

Figure 19: User Table

- a- ID: This is the number given to user.
- b- email: This is the email that the user chose.
- c- fullname: This is the name that the user chose.
- d- password: This is the password that the user chose.
- e- username: This is the username that the user chose.
- f- Phone-number: This is the user's phone number
- g- confirmpassword: This is the user use to confirm his chosen password

## 7.Bus Table

tourism bus	
#	id : int(11)
#	capacity : int(11)
②	destination : varchar(255)
#	full : int(11)
#	price : double
②	source : varchar(255)
⌚	time : time(6)

Figure 20: Bus Table

- a- ID: This is the number given to bus.
- b- capacity: This is the capacity of the bus.
- c- destination: This is the destination of the bus.
- d- source: This is the pickup point of the bus.
- e- time: This is the time when the bus starts the trip.
- f- price: This is the price of the bus ticket.
- g- full: This determines whether the bus capacity is full or not

## 8.Bus Booking Table

tourism bus_booking	
#	id : int(11)
#	bus_id : int(11)
②	destination : varchar(255)
#	price : double
②	source : varchar(255)
⌚	time : time(6)
#	user_id : bigint(20)

Figure 21: Bus Booking Table

- a- ID: This is the number given to bus- booking.
- b- bus\_ID: This is the id of the booked bus.
- c- user\_ID: This is the id of the user who booked the bus.
- d- destination: This is the destination of the bus.
- e- source: This is the pickup point of the bus.
- f- time: This is the time when the bus starts the trip.
- g- price: This is the price of the bus ticket.

