Green University of Bangladesh

Department of Computer Science and Engineering (CSE)
Semester: (Spring, Year: 2024), B.Sc. in CSE (Day)

Travel and Tourism Management System

Course Title: Database System Lab
Course Code: CSE-210
Section: 221 D5

Students Details

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Submission Date: 10/06/2024
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Lab Project Status	
Marks:	**Signature:**
Comments:	**Date:**

Contents

Chapter 1

Introduction

1.1 Overview

The Travel and Tourism Management System is a Java-based application with a Swing interface that aims to facilitate seamless booking, management, and organization of travel plans. Utilizing MySQL database for data storage, the system provides functionalities such as booking hotels, finding the best travel plans, canceling trips, updating trip details, and more.

1.2 Motivation

Travel and tourism industry is experiencing rapid growth, and there is a growing demand for efficient management systems to streamline the booking process and enhance user experience. This project seeks to address the need for a comprehensive solution that allows users to easily plan, book, and manage their travel arrangements.

1.3 Problem Definition

1.3.1 Problem Statement

The project aims to address the following challenges:
1. Designing a user-friendly interface for easy navigation and interaction.
2. Implementing robust database management system for storing and retrieving user data.
3. Developing algorithms for efficient booking and itinerary management.
4. Ensuring data security and privacy of user information.

1.3.2 Complex Engineering Problem

One of the complex engineering problems involves designing the database schema to efficiently store and retrieve user data while maintaining data integrity and consistency. Additionally, implementing algorithms for itinerary management and trip planning requires careful consideration of various factors such as location, budget, and user preferences.

1.4 Design Goals/Objectives

Specify and discuss the goals or objectives of your project.
1. To Create an intuitive user interface using Java Swing for seamless interaction.
2. To Design and implement a MySQL database schema for storing user information and travel data.
3. To Develop algorithms for booking hotels, finding optimal travel plans, and managing trip itineraries.
4. To Ensure data security and privacy by implementing encryption and access control mechanisms.
5. To Provide functionalities for booking cancellation, trip updates, and itinerary customization.

1.5 Application

The Travel and Tourism Management System has several potential applications:
1. Travel agencies: Can use the system to streamline their booking process and manage customer reservations.
2. Individual travelers: Can utilize the system to plan and organize their trips more effectively.
3. Hotels and accommodation providers: Can integrate with the system to offer their services to users.

Chapter 2

Design/Development/Implementation of the Project

2.1 Introduction

The main objective of the Tourism Management System is to manage the details of Customer, Hotel Booking, Cancellation and Tourism places. It manages all the information about Users, Hotel, Packages etc. The project is totally built at administrative end and thus only the administrator is guaranteed the access to the backend database. The purpose of this project is to build an application program to reduce the manual work for managing Tourists, Booking, Places etc.

2.2 Project Details

• Operating system: Microsoft windows 11.
• Integrated Development Environment: Intellij Idea IDE
• MySQL Command Line Client
• Programming language: JAVA

2.3 Projects Image

Here you can see the projects image:

