Java Project Report on Bus Ticket Booking System

School of computer science and Engineering

Course code: CSE310

Topic: Bus Ticket Booking System using the Java GUI

Team Members Details

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PROJECT SUBMITTED TO:

Dr Amarinder Kaur

PROJECT TITLE:

Design an Bus Ticket Booking System using the Java GUI management System software using Java Programming Language.

INTRODUCTION

Bus ticket booking refers to the process of reserving seats on a bus through various channels, such as online booking platforms, ticket counters, mobile applications, and travel agencies. It has become a popular and convenient mode of booking bus tickets, as it saves time and effort for travelers

The process of bus ticket booking involves selecting the preferred route, bus operator, travel date and time, and the number of seats needed. Depending on the mode of booking, the traveler may need to provide personal details, such as name, contact number

.Bus ticket booking platforms provide travelers with a range of options, such as seat selection, cancellation and refund policies, and the availability of various amenities like air conditioning, Wi-Fi, and food. The cost of the ticket may vary depending on the route, time of travel, and the operator.

Overall, bus ticket booking has simplified the process of reserving seats on a bus, making it convenient and hassle-free for travelers to plan their journeys.

Advantages

Convenience: Bus ticket booking allows travelers to book their tickets at any time, from anywhere, through online booking platforms or mobile apps. This eliminates the need for travelers to visit ticket counters or travel agencies, saving time and effort.

Wide range of options: Bus ticket booking platforms provide travelers with a range of options, such as bus operators, routes, travel dates and times, and types of buses. This allows travelers to select the option that best suits their preferences and budget.

Availability of discounts and offers: Many bus ticket booking platforms offer discounts and offers to travelers, especially during festive seasons and off-peak periods. This enables travelers to save money on their ticket costs.

Transparent pricing: Bus ticket booking platforms provide transparent pricing, which means that travelers are aware of the ticket costs and any additional charges, such as taxes and service fees, upfront. This eliminates the risk of hidden charges and unexpected expenses.

Seat selection: Bus ticket booking platforms allow travelers to select their preferred seats on the bus, providing them with the comfort and convenience of their choice.

Cancellation and refund policies: Bus ticket booking platforms have clear cancellation and refund policies, which allow travelers to cancel or reschedule their

tickets as per their requirements. This ensures that travelers do not lose their money in case of unexpected changes in their travel plans.

Overall, bus ticket booking provides several advantages to travelers, making it a convenient, reliable, and cost-effective mode of reserving seats on a bus.

Programming Languages Used:-

In this system we use JAVA Platform for programming language.JAVA Platform means the environment which is used to run program.JAVA is platform independent language since no only single operating system can be required by the java. All the different operating system can execute the java programming language. Java provides huge functionality that means it provide A huge library.

❖Containing lots of reusable codes.

❖An execution environment that provides services such as security

❖Portability across operating system.

❖Automatic garbage collection.

Hardware Requirements:

1. Processor: Pentium 4 or onwards.
2. Hard Disc: 80GB.
3. RAM: 128MB.
4. Processor speed: 2.30 GHZ or higher
5. Monitor: 15= Colour Monitor.
6. Mouse.
7. Keyboard.

Requirement Analysis:-

➢ This involves studying the current system to find out how it is working and where the improvements should be made.

➢ These studies consider both manual and computer methods. Hence an early step in investigation is to understand situation.

Description About Project

The project is prepared using Java **GUI** in compiler NetBeans IDE-16 along with database **Mysql**.

This project consists of main Java modules:

1. Login.java
2. Bus ticket.java
3. Print ticket.java

Features Lists

1. Selection of Name of passenger module.
2. Selection of Boarding time module.
3. Selection of Boarding point module.
4. Select the destination point module.
5. Select the distance module.
6. Select Amount Module.
7. Select GST module.
8. Number of Tickets booking modules.
9. After the printing the ticket

Features of each module

1.Login.java: The login page typically consists of a form with fields for the user to enter their login information. These fields may include a username, or another identifier, as well as a password field for the user to enter their password.

