



Course Code : CSE 404
Course Title : Software Engineering and ISD Laboratory
Project name : Bus ticket booking management system
Experiment no: 07
Experiment name: Application of design pattern (Interface) of bus ticket

Submitted To

Dr. Mohammad Zahidur Rahman

Professor

Dr. Md. Humayun Kabir

Professor

Department of Computer Science & Engineering
Jahangirnagar University, Savar.

Group No : 02

Group members :

Sl	Class Roll	Name
01	342	Tama Shil
02	370	Prokash Maitra
03	374	Mubasher adnan jihad
04	375	Pritam Saha

Prokash Mitra

Roll:370

Introduction:

Interface design is a crucial aspect of software development that focuses on creating clear and intuitive user interactions. In this report, we will explore the interface design of an online bus ticket management system, highlighting the considerations, principles, and components that contribute to an effective and user-friendly interface.

1. Importance of Interface Design:

Interface design plays a pivotal role in enhancing user experience and satisfaction. A well-designed interface not only makes the system visually appealing but also ensures ease of use, efficient navigation, and clear communication of information.

2. Design Principles:

- **Clarity and Consistency:**
Ensure that the interface elements are clear and easily understandable. Consistency in the placement of buttons, icons, and navigation elements across different sections of the application helps users feel comfortable and confident while using the system.
- **User-Centric Approach:** Design the interface with the user's needs and expectations in mind. Understand the target audience and tailor the interface to their preferences and behaviors. Use user personas and scenarios to guide your design decisions.
- **Minimalism and Simplicity:** Keep the interface clean and uncluttered. Avoid unnecessary elements that might confuse or overwhelm users. Prioritize essential information and actions, presenting them in a straightforward manner.
- **Visual Hierarchy:** Use visual cues such as size, color, and placement to establish a clear hierarchy of information. Important elements should stand out while secondary elements remain less prominent.
- **Feedback and Responsiveness:** Provide instant feedback for user actions. Buttons should respond to clicks, forms should provide

validation feedback, and loading states should be indicated. Ensure that the interface is responsive and adapts well to different devices and screen sizes.

Mubasher Adnan Jihad

Roll:374

Must have booking Software features for client-

Must-Have Bus Booking Software Features for Clients



**Easy Registration
& Social Login**



**Destination,
date/time,
passengers**



**Trip choice & tour
details**



**Passenger's
information**



**Confirmation
& payment**

Must have bus booking Software business for Business-

Must-Have Bus Booking Software Features for Business



**Control Hub
& Dashboard**



**Routes
& Schedules**



**Inventory
management**



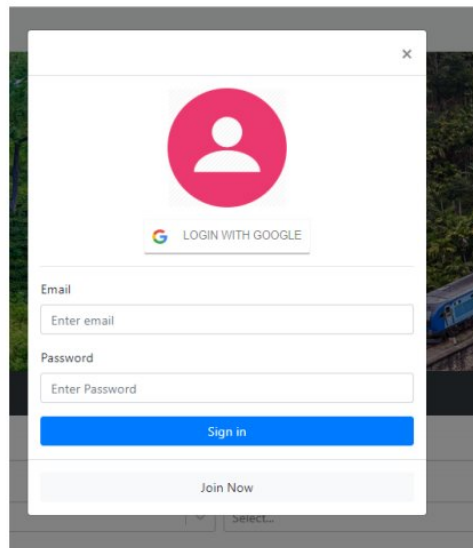
**GPS Bus
Tracking**



**Bus driver
management**

Pritam Saha
ID:375

1) User login: The login serves as the point for user login

A user login form is displayed as a modal window. At the top, there is a pink circular icon with a white person silhouette. Below this icon is a button labeled "LOGIN WITH GOOGLE" with the Google logo. The form contains two input fields: "Email" with the placeholder text "Enter email" and "Password" with the placeholder text "Enter Password". Below these fields is a prominent blue "Sign in" button. At the bottom of the form is a light gray "Join Now" button. The modal has a close button (an 'x') in the top right corner. The background of the page is a blurred image of a train.

