- can add provider to favorites;
- can see and clear order history;
- can add tenders.

On provider part providers:

- can add, update, remove products;
- can add, update and remove information about company;
- can add, remove promotion event (action) for products;
- can add, update and remove news;
- can see, confirm and clear orders.

Conclusion

This web application created for providers and customers who wants to do business without leaving the office. Web application gives to provider detailed information on customers' personal information, purchase history, buying preferences and concerns, with the goal of improving business relationships with customers, assisting in customer retention and driving sales growth and web application which gives to customers detailed information on providers' personal information, products list and rating of providers. We think this web application will be really interesting.

Although the web application works fine, it could be further developed. Because, we think that, search will work slowly if in database will be more than million products. With chat also same problem, if many people will use chat simultaneously it will work slowly and web application's server could down. In future, we will improve search and chat algorithms and we will add one extra page where customers and providers can see graphs of all statistics.

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УДК УДК 004;681.5

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BUS TICKET ORDERRING SYSTEM

Abstract. Nowadays we have a lot of problems with ticket ordering. To order ticket we should go to bus station. There are long queues. First, you waste your time and money. That is the problem. It is so hard for people. To simplify this process we going to create the simple, but useful service which get small time and money.

This paper introduces the new Bus Ticket Ordering System, which called "BusZhol". BusZhol is – Mobile and Web Application to order Bus tickets to all bus directions.

Traveling is a large growing business across all countries. Bus ticket reservation system deals with maintenance of records of details of each bus and passenger who had reserved a seat for a journey. It also includes maintenance of information like schedule, rating and details of each bus.

We observed the working of the Bus Ticket reservation system and after going through it, we get to know that there are many operations, which they have to do. It takes a lot of time, money and causes many errors. Due to this, sometimes a lot of problems occur and they were facing many disputes with client. To solve the above problem, and further maintaining records of items, seat availability for customers, price of per seat, type, rating and other things, we are offering this proposal of reservation system.

By using this software, we can reserve tickets from any part of the country, through mobile phone, via internet. This project provides and checks all sorts of constraints so that user does give only useful data and thus validation is done in an easy and effective way.

Keywords: bus, ordering, ticket, order, system, bus offices.

Introduction

Bus Ticket Ordering system it is new, needed nowadays. System consists of two parts. First part is Web, second is Mobile. Each one has different functionality. But the main part is same. You order bus tickets online. This application makes this process easier and faster.

Why we need this system? Because, this century is technologies century. We should improve our economy by using advantages of technology. It helps us faster be one of developing countries in this side. We have some relative works. Like, AparuBus and Aviata. AparuBus also orders ticket. But only via Web Application and order tickets to North side of Kazakhstan. We add some features to improve and make system useful. Aviata mobile applications and only you order tickets to plane.

How “BusZhol” works? You enter your cities, select place and enter the data. After reservation you must get ticket from nearest bus station. That’s all. Fast. Cheap. Easy.

Our project is to computerize traveling and Transportation Company to manage data, so that all the transactions become fast, safer and there should not be any error in transaction like calculation mistake, bill generation and other things. It will replace all paper work. It keeps records of all bills also, giving to ensure 100% successful implementation of the computerized Bus Ticket reservation system.

Our reservation system has three modules. First module helps the customer to get the availability of seats in a particular bus at particular date. Second module helps him to reserve a ticket while particular reservations time will expired. Using third module he can cancel a reserved ticket.

- First module retrieves data from database tables required for enquire.
- Second module inserts values into the database on reservation.
- Third module deletes values into from database on cancellation of tickets.

However, since the current reservation system is still conducted manually and separately at each branch, contact must be made by operator for each customer’s enquiry in order to get the latest update on schedule, seat availability and other reservation-related information; as well as to avoid duplicate bookings or over-capacity. There is also a physical limit to the reservation availability as each branch only operates during certain hours and reservations can only be made on-the-spot. These limitations are not the only issues the company is currently facing. Other factors that create problems include human errors (e.g. miscalculations in ticket price, mistakes in noting passenger data, etc.), the fluctuation of passengers during certain periods of time that causes a bottleneck in the check-in process because of the inability of the front-officer to multitask and the lack of overview or report of the on-going business; making it difficult for the company to judge past/current performance or plan future improvements.