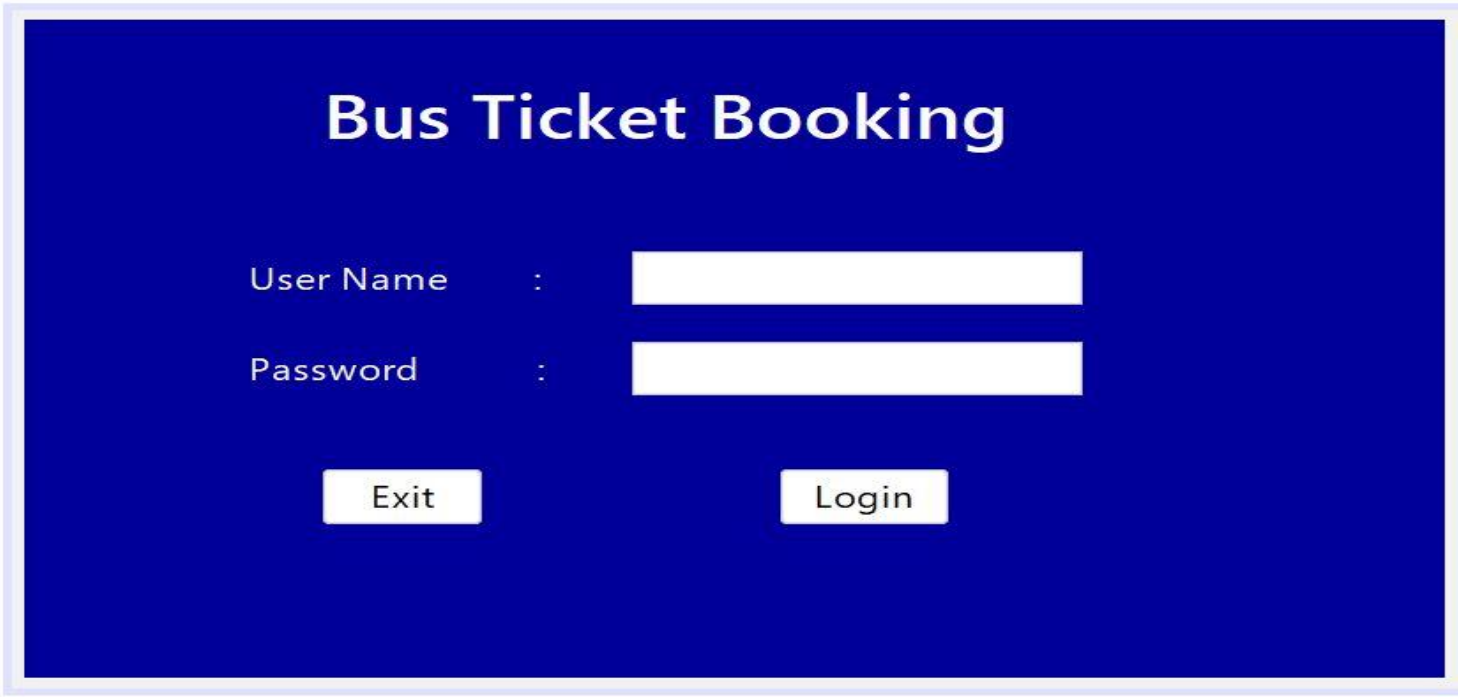
Characteristics:

- In this module when a user enters input for the text fields and presses on Login button it validates an event in Java called **void btnLoginActionPerformed().**
- The function used to validate whether the entered data is present in the signup table
- database is verified by **void user verification (String username, String password).**
- On pressing the signup buttons page will navigate to signup page
- On pressing the Exit button using **dispose() function** gui will exit from running.

The importance about successful login page:

- The login form gives access to your website or web application and therefore to your data. This form fulfils a fundamental task of security; but many times it is omitted to evaluate if the procedures of user name (user), keys (passwords) and authentication comply with the security recommendations

This is the User-Interface of an Login page



This is the User-Interface of a successful login page

2.Bus ticket.java: This is used to navigate to different modules and acts as a home/dashboard of the whole project in which all modules are present.