2) Registration

The registration serves as the point for user registration

Create an Account



☒ Subscribe to our email list

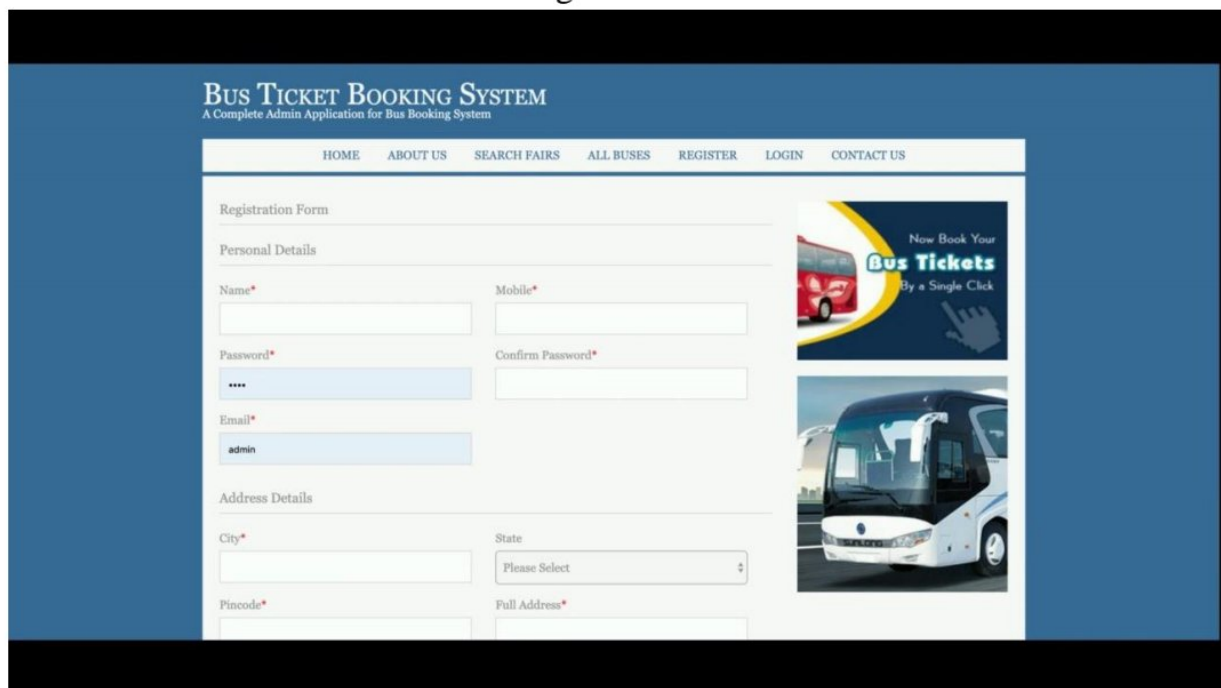
Register

Tama Shil
ID:342

3. Components of the Interface:

- **Home Page:**

The home page serves as the starting point for users. Display available buses, routes, and search options prominently. Include a user-friendly search bar and clear navigation links.



The screenshot displays the 'BUS TICKET BOOKING SYSTEM' registration form. The header includes the system name and a navigation menu with links: HOME, ABOUT US, SEARCH FAIRS, ALL BUSES, REGISTER, LOGIN, and CONTACT US. The form is divided into two main sections: 'Personal Details' and 'Address Details'. The 'Personal Details' section contains fields for Name*, Mobile*, Password*, Confirm Password*, and Email* (with 'admin' entered). The 'Address Details' section contains fields for City*, State (a dropdown menu currently showing 'Please Select'), Pincode*, and Full Address*. To the right of the form, there is a promotional banner for 'Bus Tickets' with the text 'Now Book Your Bus Tickets By a Single Click' and an image of a bus.

- **Bus Details Page:**

When a user selects a bus, present detailed information about the bus, including amenities, seat layout, and photos. Provide the option to choose seats and view available time slots.