Looking at these problems and limitations, it is clear that both the company and the customers require an integrated reservation system that is more efficient in information update and reservation handling and also easy to use. Online reserved tickets give evidence that their holders have permission to enter a place of entertainment, use a means of transportation, or have access to some internet services. Bus Ticket Reservation System enables the customer to

buy bus ticket, make payment and ask for information online easily. Furthermore, staff can sell bus ticket using Bus Ticket Reservation System after check bus ticket availability for the customer and print the bus ticket to the customer that queue up in the counter. The method to solve this problem is to create an online buying bus ticket system. Customer can buy the bus ticket over the Internet, 24 hours a day, 7 days a week and the bus ticket can't be lost, stolen or left behind. In addition, the online system lets the customers check the availability of the bus ticket before they buy bus ticket Furthermore, customers no need to pay cash to buy bus ticket because they can pay the bus ticket by using deposit slip number order by bank.

Background

System study aims at establishing requests for the system to be development and installed. It involves studying and analyzing the ways of an organization currently processing the data to produce new and needed information. We analyze the problem thoroughly forms the vital part of the system study. In system analysis, prevailing situation of problem is carefully examined by breaking them into sub problems by using dynamic programming. Problematic areas are identified and by doing research information is collected. Data gathering is essential to any needed analysis of requests. It is necessary that this analysis familiarizes the designer and programmer with objectives, activities and the function of the organization in which the system is to be implemented.

Study of existing system

We have few similar systems for bus ticket reservations. Like:

- Aparubus
- SaparZhai
- Avokzal

This systems have some problems like:

- This systems works only in web versions. Need implement mobile version to booking
- Need add some extra information about bus like rating, bus type and etc
- Routes limited with area
- Major problem was lack of security.
- In existing system, there are various problems like keeping records of items, seats available, prices of per/seat and fixing bill generation on each bill.
- Finding out details regarding any information is very difficult, as the user has to go through all the books manually.

System study aims at establishing requests for the system to be development and installed. It involves studying and analyzing the ways of an organization currently processing the data to produce new and needed information. We analyze the problem thoroughly forms the vital part of the system study. In system analysis, prevailing situation of problem is carefully examined by breaking them into sub problems by using dynamic programming. Problematic areas are identified and by doing research information is collected. Data gathering is essential to any needed analysis of requests. It is necessary that this analysis familiarizes the designer and programmer with objectives, activities and the function of the organization in which the system is to be implemented.

Proposed System

BusZhol – is new bus ticket ordering system, which help us reserve ticket easy and fast. It is multi-platform application for web and mobile devices. The main objective for this project is developing an android application so that passengers can book the tickets online directly from their smart phones and a received message to their own phones is enough for travelling a desired distance. Thus the process of standing in lines to book the tickets and after that carrying the tickets is curdled. For security reasons the information about every user is stored in CLOUD which is to be accessed for each ticket booking for validation purpose. As pointed out

by Agostinho Baia et al.5, “This change of paradigm benefits from the fact that cloud ticketing services can be accessed through the Internet and they can be elastically grown or shrunk, providing easier scalability and high availability”. There are two modes of ticket payment. Firstly a customer can pay by cash and secondly he can pay by token, an inbuilt account in the cloud itself. In the paper by Surya Michrandi Nasution et al., in 20111, Google Wallet launched by Google combines credit cards and the requirements of detecting radio signals on the phones.