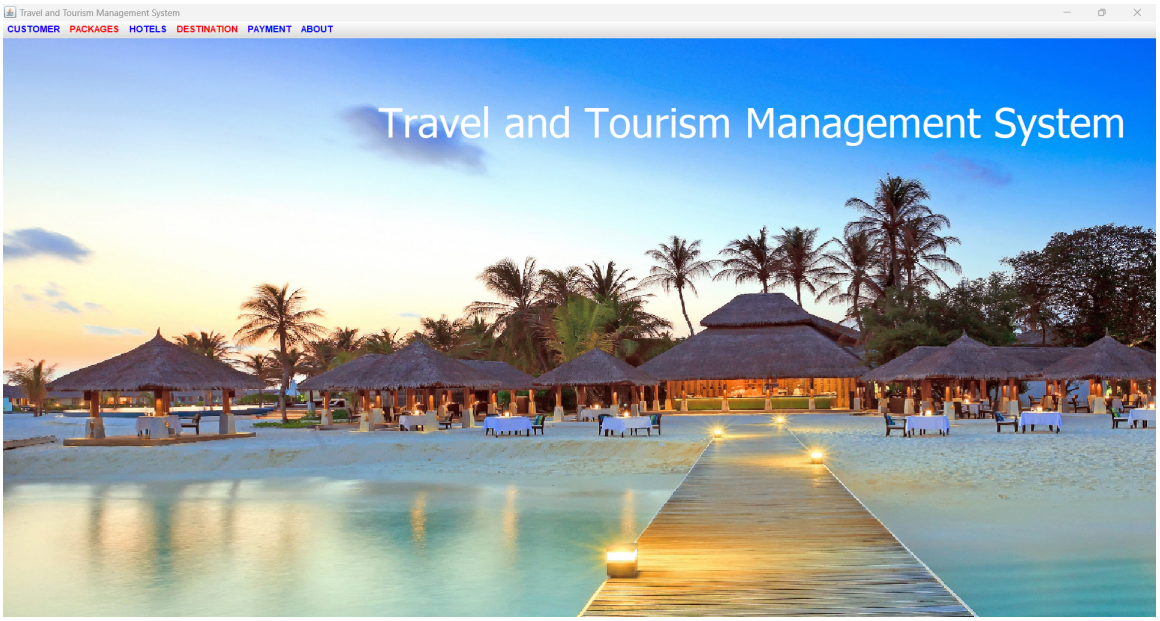
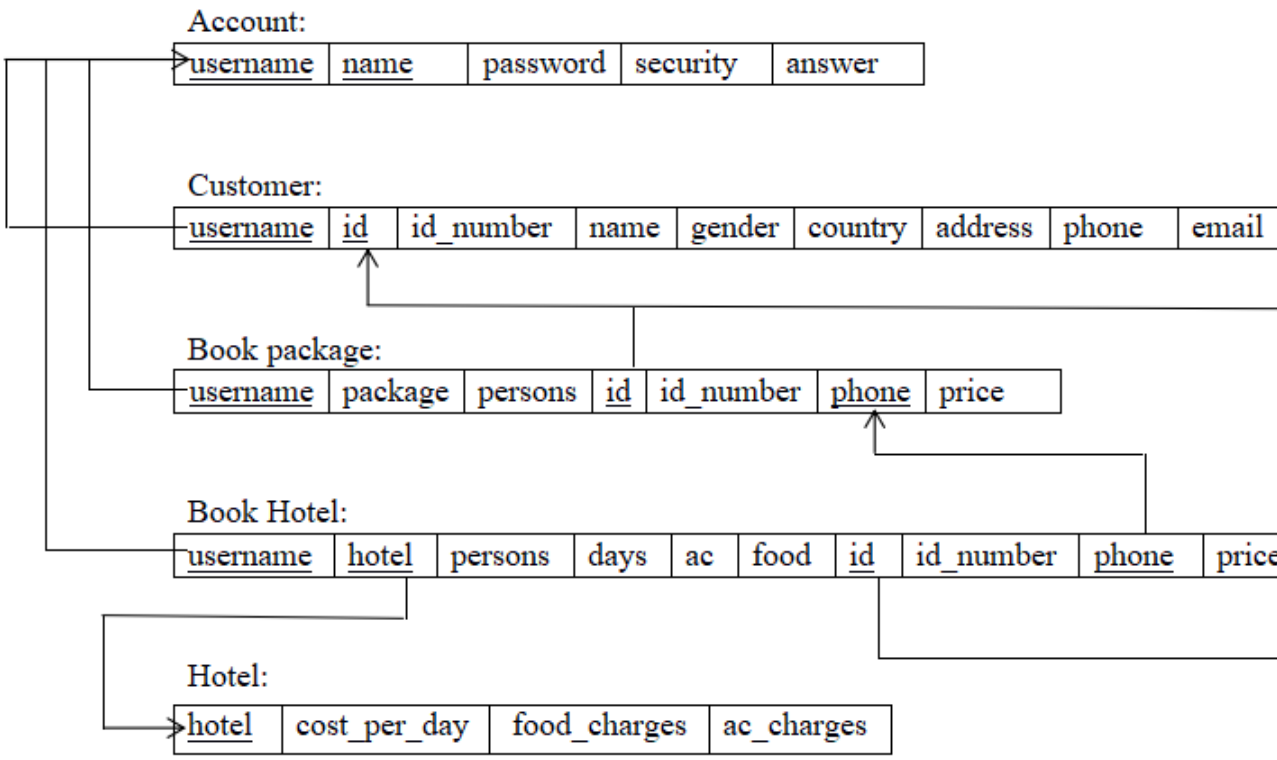


Figure 2.1: Travel Management System

2.4 Implementation

Here is the code for this project.

```
create database tms;

show databases;

use tms;

create table account(username varchar(30), name varchar(40), password varchar(30),

select * from account;

create table customer(username varchar(30), id_type varchar(20), number varchar(20

create table hotels(name varchar(30), cost_per_day varchar(20), food_charges varcha

insert into hotels values("Radison Blu Water Garden", "2000", "2500", "3000");

insert into hotels values("Sheraton Hotel", "1200", "1900", "2200");

create table bookHotel(username varchar(30), name varchar(30), persons varchar(20)

create table bookPackage(username varchar(30), package varchar(40), persons varcha

select * from customer;
select * from bookHotel;
```



2.5 SCHEMA DIAGRAM

Here is the schema diagram for this project.