Bus Registration

Customer Seat Booking

Bus Registration

+ Basic Details

+ Bus Details

+ Trip Details

+ Stoppages Details

Submit

Reset

Activate Windows

Go to Settings to activate Windows.

- Booking Process:** Streamline the booking process. Clearly show available seats, allow seat selection, and prompt users to enter passenger details. Provide a summary of the booking before confirming.

Bus Registration

Customer Seat Booking

ABC1

Aniket Travels

Owner Name	Mobile No	Email ID	Endpoint1	Endpoint2
Aniket Agarwal	1234567890	anikettravels@sample.com	Jammu	Amritsar

Bus Scheduling

Completed Trips

Scheduled Trips

Start Point

Departure Time

End Point

Arrival Date

Departure Date

Arrival Time

Activate Windows

Go to Settings to activate Windows.

- Ticket Confirmation Page:**
 After booking, display a confirmation page with all relevant details, including seat numbers, departure time, and boarding point. Provide a printable or downloadable ticket.

ABC1

Q

Bus Registration

Customer Seat Booking

ABC1

Aniket Travels

Owner Name	Mobile No	Email ID	Endpoint1	Endpoint2
Aniket Agarwal	1234567890	anikettravels@sample.com	Jammu	Amritsar

Bus Scheduling

Completed Trips

Scheduled Trips

Start Point	End Point	Departure Date	Departure Time	Arrival Date	Arrival Time	Seat Pdf
Jammu	Amritsar	01/01/2025	12:00:00	01/01/2025	19:00:00	View Pdf

- User Dashboard:**
 Create a user dashboard where users can view their booking history, manage their profile, and access customer support if needed.

6. Conclusion:

Effective interface design is a blend of aesthetic appeal, usability, and functionality. In the context of an online bus ticket management system, a user-centric approach, adherence to design principles, thoughtful arrangement of components, and attention to visual elements contribute to a seamless and satisfying user experience. An intelligently designed interface enhances user engagement and contributes to the success of the application.



Course Code : CSE 404

Course Title : Software Engineering and ISD Laboratory

Project name : Bus ticket booking management system

Experiment no: 07 refine

Experiment name: Application of design pattern (Interface) of bus ticket
management system

Submitted To

Dr. Mohammad Zahidur Rahman

Professor

Dr. Md. Humayun Kabir

Professor

Department of Computer Science & Engineering
Jahangirnagar University, Savar.

Group No : 02

Group members :

Sl	Class Roll	Name
01	342	Tama Shil
02	370	Prokash Maitra
03	374	Mubasher adnan jihad
04	375	Pritam Saha

Tama shil

ID-342

Design pattern is kind of "one-size-fits all" approach, where we will show how our functionalities are designed and positioned in our system.

For interface design pattern we will follow our MVC model and show some functionalities design. We will explore the application of interface design pattern in context of an online bus ticket management system.

The interface design focus on-

- Common interface that multiple classes can implement
- Ensuring consistency and flexibility in the system architecture.

Design principles -

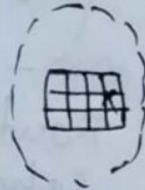
- ☐ Clarity and consistency
- ☐ User-centric Approach
- ☐ Minimalism and simplicity
- ☐ Visual hierarchy
- ☐ Feedback and Responsiveness

Name : Mubashere Adnan Jihad
Roll : 374

Must have Booking Software Features for clients.



Easy registration
& Social login



Destination,
date/time,
passengers



Trip choice
and tour
details



Passenger's
information



Confirmation
& Payment

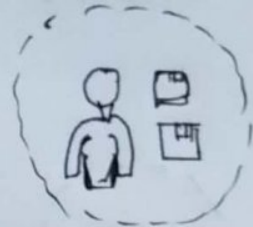
Must Have Bus Booking Software Features for Business



Control Hub
& Dashboard



Routes &
schedules



Inventory
management



GPS
Bus Tracking



Bus Drivers
management

Name: Pritam Saha

Id : 375

1) Login :

The login serves as the point for

Users login:

- User name
- User password
- login

Login



Username

Password

[Forgot Password?](#)

Login

or sign up using

Sign In

2) Registration:

The Registration serves as the point for user registration.

