TRIBHUVAN UNIVERSITY

FACULTY OF HUMANITIES AND SOCIAL SCIENCE

A Project Report

On

Tour Manager

Submitted to

Department of IT

Hetauda School Of Management And Social Sciences

In partial fulfillment of the requirements for Bachelor Degree in Computer Application

Submitted By:

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TU Registration No: 6-2-479-21-2020

Under the Supervision of

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Supervisors' Recommendation

I hereby recommend that this project prepared under my supervision by Raj Lama entitled "Tour Manager" in partial fulfillment of the requirements for the degree of Bachelor of Computer Application is recommended for the final evaluation.

Sincerely,

……

Er. Sujan Devkota,

Department of IT

Hetauda School of Management and Social Sciences

Approval Letter

This is to certify that the project work entitled **"Tour Manager"** has been prepared by **Raj Lama** of Bachelor of Computer Application (BCA) at Faculties of Humanities and Social Science, Department of IT, Hetauda School of Management and Social Sciences has been approved by the undersigned evaluation committee.

.....

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(External Examiner)

Declaration

I, Raj Lama, hereby declare that this project, titled **"Tour Manager"** and the work presented in it are my original contributions, except where otherwise indicated. I have acknowledged all sources used in this thesis/project, and I have cited all sources from which I have used data, ideas, or words, whether quoted directly or paraphrased. This thesis/project has not been previously submitted for any degree or examination at any other university or institution.

Where other people's work has been used (either from books, articles, internet sources, or any other sources), it has been duly acknowledged and referenced in the bibliography.

I further declare that this project is the result of my own independent scholarly work. I have not used any sources or materials that were not cited in this thesis.

I understand that any act of plagiarism or academic dishonesty in this thesis will result in severe consequences, including possible disqualification from the degree program.

_____

Raj Lama

TU Reg. No.:6-2-479-21-2020

Monday, September 24, 2024

Acknowledgement

I would like to take this opportunity to express my heartfelt gratitude and appreciation to everyone who has supported me throughout the journey of completing the **"Tour Manager"** project.

First and foremost, I want to thank my supervisor **Er. Sujan Devkota** for his invaluable guidance, encouragement, and unwavering support. His expertise and insightful feedback have been instrumental in shaping the direction of the project and enhancing its quality.

I extend my appreciation to my family and friends for their constant encouragement and belief in my abilities. Their encouragement and motivation during challenging times have been a driving force behind my determination to excel in this endeavor.

This project has been a journey of growth and learning for me, and I am truly grateful for the opportunity to work on such a challenging and rewarding endeavor.

Thank you all once again for being a part of this project and for your encouragement throughout. Your support has been invaluable, and I look forward to applying the knowledge and experience gained from this project to future endeavors.

Raj Lama

Abstract

The "Tour Manager" project presents an effective solution for managing tourism operations through a desktop application built in Java Swing and utilizing MySQL Workbench for database management. This system aims to streamline tourism management by allowing users to easily plan trips, make bookings, and explore destinations. Travelers can register, create personalized profiles, and manage their itineraries and travel progress. Administrators have the tools to oversee bookings, communicate with travelers, and ensure a smooth travel experience. The desktop application provides a user-friendly interface for accessing and updating travel information, enhancing both operational efficiency and traveler engagement in the realm of tourism.

Keywords: Java, MySQL Workbench, integration, efficiency, tourism management

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Chapter 1. Introduction

1.1. Introduction

Tourism is an exhilarating adventure, offering the chance to explore new places and immerse oneself in diverse cultures. It opens doors to stunning destinations, whether near or far-flung, allowing travelers to marvel at historical landmarks, unwind on pristine beaches, and dive into the vibrancy of cities. It's an opportunity to break free from the monotony of daily life and forge lasting memories. The Tourism Management System, the subject of our final project, builds upon the concept presented in our earlier proposal and midterm report. This system's objective is to simplify and enhance the tourism experience for all stakeholders. It streamlines the management and coordination of all tourism-related activities, making trip planning, booking, and enjoyment easier for travelers, tour operators, and others in the tourism industry.

Our goal is to create a user-friendly platform that elevates the overall travel experience. With this system, travelers can effortlessly access information about diverse destinations, plan itineraries, and book accommodations, transportation, and activities. Tour operators and industry participants will benefit from a streamlined method to manage services, interact with travelers, and deliver seamless and enjoyable travel experiences. Through the development of the Tourism Management System, our aim is to make travel more accessible, convenient, and enjoyable for everyone. Join us on this voyage as we delve into the realm of tourism and create a platform that transforms the way we explore the world [1].