Characteristics:

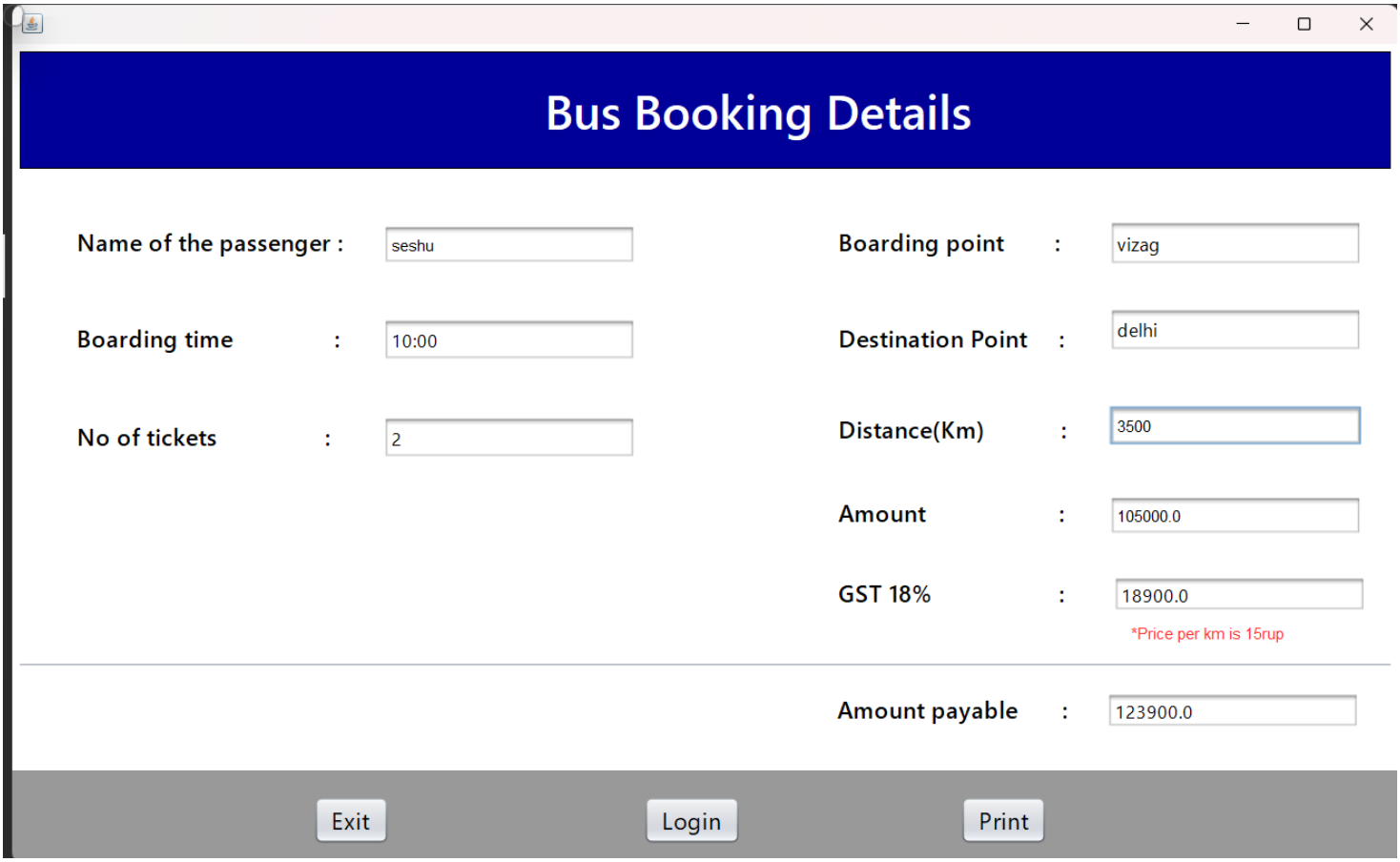
- Mouse clicked, entered, and exited events are used to change the color of the text field to act like a hover function.
- Each field as JPlane on the back of the JLabel of the text field.
- We need give details of passenger ,boarding time,no of tickets that we need
- And boarding point and destination point and distance km
- And enter thr distance then you will get the total payable amount
    - Selection of Name of passenger module.
    - Selection of Boarding time module.
    - Selection of Boarding point module.
    - Select the destination point module.
    - Select the distance module.
    - Select Amount Module.
    - Select GST module.
    - Number of Tickets booking modules.
    - After the printing the ticket