• Registration Form • X

• Name

• Email address

• Gender

• Phone

• Password

CREATE ACCOUNT

Already have an account?
[link] sign in

Tama shil
ID-342

Feedback and Responsiveness

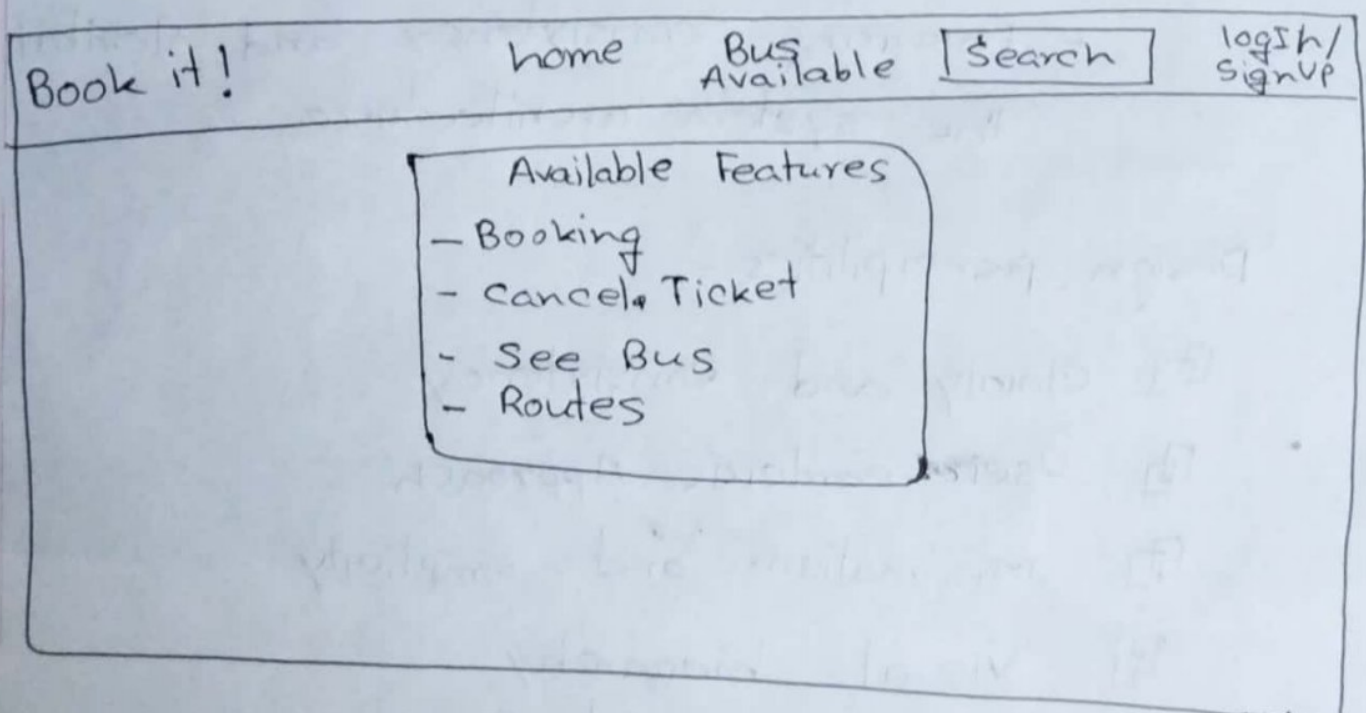
Component of the interface

3) HomePage

The homepage serves as the point for users. Displays -

- available buses
- login/signUp
- Routes
- Search

It includes a user-friendly search bar and navigation links



4) Bus Detail Page

when a user selects a bus, present detailed information about the bus, including

- seat layout

- photos

- time slots

Provide a option to choose seats and view available time slots.