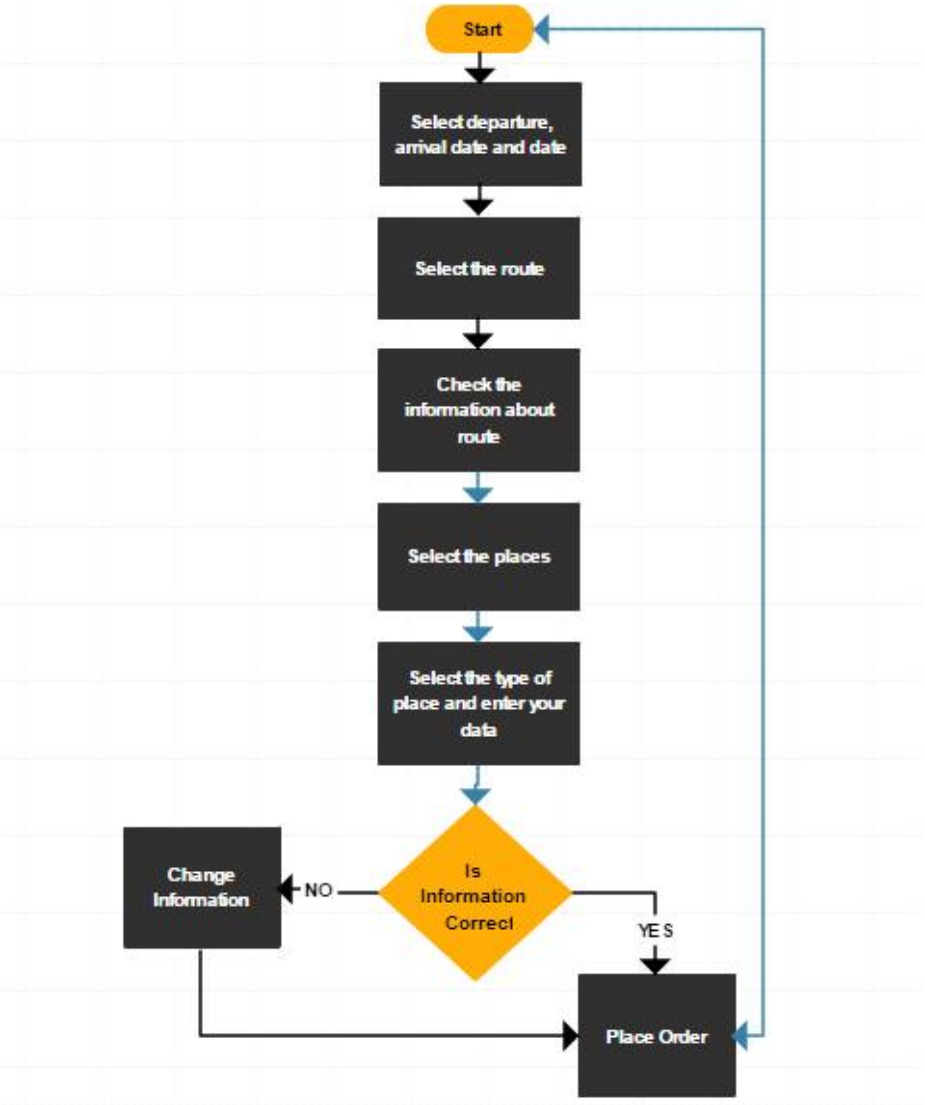


Figure 1 Reservations steps diagram

The system is not simple in design and to implement. The system requires not low system resources and the system will work in almost all default configurations. It has got following features.

- Ensure data accuracy.
- Records are efficiently maintained by DBMS.
- DBMS also provides security for the information.
- Any person across the world, having internet can access this service.
- Availability of seats can be enquired very easily.
- Passengers can also cancel their tickets easily.
- Minimum time needed for the various processing
- Better Service
- Minimum time required

This would help the corporation prepare and organize its schedules more efficiently and faster on the basis of traffic demand.

