**Bus Reservation System**

**Introduction**

Bus Ticket Reservation System enables the bus company’s customer to buy bus tickets

remotely; this is an easy method that saves a lot of time, it will enable customers in their

comfort zone, to search for available tickets and get their data easily without any prior

experience with queuing at the counter.

Currently local customers are unable to buy bus tickets remotely at this moment and have

to go to the counter to buy a bus ticket. Sometimes, customer needs to queue up a long

queue to buy a bus ticket and ask for information. This brings a lot of inconvenience to the

customers. The system solves the problem of inconveniencing passengers who may not be

physically present at the bus terminal to buy a bus ticket at a particular time.

This system would also help the owner to manage the seats, clients, services, etc.

Customers can book their desired seats. They can check the availability of seats to a specific

place. The customer can check availability, book a ticket, or cancel a ticket 24X7, and

check their reservation. The online system is available to use anytime.

They just need internet and device to use our system. They can check the route, price and

etc. And print out the e-ticket without having to go an office. The system decreases human

efforts and increases customer satisfaction.

**Statement of a problem**

Transportation is one of the necessities of a human being. But with the growing

population and expanding cities the old system of standing in line or showing up in person

to buy a bus ticket in very inconvenient. Other than being tiring, it is also time consuming

for people who have other businesses to do. Most people in this country cannot plan their

trip ahead because they don’t know the exact time buses are departing or what time they

will be arriving.

1The payment system is much disorganized. This makes refunding ticket and canceling trips

very hard, if their plans change. Seating arrangement in buses is out of the passenger

control.

**Objective**

General objective

The main objective of this project is to write a computerized bus reservation system. It

enables each user to book ticket at his or her place. We will write a secured and user

friendly Bus Reservation System.

The specific objective

 The program will be able to print out a ticket containing the seat number of the

passenger including the necessary details about the passenger.

 Any user or visitors view will be able to search other customers.

 It enables customers to cancel their reservation.

 The admin is able to cancel and modify destination.

 Admins are to oversee all activities, reservations and users within the system.

**Requirement Analysis**

**Requirement gathering Methods**

We will use three requirement finding methods to achieve the objectives stated above. And

those are questionnaires, interview and observation.

 Interviews

Personal interview is a recognized and most important requirement finding techniques. In

this system we gather information from people through face to face interaction. This will

help us get primary information and also clarify confusions on the spot if there are any. We

are conducting an interview to identify the problems peoples face at the time they need to

buy a bus ticket because they have to go to the bus ticket office personally to reserve a seat

and this will take a time and transportation cost to get there and also there is a probability

that all the tickets are sold out.

2 Questionnaires

We might use this method if there are people who are not willing to give a face to face

interview. We have chosen to conduct an open ended questionnaire to better understand

our customer’s opinion and feelings.

 Observation

Observation allows us to gain information that cannot be obtained by any other fact finding

methods.

The main advantage of this method is to go to the ticket office and figure out how the

cashiers are being sold the tickets and getting an information from the customers the

limitations of this type of reservation system. By using this method we can get direct

knowledge of the situation.

**System requirement specifications**

 **Functional**

 **Non-Functional**

**Functional requirement**

 Administrative access for the system

The system developer team will have a special login place enables them to have

administrative access to the entire system which includes Modifying destination, check

the validity of an account, getting a statics of the system.

 Give a tour of the system

The system will have a section where users can see the reserved seats, the destination

places, and the availability of the bus all this are found on the system dashboard.

 There will be a page specifically tailored for Admin and users use case.

**Admins use case**

3 The system admins maintains all data’s of users, bus details, reservation details,

booking details and customers details.

 Capable of overseeing all activities, reservations and users within the system.

 Registering and Modifying Destination.

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**Users use case**

 Able to choose the seats (window seat or aisle seat) which are available for a certain

class.

 Customers can check the availability of the bus ticket, buy a bus ticket, and pay for

the bus ticket online.

 Make a reservation or cancellation.

**Non-functional requirements of the system**

 Usability

The system we are going to develop is used to save the time peoples are going to reserve

a bus personally by going to the bus ticket office.

 Accessibility

Our system is accessible in one country as long as the person has an electronic device like

smartphones.

4 Security

The system that we are going to develop will protect the privacy of our clients and from

being hacked of their personal information by the hackers.

Application security is the process of developing, adding, and testing security features

within applications to prevent security vulnerabilities against threats such as unauthorized

access and modification.

 Performance

Our vision is to make the system load quickly, allow the user to start interacting with it

quickly, and offer reassuring feedback if something is taking time to load.

 Compatibility

The system is able to appear fully functional on most of electronic devices that are available

in the market.

System Specification

 Hardware configuration

Computer processor: Intel(R) Core(TM) i5-6300 CPU

Hard Disk: 50 GB

RAM: 8 GB

 Software Specification

Operating system: Windows 10

Language used: Java

Server: Apache Tomcat 6.0