## 3.2 USER INTERFACE DESIGN:

### 3.2.1 Summary of Screens (Pages)

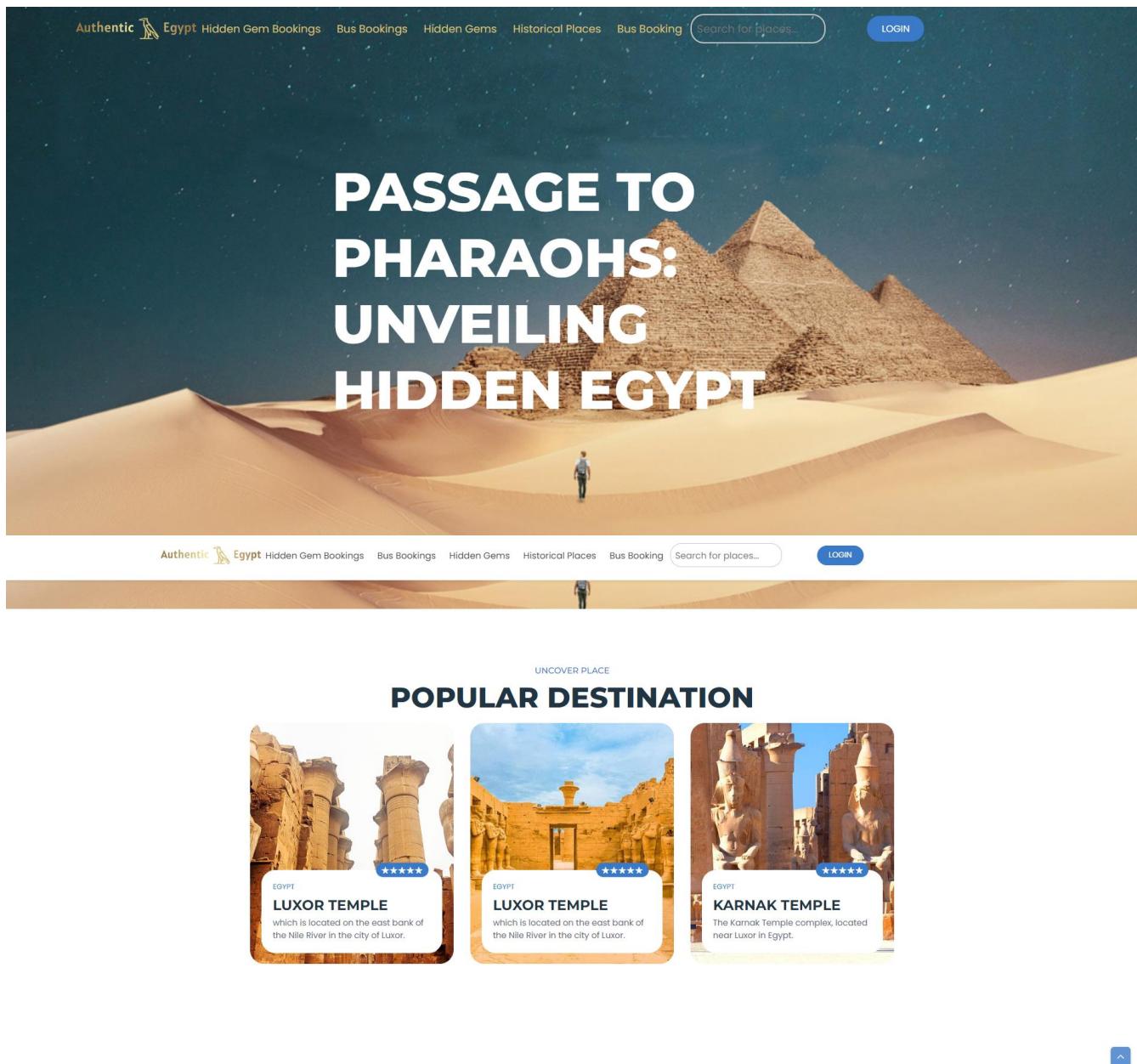


Figure 22-Home Page

### 3.2.2 Forms (Pages) Design

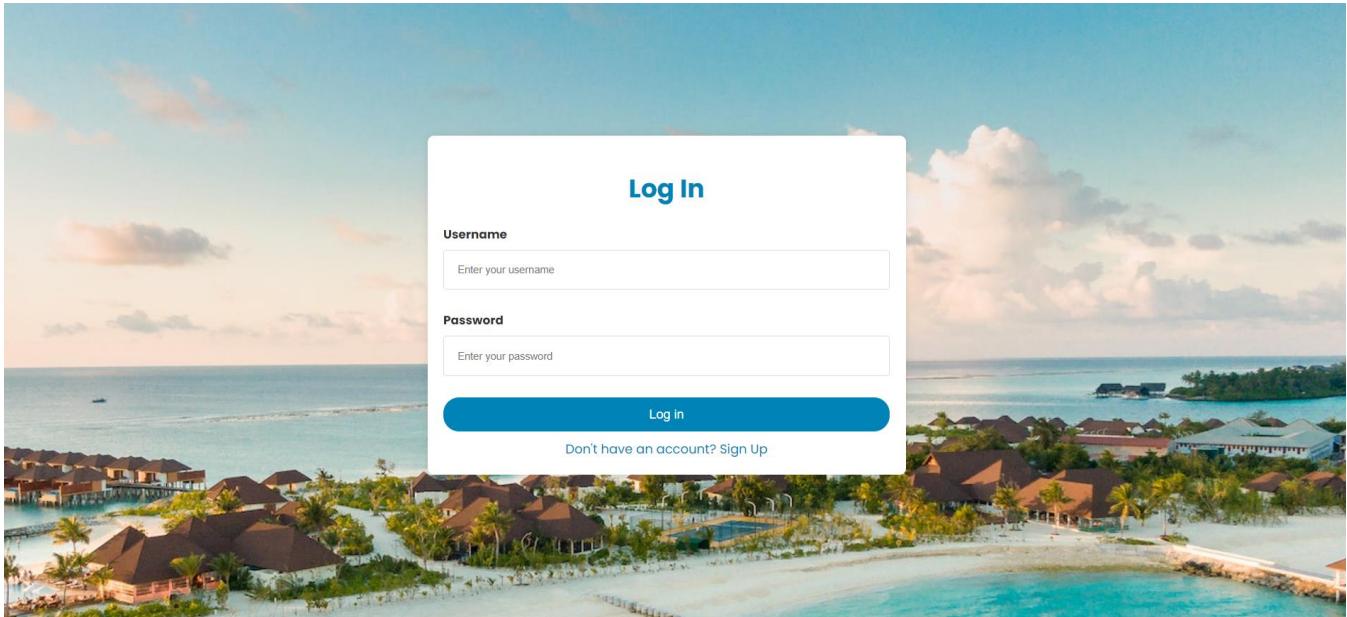


Figure 23- user login page

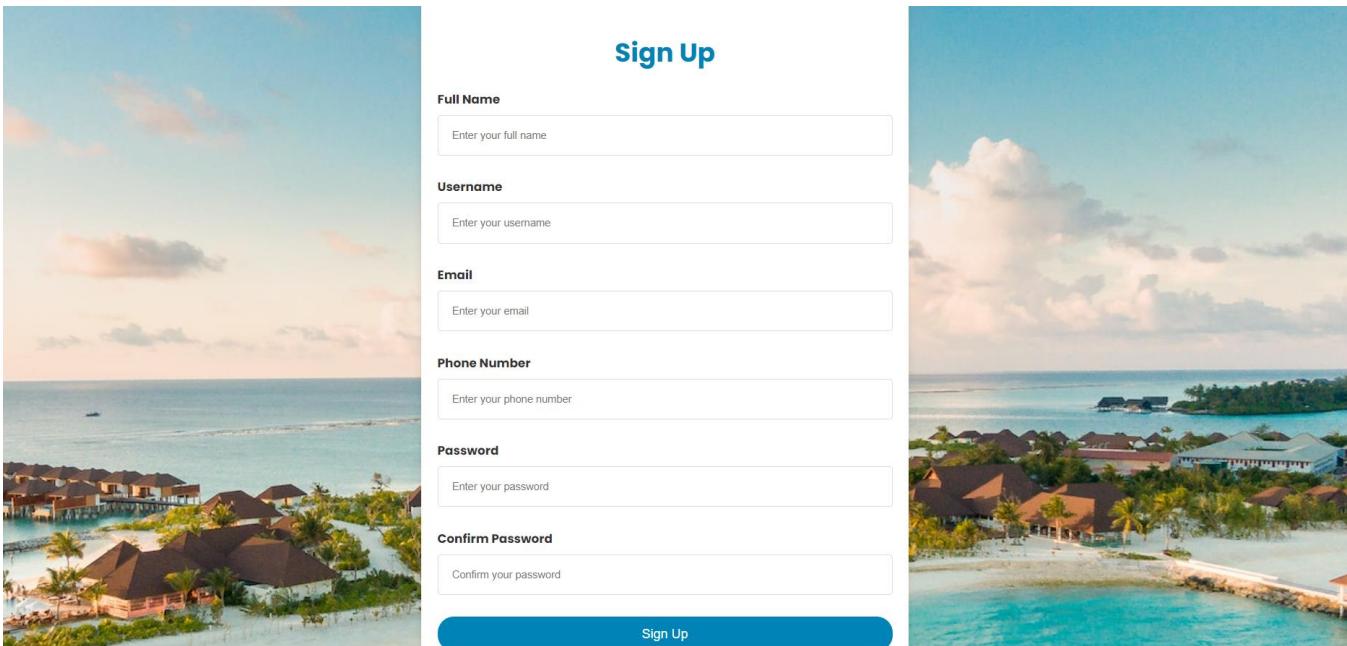


Figure 24- user sign up page

Hidden Gem Booking

Day

Time

Number of people

**Figure 25- Hidden gem booking page**

### 3.2.3 Reports Design

## HIDDEN GEM



Figure 26- view hidden gem page

Bus Number	Pick Up Point	Destination	Time	Cancel Booking
6	zayed	settlement	10:00	<button>Cancel</button>

Figure 27- user hidden gem bookings

## HISTORICAL PLACES



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Figure 28- View historical places page

## SYSTEM IMPLEMENTATION

### 4.1 Used Technologies

#### **4.1.1 Database:**

We decided to use MySQL as our database management system because it offers scalability, and reliability, making it suitable for both small and large-scale applications

#### **4.1.2 Programming:**

We decided to use Java for our programming language because it offers platform independence through its "write once, run anywhere" capability, which is essential for developing applications that need to run on various operating systems without modification.

## 4.2 System Implementation Plan

### 4.2.1 ADMINISTRATION

The System administrator is responsible for controlling and managing the local business owners, historical place and transportation.