1.2. Problem statement

There are lots of tourism management system in Nepal but they have several limitations, such as:

- Lack of a centralized platform for guide and tourist to plan their trip and manage their activities.
- Inadequate information about tour destinations and activities.

- Difficulty in booking trips and accommodations due to the lack of proper communication with the guide.
- Inefficient communication between tourists and guides being provided by tourism service providers(agencies).

Building a tourism management system is also not an easy work to do, While working on this project I have faced a lot of problems such as:

- Lack of proper knowledge about programming language and DBMS.
- Lack of proper resources needed for the user as well as admin part.
- Unavailability of sample data.

1.3. Objectives

The general objective of the project will be to construct an all-inclusive tourism management system for Nepal that can provide an easy-to-use platform for planning trips to the nation and make it easy for the stakeholders of tourism to work collaboratively. The specific objectives are as follows:

1. One-Stop Platform for Holiday Planning and Activity Management:

- Design an integrated system through which tourists and guides can easily plan and manage trips and activities from booking to implementation.

2. Improved Information Availability:

- Rates, detailed and accurate information about the destinations, activities, accommodation, or any other essential services that the tourists may need to help in best decision-making and perfecting the travel experience.

3. Streamlined Booking and Communication:

- Facilitation of efficient processes for booking trips and accommodation, thereby allowing direct communication between tourists and guides to ensure clarity and convenience of process.

4. Improved Interaction between Tourists and Guides:

- Strengthen communication channels between tourists and guides, breaking dependence on tourism service providers in order to enhance direct effective interaction.

1.4. Scope and limitations

Every project has its own scopes and limitations and the project mentioned in the given report also has its own scopes and limitations such as:

1.4.1 Scopes:

- Users can choose from multiple pricing trips according to their comfort and like.
- Users with no experience can easily browse through this application and get necessary information about the trip details.
- User friendly environment.

1.4.2 Limitations

- Limited package categories but admin can add more categories according to customer needs.
- Payment gateway is not available.
- Not build as a website.

1.5. Report Organization

This report document contains five chapters including this chapter. Chapter two defines and describes Background Study and Overview of related existing systems and their pros and cons. Chapter three presents the System Analysis and Design including Requirement Analysis and Feasibility Analysis. Chapter four presents the Implementation, Testing and debugging are explained. In chapter five, Conclusion, Limitations and Future Enhancement are briefly explained.

Chapter 2. Background study and literature review

2.1. Background study

In today's world the use and access of the internet is so high, so most of the people are busy with their own work. So we have developed this module for all the users who want to get some refreshment and take some break from work and also for those who want to explore different places. They can create and access to their account through the use of internet and general concept and terminologies are mentioned below:

- User registration: A user can create an account through registration process and user can create an account when there is access to the internet through this module.
- Login: After creation of an account user can login through their details and can access the features of the website through this module like booking a tour plan of their want.
- Surfing: Any one can surf through different pages of this module but to book a tour they need to be registered.
- Choose plan: After finding the desired plan you can book them and provide your details there.

2.2. Literature Review

In their study, Giuseppe Daconto and Lhakpa Norbu Sherpa explore the use of scenario planning in mountain protected areas like Khumbu. They find that scenario planning can bridge the gap between management and strategy by involving stakeholders in inclusive conversations. It helps in addressing long-term management issues and fostering collaboration. The authors propose its application in Sagarmatha National Park (SNP) for public consultations and technical analysis. However, they acknowledge challenges like long time horizons and suggest creative communication to overcome them. Scenario planning, they argue, can facilitate strategic learning, adaptive management, and uncertainty management, benefiting both the park and its tourism industry [2].

In their study, Sudeep Thakuri, Sanjay Nath Khanal, and Pramod Kumar Jha apply a methodology from a previous work by Salerno et al. (2010) to address natural resource management in SNPBZ. They focus on solid waste and water quality issues, involving researchers, stakeholders, and decision-makers in participatory modeling. The research highlights challenges in solid waste management, especially the improper disposal of glass, metal, and plastic waste, posing risks to the environment and health. Water pollution is also linked to inadequate sanitation. While progress is made in solid waste management, there's a need for an agency to address human waste disposal. The study develops quantitative models and engages stakeholders in adaptive management for better decision-making and consensus-building [3].

Chapter 3. System Analysis and Design

3.1 System Design

Considering the fact that this project involves design and implementation of a software system regardless that is web-based, it will be important to mention and consider some models used in software development and deployment, some general models of software development are namely:

• **The Waterfall approach:** It represents activities in requirements, specifications, design, implementation and testing. All these are separate processes.