This is the User-Interface of a bus ticket.java

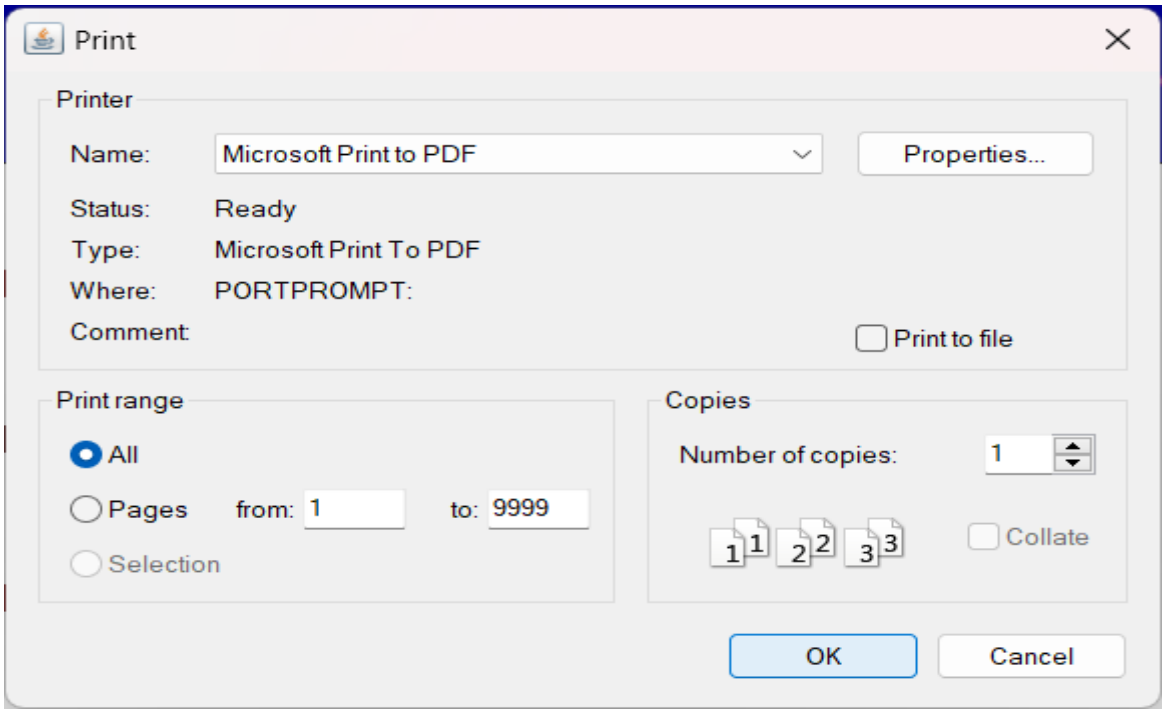
To implement this functionality, the system would typically have a user interface for selecting the travel details and entering payment information. This information would then be passed to the server-side code, which would perform the necessary validation and processing to book the ticket.

The server-side code would typically interact with a database to store information about the booked ticket, including the passenger details and the booking reference number. It may also interact with external payment processing services to securely handle payment transactions.

Overall, a bus ticket booking system in Java would need to carefully manage user input, perform necessary validation and processing, and securely handle payment transactions to provide a reliable and user-friendly experience for customers.



This is the User-Interface of print page.java



Print the page and click on ok

It will automatically save and open that printed ticket

Assuming you are referring to a Java program that prints pages, the user-interface for the Print Page class would typically include a few key elements.

here would be a section for selecting the printer to be used, which would typically display a list of available printers on the system.

Secondly, there would be an option to select the pages to be printed, either by specifying a page range or by selecting specific pages from the document.

Thirdly, there would be options for setting the print orientation (portrait or landscape), adjusting the page margins, and selecting the number of copies to be printed.

