

Research

Research is the most featured method that can use to get more information about regarding company. By this way users and developers can create a system which fulfills requirements of customer. Those popular companies that researched such as Metro, Ulusoy etc. and they observed by team members.

Interview

Team members ask a friend who is working in box-office in order to get more information from different perspectives. We had these questions:

1. Does your company use any system?

They use a system which box-officer get in and select the ticket.

2. Do you think this system which you are using is user-friendly?

Some customers cannot make tickets reservations by using online system. Elderly people generally suffer from that program is too complicate and they do not trust security when they use their credit cards.

3. Do you think this system easy to use?

I get used to use it, so I feel okay but it can be better.

4. Do you like and dislike about the system?

I like system generally but sometimes errors occur.

5. What kind of error happens?

Rarely system stack or when the electricity goes system doesn't give last information after generator start and system comeback.

Observation

Online bus ticket systems are available in websites of bus companies, but the thing is team members observed that system wants information of card owners and there are so many steps and unknown information of companies' campaign.

Moreover, box-officers suffer from stack and system doesn't give last information after generator starts in the interview below the observation.

System Requirements

System Requirement Specifications

1. Box-officer or passenger shall indicate available seats, date, time for passengers with operator.
2. After these situations, box-officer shall get information from passenger or customers shall fulfill their information on Online Booking System.
3. Passengers pay cost of the seats for reservation or buy the tickets.
4. Operator completes reservation or buying processes.
5. If the passengers want to get information about procedure, they can access easily.
6. After each bus leave the station, a summary of tickets recorded, their costs and the recording tickets shall be generated.
7. The system shall automatically generate report after each bus leave station.
8. A report shall be created for each bus-office and shall list the station names, total number of passengers, times and total cost of travel.
9. If routes of bus are same separate reports shall be created for each times of travel.
10. Access of the all reports shall be restricted to authorized by access control.

Functional Requirements

- In the main menu page is opened, box-officer will be prompted to home page.
- When users click help button, system will display asked questions and answers.

Software Interfaces

The databases shall include bus seats, passenger information and agent. These can be modified by end-user. The bus database will include passengers' and agents' information such as passengers' full name and agents' id etc.

Software should include payment gateways integration, remote hosting, SMS, users' permissions and encrypted password.

Product Functions

- Allows for typing in passenger information.
- Has a unique ticket number.
- When a passenger make reservation color of seat shall change white to pink or blue according to their gender.
- Records payment.
- Allows adding various bus types, show seats number and graphic seat map.
- Allows adding multiple bus routes with start, end and intermediate stop locations.
- Allows seeing a route time table with the departure times of all buses of specific route.
- Multilanguage supporting.
- Email & SMS notifications.

Non-functional Requirements

Product Requirements

The company does not want to switch off electricity more than 5 minutes in this case system should include UPS. The reason why UPS is ideal for a range of applications and industries including; IT, telecommunications, financial services, education, healthcare. UPS is used for reliability, efficiency, availability, scalability and flexibility.

Performance Requirements

The load time for user interface screens shall take no longer than five seconds.

Query shall return result within five seconds.

External Requirements

The system shall implement passenger privacy recognized that credit card details, IP address if booked online, as well as the names and personal information of emergency contacts.

User Requirements

User Requirement Definition

The system shall generate seasonally management reports showing the cost of passengers describe by each station during a season.

Usability Requirements

- Aim of the system is that easy to use by passengers and station staff and errors should be minimized.
- Passengers should set their preferred currency from drop-down list
- Defining deposits and tax payment is important for customers.
- Getting easier online payments
- System should provide indicating enable/disable payments to passengers.
- Providing offline payments also necessary option for passengers.

Use Case For Transfer Data

Station Box Officer transfer data ticket record system. These datas are saving passengers' informations which are passengers' id, first name, surname, phone numbers, addresses, e-mail, gender, date etc. Another functions of the system is taking agency information, reservation information and payment information.

Use Case For Operator

1. Operator registers both passenger information and baggage information.
2. Operator records these information and gives a unique number to passengers.
3. After each buses leave the station, operator report data to management.

4. When registration is completed, system automatically sends e-mail or SMS about travelling information. Otherwise management does not take information from computer, system understands situation and send e-mail or SMS data.

Use Case For Box Officer

Box officer provides register and unregister operations and views whole passengers' information. Another feature is about box officer which could contact passenger and derive passengers' requests.

Structural Model For Bus Ticket System

When passengers log in online system, they can reach the availability of agents' bus. Passengers choose an agent and make reservation via online system. If passenger does not pay the cost of ticket, they must pay a part of price of ticket for reservation. If passenger does not pay the cost of ticket until the due date, reservation is automatically cancelled. Another scenario is about cancelling reservation is that passenger can take their payment back when they cancels the reservation before due time. The last option for passenger is reservation and payment should be in the same time.

Passengers could make all operations via box officer but in the payment case passengers should visit the station until due date.

In critical point about whole payment process is passengers can only retake their payment 24 hours ago from travelling when they cancels the reservation.

Context System

A passenger can make more than one reservation in both systems for seats but one seat can not reserved by more than one passenger.

A box officer can make more than one reservation for seats but one seat can not reserved by more than one passenger.