• **Incremental / Evolutionary development:** It involves a rapid development of the specifications and then refined later for the customer.

• **RAD model:** RAD focuses on rapid development through prototyping and component reuse, while prototyping emphasizes early user interaction with a working model based on a basic formal specification.

• **Prototyping model:** Prototyping emphasizes early user interaction with a working model based on a basic formal specification, prioritizing feedback and iterative development.

After reading through all these models, The waterfall methodology is a linear project management approach, where stakeholder and customer requirements are gathered at the beginning of the project and fits in the development of this website. The main aim of using this approach is we can focus on each part of the model during development and come back to it if need be. The project can easily be broken down into different parts based on this model. Software development using waterfall model follows the following stages:

- Requirement
- Design
- Implementation
- Verification
- Maintenance

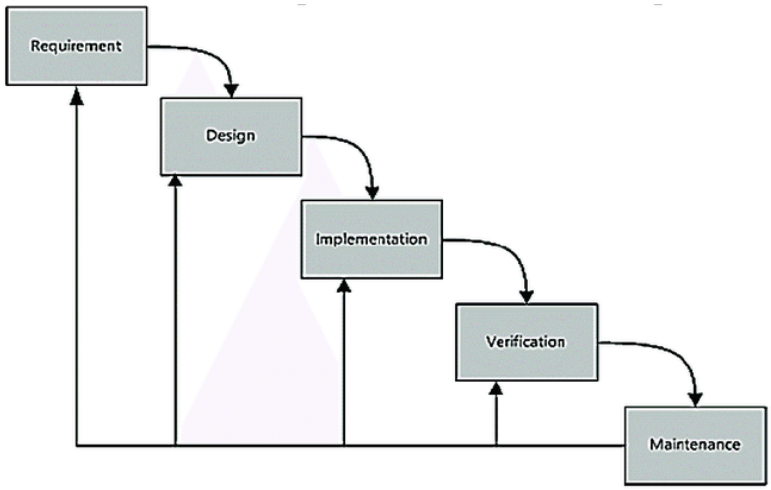

Figure 1: Waterfall Methodology

3.2. Requirements

Requirement identification is the gathering of relevant requirements that will be used to develop a system. There are different methods to gather requirements which includes studying of existing systems, interviews, questionnaires etc**.** Requirements are collected through interviews, website visits, friendly suggestions and internet surfing. Basically there are two types of requirements, they are:

3.2.1. Functional requirement

- This system should allow users to register and login.
- This system should allow users to surf through the desktop application and collect all the necessary information.
- This system should provide users to contact the tour manager or the host.
- This system should provide users to book the preferred destination.
- This system should provide signed in users to log out as well after completing their task.

3.2.2. Non functional requirement

- **Availability:** This system will be available for all the users from any geographical region with the access of desktop or laptop device.
- **Reliability:** This system will be reliable as it uses encryption to protect the user's data as well as other valuable information.
- **Reliability:** The system should be reliable and available at all times. The system should be designed to handle unexpected system failures or errors, and should provide options for data backup and disaster recovery.
- **Performance:** The system should be able to handle a high volume of traffic and user activity without experiencing significant delays or downtime.
- **Usability:** The system should be user-friendly and easy to navigate, with an intuitive interface that requires minimal training for users.

3.3. Feasibility Study

It is the study of how well the system will function under the given constraints. It studies how easy it is to build a system under given constraints. The constraints include technical feasibility, operational feasibility and economic feasibility.

3.2.1. Technical Feasibility

The system can be built using desktop application building technologies such as Java Swing as the interface and MySQL Workbench as a database.

3.2.2. Operational Feasibility

Since the proposed system can be accessed using a desktop or a laptop divide which will be owned by most of the people or they can access via cyber cafe.

3.2.3. Economic Feasibility

The system will be built using the tools that are freely available on the internet. So, this system is economically feasible.

3.2.4. Economic Feasibility

The system that we developed is scheduling feasible as it does not require more time for the development phase. The data collection takes more time to collect the data about various products and their quality. After data is collected, the other development phase can be within a month.