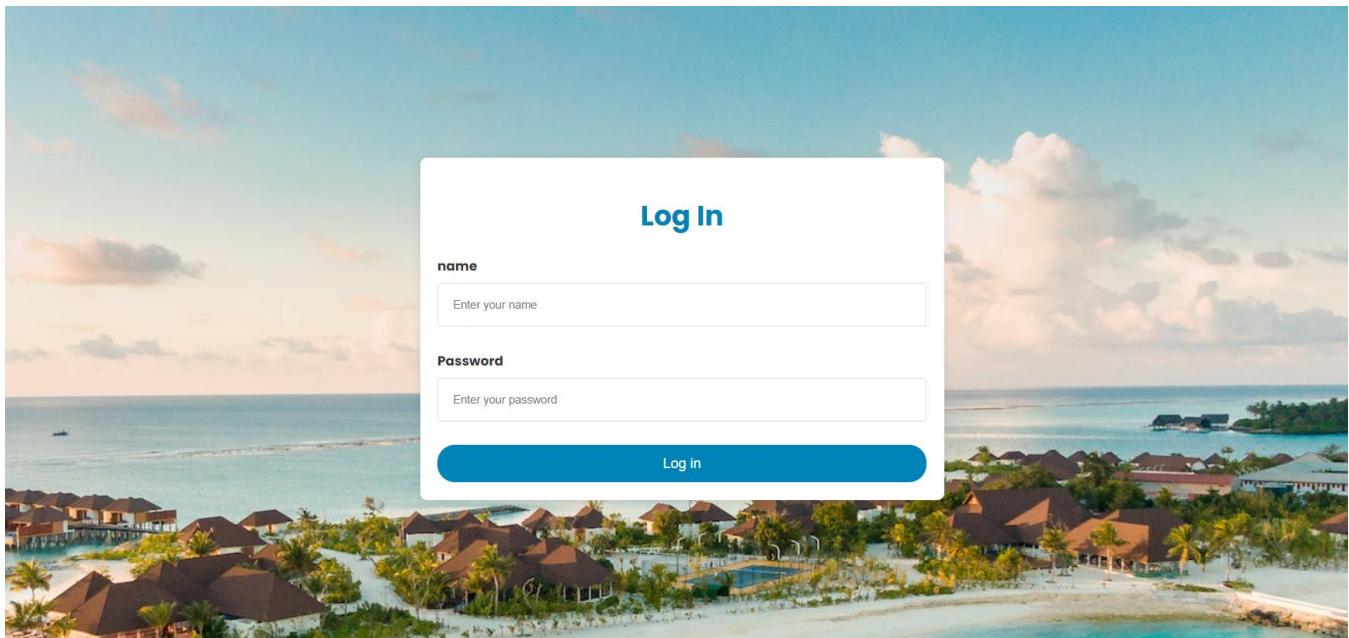


Figure 29- admin login page

The screenshot shows the AdminHub dashboard with a sidebar containing links like Dashboard, Profile, Add Local Business Owner, Local Business Owners, Tourists List, Add Transportation, Transportation Details, Add Historical places, Historical places, Hidden Gem Bookings, Bus Bookings, Settings, and Logout. The main content area is titled "Add Transportation Information" and includes fields for Source, Destination, Price (0.0), Time (dropdown menu), capacity (0), and a large orange "Add Transportation Information" button.

**Figure 30- Add transportation details**

The screenshot shows the AdminHub dashboard with the same sidebar as Figure 30. The main content area is titled "Add Historical Place" and includes fields for Place, City, Description, Location, Image (with a "Choose file" button and "No file chosen" message), Start Working Day (Saturday dropdown), End Working Day (Saturday dropdown), start Working Time (dropdown menu), and End Working Time (dropdown menu). A large orange "Add Historical Place" button is at the bottom.

**Figure 31- Add Historical places details**

**AdminHub**

Categories Search... 

**Dashboard**

Dashboard > My Bus Bookings

Bus Number	Pick Up Point	Destination	Booked By	Time
6	zayed	settlement	sara	10:00

- [Dashboard](#)
- [Profile](#)
- [Add Local Business Owner](#)
- [Local Business Owners](#)
- [Tourists List](#)
- [Add Transportation](#)
- [Transportation Details](#)
- [Add Historical places](#)
- [Historical places](#)
- [Hidden Gem Bookings](#)
- [Bus Bookings](#)
  
- [Settings](#)
- [Logout](#)

**Figure 32- view tourists page**

**AdminHub**

Categories Search... 