Time:

total seat:

Available seat:

From: To:

Seat →

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☒ → booked
☐ → available

4.5) Booking / Reservation -

Streamline the booking process. Show

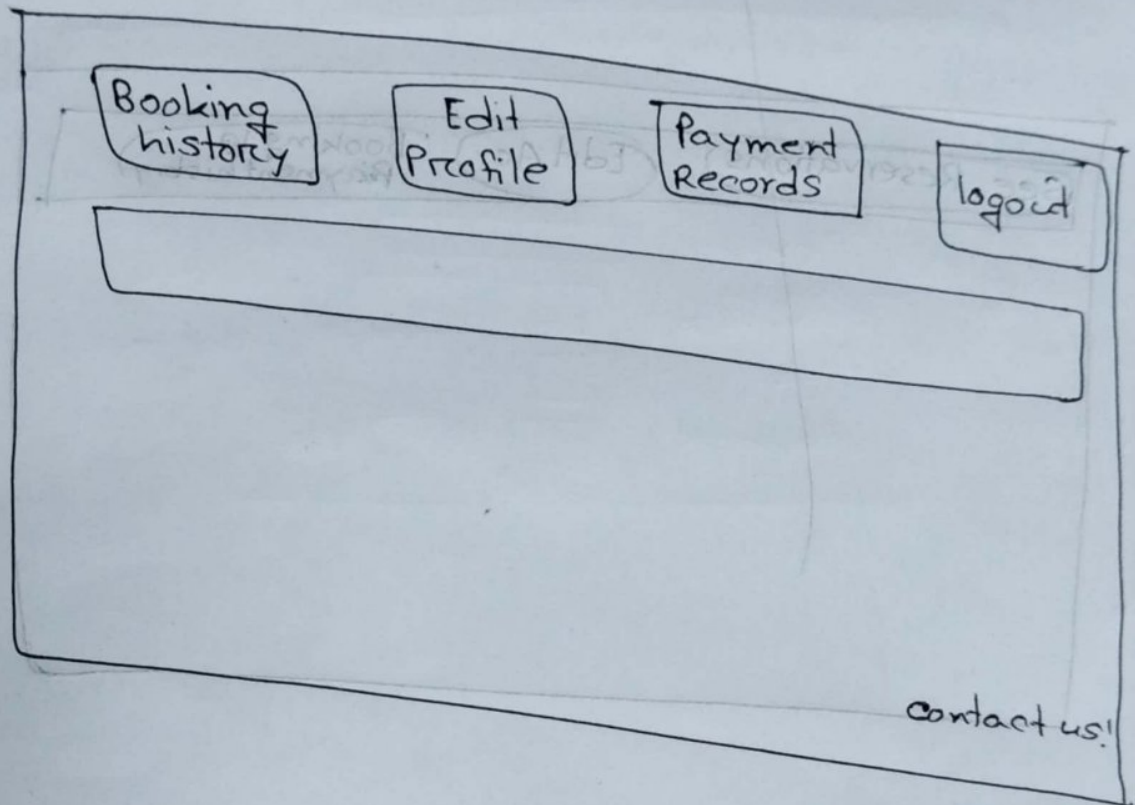
- Available seats
- passenger details
- Payment

It provide a summary of booking before confirming.

Passenger Name:	<input type="text"/>
Gender:	<input type="text"/>
Mobile:	<input type="text"/>
PickUp:	<input type="text"/>
Route:	<input type="text"/>
Fare:	<input type="text"/>
Payment:	<input type="button" value="book"/> <input type="button" value="Bikash"/> <input type="button" value="Acc"/>
	<input type="button" value="Submit"/>

c) User Dashboard

Creates a user dashboard where users can view their booking history, manage profile, access customer support,



Conclusion

Effective interface design is a blend of aesthetic appeal, usability, functionality as so on. In context of an online bus ticket management system, a user-centric approach, adherence to design principles and implement visual elements to contribute to a seamless and satisfying user experience.