3.3. Gantt chart

Gantt chart is a bar chart that provides a visual view of tasks scheduled over time. A Gantt chart is used for planning projects of all sizes, and it is a useful way of showing what work is scheduled to be done on a specific day. It can also help you view the start and end dates of a project in one simple chart. The Gantt chart for the Tour booking is shown in figure 2 below:

Gantt chart

Process	No. of Weeks							
	1	2	3	4	5	6	7	8
Requirement Gathering								
Planning								
Designing								
Coding								
Testing and debugging								
Implementation								

Figure 2: Gantt chart for Tour booking

3.4. DFD Diagram

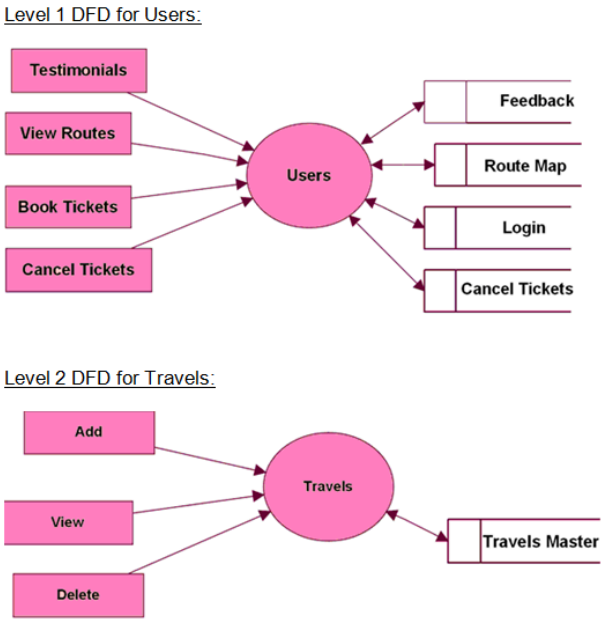

Figure 3: Level 1 and level 2 DFD on Tour booking

3.5. ER Diagram

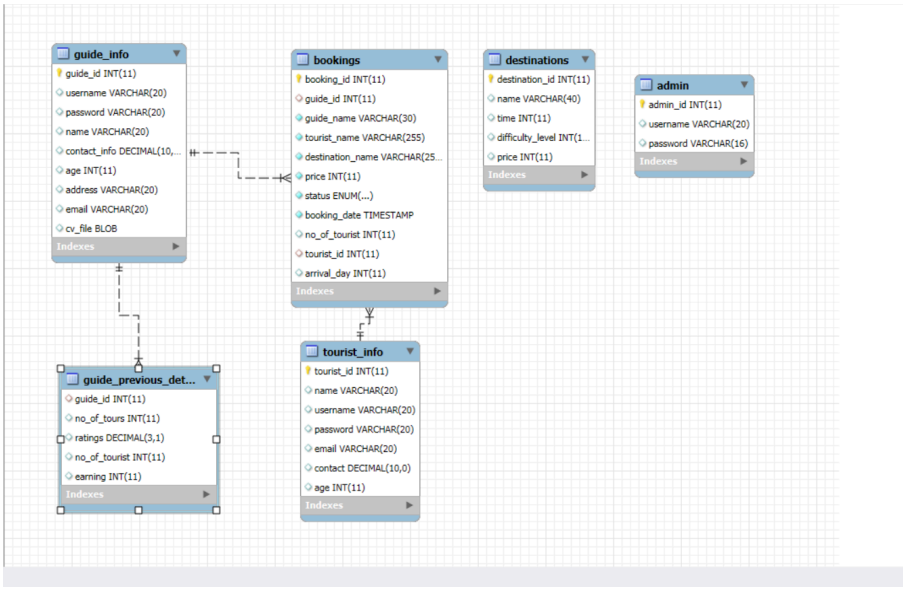

Figure 4: ER Diagram on Tour booking

Chapter 4. Implementation and Testing

4.1. Implementation

Implementation is the crucial stage where the system design specifications are turned into functional software through coding, thorough testing, seamless installation, comprehensive documentation, effective training, and ongoing support, utilizing the tools and technologies previously discussed in this chapter, marking a pivotal moment in the project's lifecycle.

4.2. Tools Used

This chapter discusses the various tools utilized in developing both the front-end and back-end of the project.

4.2.1. Front-end

The front-end of the application is developed using Java Swing.

Java Swing

Java Swing is a part of Java's Standard Library and is used to create graphical user interfaces (GUIs). Swing provides a set of "widgets" for building rich user interfaces, including buttons, text fields, tables, and menus. It allows for the creation of fully-featured, interactive desktop applications with a native look and feel.

4.2.2. Back-end

The back-end of the application is implemented using MySQL Workbench for database management.

MySQL Workbench:

MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. It provides data modeling, SQL development, server configuration, user administration, backup, and other essential tools for managing MySQL databases. It is used to design, manage, and interact with MySQL databases, providing a robust environment for database management and development.

