Course Code : CSE 404

Course Title : Software Engineering and ISD Laboratory

Project name : Bus ticket booking management system

Experiment no: 08

Experiment name: Application of Design Principle of our Project

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

Mubasher Adnan Jihad

Roll:374

1. Introduction:

The design principles lay the foundation for creating user-centered, functional, and visually appealing software applications. This report delves into the extensive application of design principles within the context of an online bus ticket management system. By adhering to these principles, the system aims to ensure a seamless and user-centric experience for both customers and administrators.

2. The Significance of Design Principles:

Design principles act as guiding beacons, directing the creation of interfaces that not only look good but also deliver optimal user experiences. By following these principles, designers and developers can ensure a consistent and engaging user interface that effectively fulfills the intended functionalities.

3. Application of Design Principles:

3.1 Consistency and Unity:

In the online bus ticket management system, consistency remains paramount. By using a unified design language, including a consistent color palette, typography, and UI components across the application, users are able to intuitively navigate and interact with different sections. This enhances familiarity and reduces the learning curve.

Prokash Maitra

Roll:370

3.2 Simplicity and Minimalism:

The principle of simplicity guides the presentation of information. A clean and minimalist design approach ensures that users are presented with only the essential details required for their interactions. By reducing visual clutter, the system prevents cognitive overload, allowing users to focus on their primary tasks, such as booking tickets, without distractions.

3.3 User-Centered Design:

Understanding the target audience is pivotal. By developing detailed user personas and user scenarios, the system can be tailored to cater to the specific needs, preferences, and behaviors of users. This ensures that the interface resonates well with the intended user base, enhancing user satisfaction and engagement.

3.4 Visibility and Feedback:

Clear and immediate feedback is crucial to user interactions. By incorporating visual cues that respond to user actions, such as button depressions and loading animations, the system provides users with confidence that their inputs have been acknowledged. This feedback mechanism fosters a sense of control and engagement.

3.5 Fitts's Law and Ease of Use:

Leveraging Fitts's Law, commonly seen in the size and placement of interactive elements, ensures that frequently used components are larger and more accessible. This design principle acknowledges the physical limitations of human movement, making interactions more intuitive and reducing the likelihood of errors.

Pritam Saha

ID:375

3.6 Hierarchy and Visual Organization:

Implementing a well-defined visual hierarchy ensures that users can swiftly navigate the interface. Through strategic use of sizing, color contrast, and placement, important elements draw attention while maintaining an organized flow of information. This organization minimizes cognitive load and supports efficient navigation.

3.7 Contrast and Readability:

Employing sufficient color contrast between text and background enhances readability. This practice ensures that information is accessible to users with varying visual abilities. A harmonious contrast ratio contributes to a comfortable reading experience, promoting engagement with the content.

3.8 Feedback and Error Prevention:

Swift feedback mechanisms are embedded to keep users informed about the outcomes of their interactions. During the booking process, validation steps help prevent errors by guiding users to provide accurate and complete information. This minimizes frustration and ensures a smooth user journey.

4. Components of the Application:

4.1 Home Page:

The home page serves as the entry point, offering an organized display of available routes and buses. By employing a visually clear search bar and prominent navigation elements, users are encouraged to seamlessly initiate their journey through the system.

Tama Shil
ID:342

4.2 Bus Details Page:

The bus details page is designed to provide comprehensive information about each bus type, including features, seating arrangements, and amenities. Users can conveniently explore available seats and select their preferences, creating an engaging and informative experience.

4.3 Booking Process:

A streamlined and user-friendly booking process guides users through the steps of selecting seats, entering passenger details, and confirming the booking. Each step is designed to be intuitive, ensuring that users can comfortably complete the transaction.

4.4 Ticket Confirmation and User Dashboard:

Upon successful booking, a detailed ticket confirmation page provides users with all relevant information. Additionally, a user dashboard allows users to access their booking history, manage their profiles, and seek assistance, reinforcing a sense of ownership and control.

5. Conclusion:

The application of design principles within the online bus ticket management system showcases the fusion of aesthetics, usability, and functionality. Through adherence to principles such as consistency, simplicity, user-centered design, and effective feedback mechanisms, the system offers a user experience that is both satisfying and efficient. The considered application of these principles serves as a testament to the commitment towards creating a system that is not only visually appealing but also genuinely user-centric. As a result, the online bus ticket management system stands poised to deliver seamless interactions and cater to the diverse needs of its users.

Course Code : CSE 404

Course Title : Software Engineering and ISD Laboratory

Project name : Bus ticket booking management system

Experiment no: 08

Experiment name: Application of Design Principle of our Project

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