

CHAPTER I INTRODUCCION

Background of Study

Internet technology has now become a necessity It is very important for every individual, everyone can access and find everything information around the world quickly and easily. Can not be denied that the internet has become a primary need which is very helpful and lighten people's work in daily life. And in the business world, the internet is used as a connecting tool very practical for communication between companies and customers without having to think about distance, time and location.

Along with the development of technology and the internet, many have been built online system, which makes it easier for someone to do access it from anywhere and get the latest information, one of business that currently needs help from information technology is a travel business.

Booking tickets is a process that many people often go through do it before going on a trip or departure. So far Ticket reservations are made using the conventional method, namely by customer Come to the departure point or via telephone to order tickets and then you can ask about candidate pick-up facilities passengers and their departure times. This method is less effective in terms of time and cost because can cause a mismatch between customer desires in the event of departure times or tickets being sold out. Information which is clearly needed by customers so that it doesn't take up time as well as costs, for this reason the company must be able to facilitate it by using the application.

Transportation services play an important role in economic activities, so that business actors in the transportation sector are obliged to increase quantity and the quality of its performance in an effort to face market competition. Every Companies need to have a company application that can display information in order to be able

to compete healthily with competitors in the same field, especially in the field of rail transportation.

Online ticket ordering can be called e-booking. E-booking that is order online using the internet by accessing the application page available (Andi, 2018). So companies and customers should no longer limited by time and distance, now everything can be done online via website or mobile media. After the e-booking process, customers will get a digital ticket (e-ticket).

E-ticketing or electronic ticketing is a ticket in digital form that has been used since June 1 2009. E-ticketing is a way to document the sales process of customer travel activities without having to remove physical valuable documents or paper tickets.

Based on the description above, the author is interested in compiling an FYP project with the title: "android train ticketing". The application can quickly order traintickets and send the order results directly to the server. It is hoped that this online ticket application will make it easier to access ordering information, improve weaknesses in the customer ticket ordering process and data processing carried out by officers.

Based on the background above, the problem statement for the Android train ticketing system

Problem statement

project includes the following key points:

1. Inefficient Ticket Booking Process: The current method of booking train tickets is cumbersome and time-consuming, leading to inconvenience for users.
2. Lack of Route Information: Users face challenges in accessing comprehensive route information for all train destinations, affecting their ability to plan trips effectively.
3. Absence of Digital Ticketing Solutions: The absence of electronic ticketing options results in the need for physical ticket collection, causing inconvenience and potential loss of tickets for customers.

By addressing these issues through the development of an Android train ticketing system, the project aims to streamline ticket booking, provide detailed route information, and introduce digital ticketing solutions for a more seamless and user- friendly experience.

Objective

Application train ticketing system can be developed with the following objectives in mind:

I. To Develop a Comprehensive Train Ticketing System for Users to Purchase Tickets:

The primary objective is to create an intuitive and user-friendly platform that allows users to effortlessly purchase train tickets. This includes enabling users to select their preferred travel dates, times, and destinations, and to securely complete their transactions online. The system should support multiple payment methods and provide a seamless booking experience to enhance user satisfaction.

II. To Provide an Extensive Route Map for All Train Destinations:

Another crucial objective is to offer a detailed and accurate route map that covers all train destinations. This feature should allow users to view and explore various train routes, understand connections and transfer points, and plan their journeys more effectively. The route map should be interactive and up-to-date, providing real-time information on train schedules, delays, and other pertinent details.

III. To Notify Users via WhatsApp or SMS with Important Information:

An essential aspect of the application is to ensure timely and reliable communication with users. This involves sending notifications via WhatsApp or SMS to keep users informed about their booking status, payment confirmations, travel reminders, and any changes or updates related to their journeys. These notifications should be automated, personalized, and designed to enhance the overall travel experience by keeping users well-informed at every stage of their trip.

1.4 Scope of the project

The scope of research for developing a local train ticket booking system will focus more on improvements and innovations in the context of a special train ticket booking system for local or regional trains. The following are some aspects that may be part of the scope of this research:

1. Develop application:

- Intuitive and easy-to-use user interface design so customers can quickly book local train tickets.
- Integration with mobile apps for easy access via mobile devices.

2. Availability Information:

- Provides accurate information about local train schedules, service types, station stops and fares.
- Provide additional information such as route maps and explanations of additional services (if any).

3. Order Management:

- Analyzing booking data to identify trends, such as peak booking times, popular routes, and seasonal variations in demand.
- Ability to book tickets, select seats and pay with various payment options.
- Tracking ordering and downloading tickets via mobile application.

The scope of this research must be carefully considered, and the system development team must coordinate with local railway companies or related agencies to ensure the system built can meet their needs and requirements. By focusing on local trains, this research can improve service quality and travel efficiency within the region.