4.2.3 Algorithm used

I have implemented the selection sort algorithm for sorting guides in the search feature, and the binary search algorithm for handling the destination panel.

4.3. Testing

Admin login test case

ID	Test case description	Test data	Expected result	Actual result	pass/fail
1	Admin enters valid input	Username: admin Password: admin	Login successfully	As expected	pass
2	Admin enters invalid input	Username: gaure Password: gaure	Alert invalid username or password	As expected	pass

User login test case

ID	Test case description	Test data	Expected result	Actual result	pass/fail
1	User enters valid input	Username: gaure Password: gaure	Login successfully	As expected	pass
2	User enters invalid input	Username: gu Password: gu	Alert invalid username or password	As expected	pass

Chapter 5. Conclusion and Recommendation

5.1. Outcome

Upon project completion, users will be able to access and book various tourism packages, providing a seamless experience. Users can register, explore and book different travel packages via a desktop application. Administrators have the ability to effortlessly add, update, or remove tour packages and their details. Users can conveniently make payments for their chosen packages and access their booking details through the website.

5.2. Conclusion

In summary, the tour manager project, developed java Swing and MySQL Workbench, effectively addresses the key requirements of managing a travel agency or tourism platform. Throughout the development journey, we've built a robust and user-friendly system that efficiently handles various aspects of tourism management, offering a practical solution for both administrators and travelers.

Leveraging Java’s dynamic nature, we've created an interactive user interface, empowering administrators to easily manage traveler profiles, track bookings, schedule tours, and generate insightful reports. The integration with MySQL Workbench ensures secure and scalable data storage, maintaining data integrity and reliability. This system enhances the tourism experience for both administrators and travelers alike.

5.3. Future recommendation

The website's future enhancements aimed at boosting usability, enhancing user experience, and augmenting its portability encompass several noteworthy aspects. This current iteration of the application can be seen as a foundational stepping stone toward a more comprehensive and impactful future development. While the upcoming improvements will undoubtedly demand additional time and resources, the realization of these ambitions remains within a realm of practicality and feasibility.

- Addition to proper payment gateway.

- Addition to legal payment API.
- Access to applications on mobile devices.
- Addition to more packages/destinations by admin.
- Upgrade to Web Application rather than only desktop application.

References

[1] Metti, M.C. (2008) *Hospitality and Tourism Management Systems*. New Delhi, India: Anmol Publications.

[2] P. K. Jha, S. Thakuri, and S. N. Khanal, Mountain Research and Development, rep., 2010