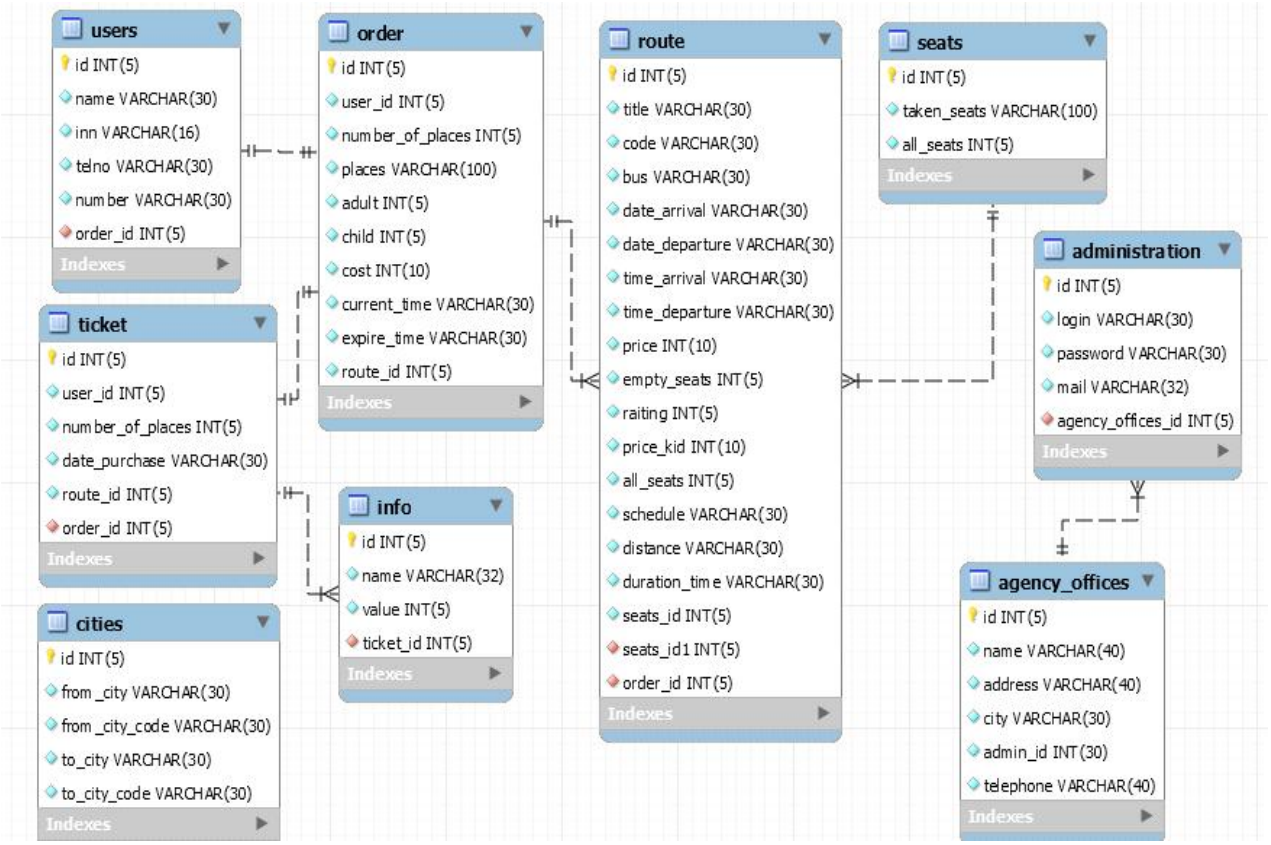
Development platforms and hardware

We realize this project on two platforms: Mobile (Android) and Web. And these platforms connected with on server. Technologies which was used on each platform:

- Mobile: Android Development Tools, Gradle, Material design
- Web: Php, Html, Twitter Bootstrap, JavaScript, MySql
- Server: Apache, MySql, Php,

2.2 Server side

First of all we get hosting and install Apache, Mysql, php. Via PhpMyAdmin create Mysql data base to application.



The following diagram shows all tables in database. In this tables will save all data about bus, bus ticket, user and etc. All data in applications will parse from this mySql Database.