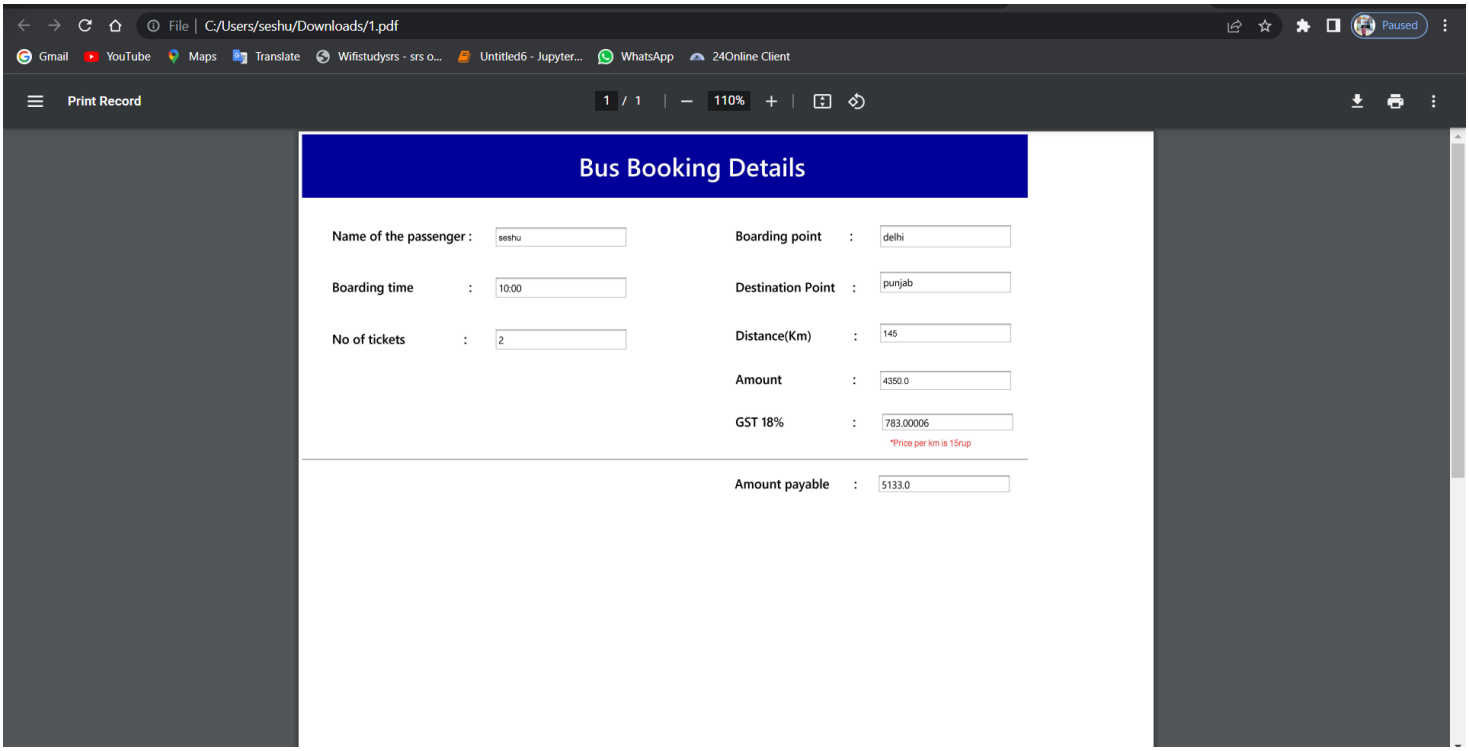
Finally, there would be a print button that initiates the printing process once the user has selected their desired options. The user-interface may also include a preview of the document being printed, allowing the user to preview the layout and make any final adjustments before printing.

Overall, the user-interface for a Print Page class in Java would need to provide a simple and intuitive way for users to select their desired print options and initiate the printing process.

This is the User-Interface of download page.java

the user interface for a download page in Java should be simple and intuitive, allowing users to quickly and easily download files while also giving them control over the download process. It should also provide feedback to the user on

the status of the download and any errors that may occur.



Java Concepts used are:

1. Inheritance
2. Exception Handling
3. Functional Interface and Lambda Expressions
4. Events in Java

Future Scope

This Bus Ticket Booking project can be enhanced further by adding the Agent Module to perform the agent-related functionalities, The generated ticket can be sent to the email id of the customer.

The website is flexible enough to be modified and implemented as per future requirements.

We have tried our best to present this website. Messages and Email alerts for various things can be sent to the Users so that they cannot miss anything.

The offers information for various festival seasons can be sent to the User. The payment-related things can be upgraded.

CONCLUSION

In the Online Bus Ticket Booking system, we have developed a secure, user-friendly Website where users,s or visitors, can view and search the buses for a specific route and can check seats available on the buses. Here we have maintained records of passenger details, seat availability, price per seat, bill generation, and other things, we have developed a computerized reservation system successfully.

GIT HUB LINK:

https://github.com/saathvicbalabhadra/Bus_booking.git