[3] L. N. Sherpa and G. Daconto, Mountain Research and Development, rep., 2010

Appendix

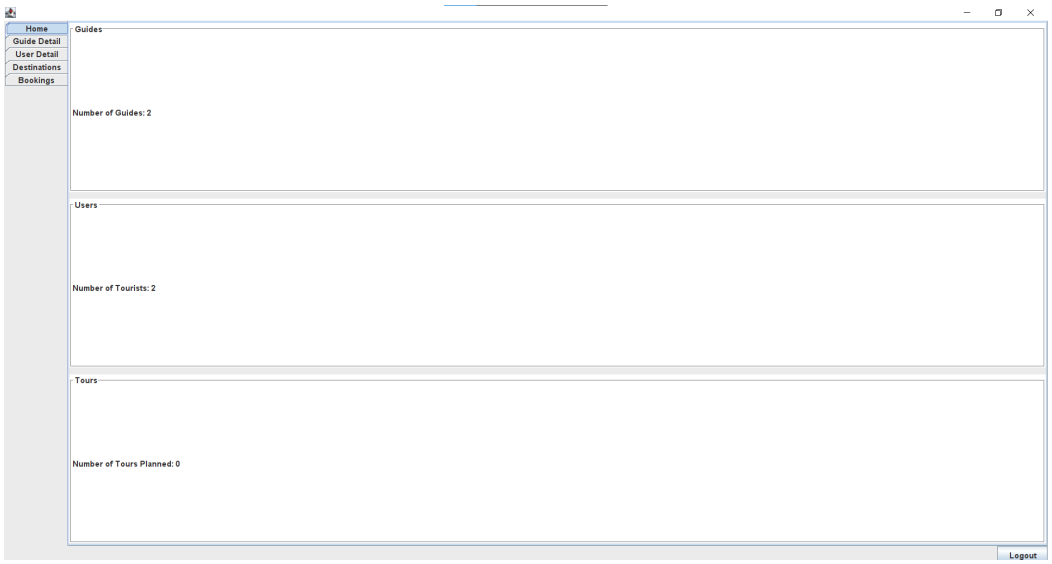

Figure 5: Admin Dashboard

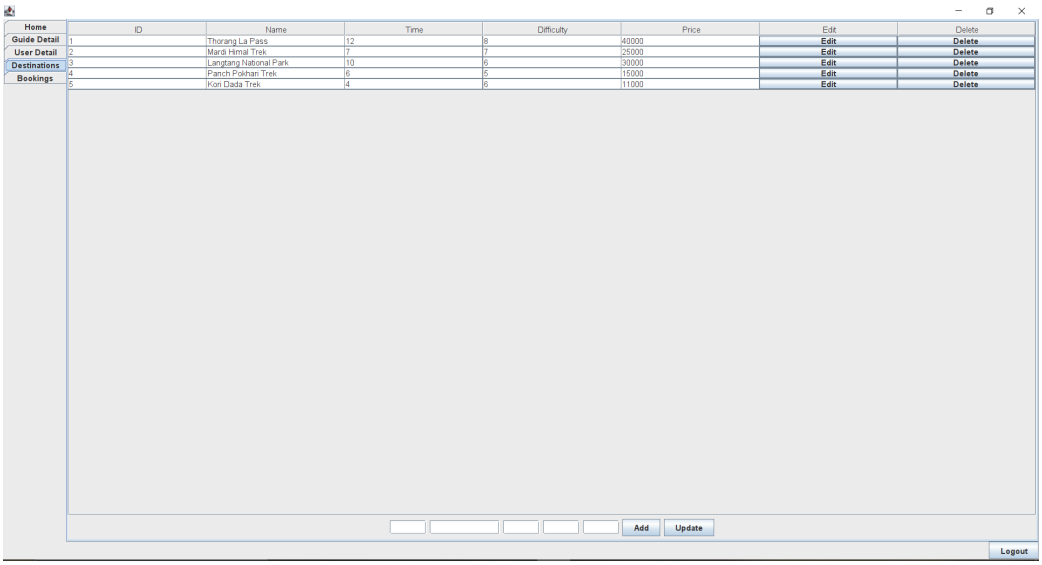

Figure 6: Destinations detail

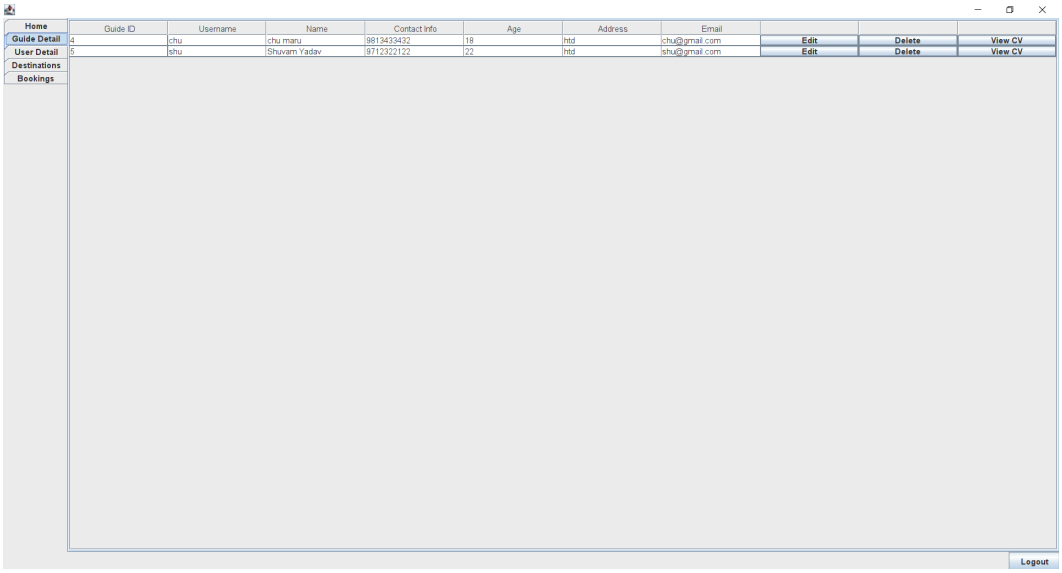

Figure 7: Guide detail