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The user scope for ordering train tickets is different between users (customers) and admins. Admin in this context is the person or entity who manages the train ticket booking system. This admin role includes managing data, settings and policies related to train ticket bookings. The following are several aspects of the admin user scope in ordering train tickets:

- **Data Management:** Admins have access rights to manage important data related to train tickets, including departure and arrival schedules, ticket prices, train types, and seat availability. They need to ensure that all information available in the system is accurate and up to date.
- **Price Settings:** Admin can set train ticket prices for various types of train classes (for example, economy, business, or first class) and certain periods (for example, holiday season or weekdays).
- **Booking Management:** Admin must have access to view, check and manage incoming ticket orders. They can assist customers in processing schedule changes or ticket cancellations.
- **Seat Availability:** Admin needs to monitor seat availability on each train journey and can assist customers in finding seats that suit their preferences.
- **Order Confirmation:** Admin can confirm orders and send proof of order to customers via email or text message.
- **User Management:** Admins may also be responsible for the management of user data, such as contact information and order history. They need to ensure that this data remains safe and protected.
- **Policies and Rules:** Admins need to manage policies and rules that apply to ticket bookings, such as cancellation policies, refund policies, and rules regarding child or infant ticket bookings.
- **Reports and Analytics:** Admins can generate reports and analyzes related to ticket bookings, including sales data, booking trends, and other statistics. This information can help in planning business strategies.

The admin user scope is important for maintaining the smooth operation of the train ticket booking system, providing support to customers, and ensuring compliance with applicable policies and regulations. Admins are responsible for maintaining data and systems to function efficiently and provide the best experience to customers.

1.4.1.2 User

User scope in the context of ordering train tickets refers to the understanding and limitations of customers or users who want to order train tickets. The following are several aspects of the customer's user scope when ordering train tickets:

- **Search and Selection:** Customers need to search for information about the train tickets they need. This includes selecting the starting and destination stations, departure date, number of passengers, and desired train class (for example, economy, business, or first class).
- **Ticket Booking:** After finding a suitable option, customers can book tickets. They need to fill in personal information, such as full name and contact information, and choose a payment method.
- **Seat Selection:** Some train ticket booking systems allow customers to select their own seats. Customers can choose seats with specific preferences, such as window or aisle.
- **Order Confirmation:** Once payment is received, the customer will receive an order confirmation via email or text message. It contains information about the booking, booking number, and e-ticket or QR code if applicable.
- **Checking and Check-In:** Before the trip, customers need to check according to the procedures set by the train operator. This includes printing a boarding pass or showing a QR code at the station entrance.
- **Changes and Cancellations:** If customers need to change their itinerary or cancel a trip, they must follow the procedures set out by the ticket provider. This includes understanding applicable change and refund policies.

- Feedback and Evaluation: Once the journey is complete, customers can evaluation of their experience, both positive and negative.

Customer user scope in ordering train tickets is the key to understanding customer needs and preferences. This enables ticket providers to provideservices that match customer expectations and provide a satisfying booking andtravel experience.

1.4.1.3 System

The system scope or scope of the train ticket booking application is a collection of features, functions and components needed to develop the application. The scope of this will vary depending on the needs and objectivesof the application, but the following are some common components that are usually included in a train ticket booking application system:

User Registration:

- Registration form for new users.
- Authentication and user account management.
- Option to log in using email, phone number, or social media.

Ticket Search:

- Train ticket search facility based on origin station, destination station, departure date and number of passengers.
- Display ticket search results which include train schedules, prices, classes and availability.

Reservation and Payment:

- Selection of train tickets, class and number of passengers.
- Total price calculation includes additional fees (if any).
- Process payments using various payment methods, such as credit cards, bank transfers, or digital wallets.

Reservation Confirmation:

- Sending emails or notifications to users containing ticket order details and order codes.
- Storing order information in the system.

User Account Management:

- Users can manage profiles, change passwords, and view order history.

Ticket and Boarding Pass Delivery:

- Option to print tickets or get boarding passes via mobile app.

Train Information:

- Displays information about the train which includes schedules, routes, facilities on the train, and train rules.

Cancellation and Refund System:

- Mechanism for canceling orders and requesting a refund according to applicable policies.

Ticket Inventory Management:

- Monitor and manage ticket stock to avoid overbooking.

Admin System:

- Admin access to manage users, routes, schedules, ticket prices and transaction reports.

Reports and Analytics:

- Provides reports and analytical data to aid decision making.

Integration with Railway Systems:

- Integration with railway systems to check ticket availability and make reservations in real time.

Security and Data Protection:

- Protection of user personal data and payment transactions.

Customer service:

- Customer support via email, phone, or live chat to handle user questions and concerns.

This scope can be tailored to business needs and technical requirements. It is important to plan and develop the application carefully to ensure that all these components work well and provide a smooth train ticket booking experience for users.

The development of a train ticket booking system is important for the following reasons:

1.5 Significance

- **Develop train ticketing app:** In order to respond to increasingly sophisticated customer needs and keep up with technological developments, developing a train ticket booking system is important to improve service quality, efficiency and competitiveness of train companies.
- **Improved Mobility:** Comprehensive train route maps enable individuals and travelers to plan their trips more efficiently, increasing mobility and accessibility to various destinations.
- **Proof of Transaction:** Printing order receipts provides valid and official proof of transactions to customers. This is especially important in the context of travel that involves paying for tickets, booking accommodation, or purchasing other products or services. Customers can use it as a reference if problems or changes occur along the way.

1.6 Summary

So this application was created to make it easier for customers to order train tickets. This application will have many features where these features are very helpful for customers, one of which is travel routes and e-mail notifications an hour before departure.