**Historical Place**

Historical Place Information > Historical Place Information



**Details**

Place: Pyramids  
City: Cairo  
Description: Giza  
Location: Giza  
Start Working Day: saturday  
End Working Day: thursday  
start Working Time: 08:00  
End Working Time: 00:00

[Edit Information](#) [Delete Information](#)



**Details**

Place: Pyramids 2  
City: d  
Description: d  
Location: Giza  
Start Working Day: saturday  
End Working Day: thursday  
start Working Time: 08:00

- [Dashboard](#)
- [Profile](#)
- [Add Local Business Owner](#)
- [Local Business Owners](#)
- [Tourists List](#)
- [Add Transportation](#)
- [Transportation Details](#)
- [Add Historical places](#)
- [Historical places](#)
- [Hidden Gem Bookings](#)
- [Bus Bookings](#)
  
- [Settings](#)
- [Logout](#)

**Figure 33- view historical places**

The screenshot shows the AdminHub dashboard with a sidebar on the left containing various administrative links. The main area is titled "Dashboard" and shows a booking record under "My Bookings".

**Dashboard Links:**

- Dashboard
- Profile
- Add Local Business Owner
- Local Business Owners
- Tourists List
- Add Transportation
- Transportation Details
- Add Historical places
- Historical places
- Hidden Gem Bookings
- Bus Bookings
- Settings
- Logout

**My Bookings:**

Place	Local Business Owner	Booked By	Day	Time	Number of people
Macan	Macan	sara	Sunday	09:00 AM	4

**Figure 34- view hidden gem bookings**

#### **4.2.4 SYSTEM MESSAGES**

<b>Message No.</b>	<b>Message</b>
ID:01	Username is required.
ID:02	Please fill all the fields
ID:03	This username is taken
ID:04	Email already in use. Please use a different email address.
ID:05	You don't have any bookings yet.
ID:06	Booking confirmed!
ID:07	Your Profile settings have been updated.
ID:08	Are you sure you want to delete this profile?
ID:09	Your book has been canceled successfully.
ID:10	You have successfully logged out.

## **SYSTEM TESTING**

To test our system, we should start testing each page one at a time. All the pages are accessed and tested.

### **5.1 Testing Check List**

Testing checklist for each page:

- 1- The design of the page
- 2- The links
- 3- The menus
- 4- The functionalities in the page
- 5- The validation in the page
- 6- Test page with random data

## 5.2 Test Cases

### Form (Page): Login Sub: User

The user wants to login to the system and use it so he can view hidden gems and historical places.

Test Case ID	Test Case Desc	Test Data	Result
TC1.1	Successful login	Valid user data	ID:01
TC1.2	Login with missing required fields	Missing required fields	ID:02
TC1.3	Username Uniqueness Check	Invalid data	ID:03

# Chapter 6

## **FUTURE WORK AND CONCLUSION**

The Project Team managed to develop a comprehensive platform designed to enhance tourists' experience of enjoying their trip and connect tourists with hidden gems offered by local businesses. Utilizing Java, the team successfully implemented core functionalities including user registration and profile management, viewing and searching historical places and hidden gems, hidden gems and busses booking.

The team hopes that resources will be allocated in the future to implement and operate the system fully, ensuring continuous improvements and the addition of new features. The successful deployment and maintenance of Authentic Egypt will depend on sustained support and further development efforts.

The following parts of the Authentic Egypt System were set aside for future implementation:

### **1. Review System**

Helps users to share their experiences and recommendations, ensuring continuous improvement and engagement with the community.

### **2. Local Maps integration**

This allows tourists to effortlessly locate hidden gems, find directions, and explore nearby attractions, enhancing their overall travel experience.

## **APPENDIX A: PROJECT SOURCE CODE**

<https://github.com/System-Analysis-Design-INF319/Tourism>

# **APPENDIX B: USER MANUAL**

## 1. Registration

- To use our system, you need to register and create an account:
- Click on the "Sign up" button on the homepage.
- Fill in the required details (full name, username, phone number, email, password, confirm password).

## 2. Log in

- Click on the "Login" button on the homepage.
- Enter your email and password.
- Click "Log in" button to access your account.

## 3. Book hidden gems

- As a logged-in tourist, you can:
  - i. View the hidden gem details.
  - ii. Click on Book now button next to your preferred hidden gem.
  - iii. Choose your preferred date, time and number of people
  - iv. Click on “Book” button

## 4. Book bus

- As a logged-in tourist, you can:
  - i. View the busses details.
  - ii. Choose the suitable time you want to book the bus at.
  - iii. Click on “Book” button

## 5. View Historical places

- Click on historical places In the navigation bar
- View a list of historical places including all place details

## 6. View Bookings

- Click on My bookings In the navigation bar
- View a list of all your booked hidden gems and busses, including all the details