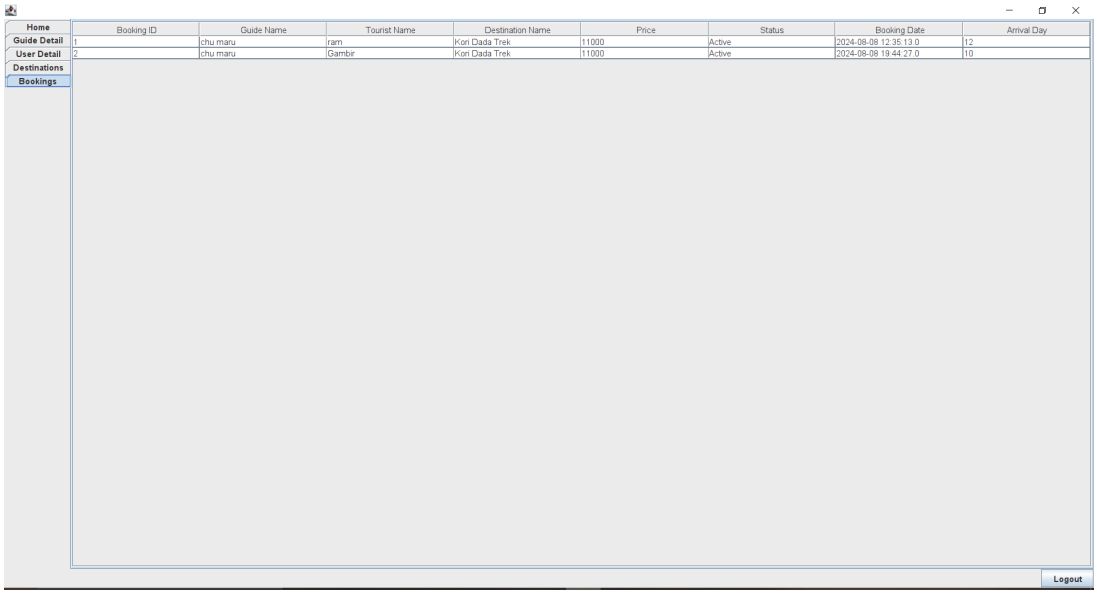

Figure 8: Bookings Detail

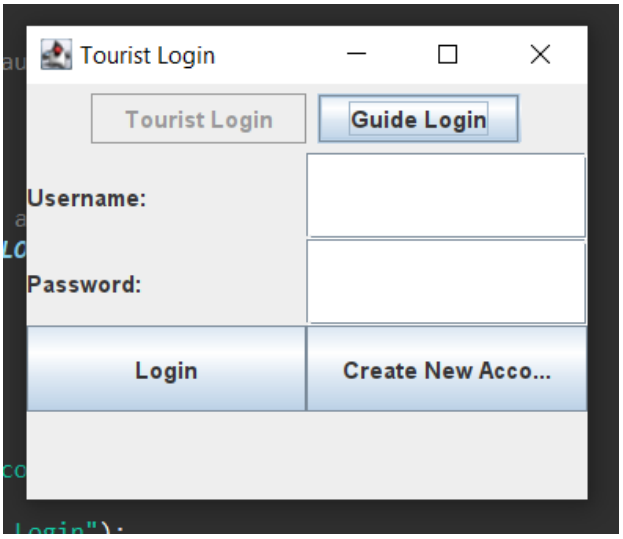

Figure 9: User login

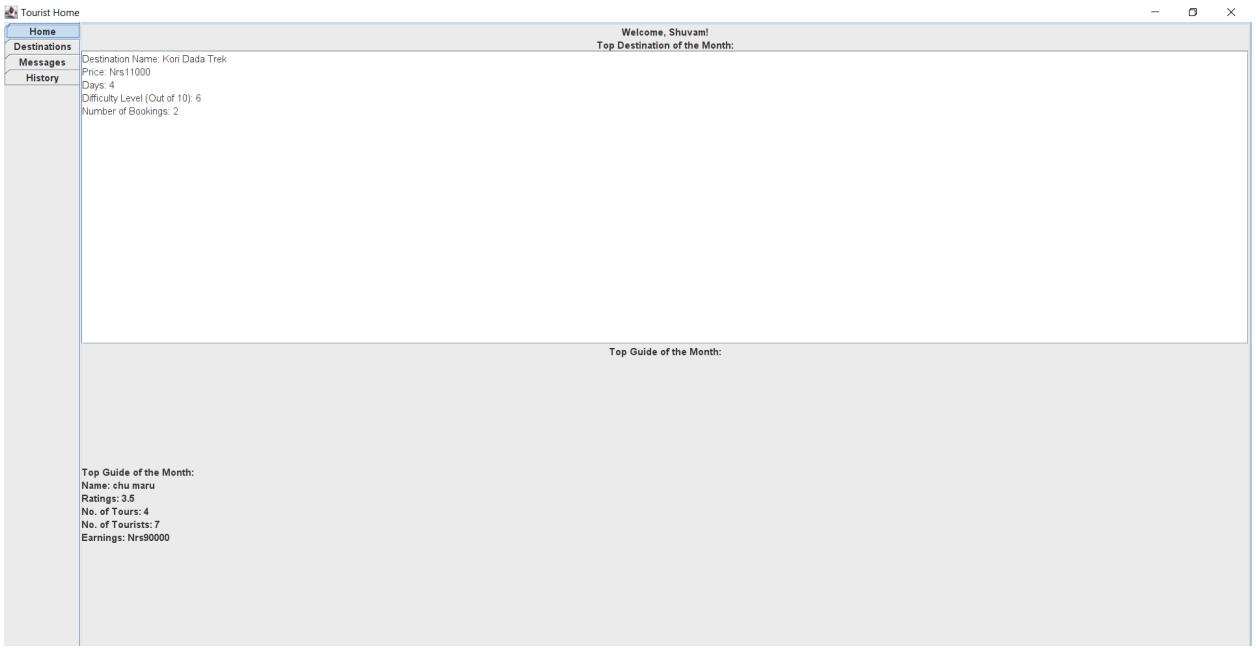

Figure 10: Tourist Dashboard

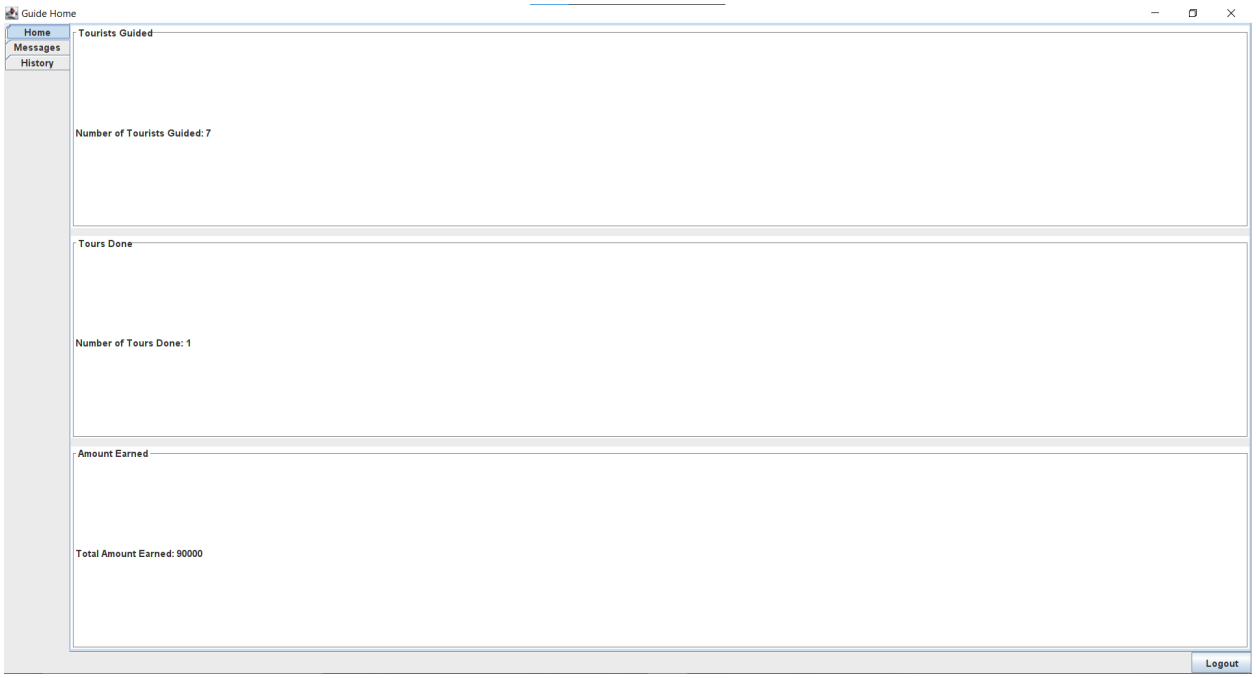

Figure 11: Guide Dashboard

Log Sheet

S.N.	Date	Work done	Comments	Signature	Remarks
1	03/020	Syncing content with database, As well as driver manager	Create related tables in database and displayed it		
2	03/25	About validation	Use regular expression		
4	04/15	Final conformation	Everything is good just redesign content		