Then we write API for mobile application. API (Application programming interface) is a set of needed functions which help get or save data to server. We write following functions for mobile Applications:

- Get routes seats by id
- Get routes info by code and date
- Get routes list by from city code, to code and date
- Get where cities list
- Get from cities list
- Add new user
- Add new order

2.2 Android Side

Android side get more time than other. For design structure we use Material Design. And start from Android Version 17 and later can download it. Following extra libraries I use for material design:

- Support library v4.23
- Appcombat library v7.23
- Design library v23.1

2.3 Web side

Web side has 2 parts:

- Admin
- User

User's part is same with Mobile part. Additionally we add list places of where you can get these tickets with your Personal Card.

Admin's part is operator's part. Operators get Personal card and give ticket after payment. Operators can to following actions:

- Add route
- Check that user pay for ticket
- Delete unpaid orders

Conclusion

This project is helpful for the users and the organization as well. This is a simple yet effective technology which helps the users to access the service concurrently from different places and time.

Advantages:

- It reduces the burden of the operator to maintain numerous data of passengers.
- It reduces wastage of time and money as it is fast and simple.
- It is low cost.
- Improves the efficiency of the organization or company.

This work introduce only prototype. In the future we want to add some futures like:

- Get bus position in real time and show it in Web part.
- Mobile application sends the coordinates to server in possible places. And people can see current position of one bus.
- If one bus stays in one place a long time it means that something wrong happens. It helps to Emergency come earlier and maybe save a lot of life in crashes.
- Get survey after trip. Mobile applications after end of trip show notification about trip, bus and service. After this we show to users results. It makes service useful.
- For example in schedule no bus which goes to one city direct. So one people choose 2 or more buses. We want to simplify it and help to find shorter or cheaper way. I will use Dijkstra's algorithm.
- Add filters which sorts buses by price, rating, type and etc. It also needed feature.
- Opportunity to configure alarm. Which help to notify people about trip

This platform independent languages java, android, htmk is used for the implementation. Along with that Mysql and Cloud Database are used as databases for user and ticket information respectively. PHP is also used as a development framework. All these things taken together can change the total concept of booking tickets in the coming days. This application can be modified according to any kind of transport system. But this is defined exclusively for bus tickets. Application reduces the manual work of both ticket bookers and ticket checkers. It is basically the transition from a manual to digital system for ticket booking of as well as ticket checking of suburban railways.

Bus Ticket ordering system (BTOS) it is new think, that change one part of our life. Make it easier. We need buses to trip, to business, to tourism. And in my opinion it was best feature for us. Our future starts today.

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МОДЕЛИ ВЗАИМОДЕЙСТВИЯ ЧЕЛОВЕКА И РОБОТА НА ПРИМЕРЕ РАЗЛИЧНЫХ СЕРВИСНЫХ РОБОТОВ

Аннотация. В данной статье рассматривается различные модели взаимодействия человека с сервисными роботами. Также рассмотренные некоторые аспекты реализации системы перемещения и ориентирования сервисных роботов в замкнутом пространстве, с учетом безопасного объезда людей на примере 3-х разработанных рабочих прототипов сервисных роботов.

Ключевые слова: Взаимодействие человека и робота, обнаружение человека, приложения сервисных роботов, мульта-модальное взаимодействие.

1. Введение.

Наше десятилетие объявлено десятилетием сервисной робототехники[1-3], это когда, наконец, наступил момент, когда производство, продажа и эксплуатация роботов в жизни человека стало доступна для широких масс. Яркий пример этому робот-пылесос iRobot Roomba 960 [5] и робот-гуманоид Pepper[6], этих роботов можно купить за вполне умеренную цену любому человеку. Чем больше различных роботов появляется в повседневной жизни человека, тем важнее становится взаимодействие человека с роботами. Данное взаимодействие с роботами должно быть двусторонним, интуитивно понятным, использовать голосовые и жестовые команды, а также быть максимально безопасным для людей и животных.

Взаимодействие человек и робот является областью исследования, посвященной к пониманию, разработке и оценке роботизированных систем для использования людьми или с людьми. Взаимодействие, по определению, требует общения между