2.6 Database

data*

Limit to 1000 rows

```
1  create database tms;
2
3  show databases;
4
5  use tms;
6
7  create table account(username varchar(30), name varchar(40), password varchar(30), question varchar(100), answer
8
9  select * from account;
10
11 create table customer(username varchar(30), id_type varchar(20), number varchar(20), name varchar(30), gender var
12
13 create table hotels(name varchar(30), cost_per_day varchar(20), food_charges varchar(20), ac_charges varchar(20))
14
15 insert into hotels values("Radison Blu Water Garden", "2000", "2500", "3000");
16
17 insert into hotels values("Sheraton Hotel", "1200", "1900", "2200");
18
19 create table bookHotel(username varchar(30), name varchar(30), persons varchar(20), days varchar(20), ac varchar(
20
21 create table bookPackage(username varchar(30), package varchar(40), persons varchar(20), id varchar(30), number v
```

```
9  select * from account;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

username	name	password	question	answer
tutul	Tutul	1412	Your NickName?	tutu
ahad	Ahad	2423	Your NickName?	ahad
tunu	Tunu	0000	Your NickName?	tunu
nobin	Nobin	1111	Your NickName?	nobin

```
23 • select * from customer;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

username	id_type	number	name	gender	country	address	phone	email
tutul	Voter Id	14126624	Tutul	Male	Bangladesh	Bangladesh	01722588086	mdtutul763@gmail.com
nobin	Voter Id	15431556	Nobin	Male	Bangladesh	Dhaka	0125469	nobin@gmail.com
tunu	Passport	546432135	Tunu	Female	Bangladesh	Natore	01245871	tunu@gmail.com
ahad	Passport	487761341	Ahad	Male	India	Mumbai	01548412	ahad@gmail.com

Chapter 3

Performance Evaluation

3.1 Simulation Environment/ Simulation Procedure

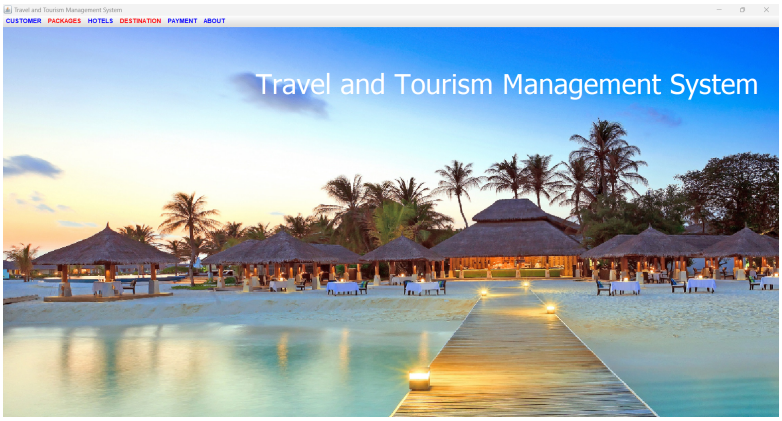


Figure 3.1: A graphical result of your project

3.2 Results Overall Discussion

From this projects we can create a new account on travel and tourism management system and book a tourist spot. Also we can pay our bill online. Most of the feature was working well.

3.2.1 Complex Engineering Problem Discussion

A Complex Engineering Problem in a Travel and Tourism Management System Java project involves developing an integrated platform that handles real-time bookings, cancellations, and modifications for flights, hotels, and rental services. It requires implementing a scalable architecture that can handle high concurrency and seamless data synchronization across distributed systems. Addressing data privacy and security for sensitive user information is crucial, alongside ensuring compliance with international

regulations. Additionally, incorporating dynamic pricing algorithms, personalized recommendations through machine learning, and multi-language support adds to the complexity. Efficiently managing these aspects demands robust error handling, thorough testing, and continuous system monitoring and optimization.

Chapter 4

Conclusion

4.1 Discussion

The Travel and Tourism Management System project in Java aims to create an integrated platform for booking flights, hotels, and rental services. This project involves handling real-time data synchronization, ensuring high concurrency support, and securing sensitive user information. Compliance with international regulations is essential. The system also incorporates dynamic pricing algorithms and personalized recommendations using machine learning, enhancing user experience. Multi-language support and robust error handling are crucial for global usability. Effective management of these complex requirements necessitates a scalable architecture, thorough testing, and continuous monitoring and optimization to deliver a reliable and efficient travel management solution.

4.2 Limitations

The Travel and Tourism Management System Java project faces several limitations. High development and maintenance costs can be prohibitive, especially for small enterprises. The complexity of integrating real-time data from multiple sources can lead to synchronization issues and latency. Ensuring data privacy and security compliance is challenging, particularly with international regulations. Handling high concurrency requires significant resources and advanced infrastructure. Personalized recommendation systems depend on vast amounts of user data, raising privacy concerns. Moreover, achieving seamless multi-language support and maintaining it across updates is difficult. Finally, continuous system monitoring and optimization demand ongoing technical expertise and financial investment.

4.3 Scope of Future Work

Cross Platform Appliication: I will make cross platform application for this projects in future so that anyone can access by any device.

Real time Monitor: Though my projects gives us static value I will upgrade realtime dynamic feature of our projects in next update.
Cool user interface with security: In next update I will design a cool user interface of this projects and add some security feature of this projects so that the user data will be protected.