B.Sc. Engg. Project

A project on Ticket Management System for Train using C Programming language

Submitted to

Department of Computer Science & Engineering

(In partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science & Engineering)

Department of Computer Science & Engineering

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Acknowledgment

We would like to pay our gratitude to the Almighty Allah who created us with all the abilities to understand analysis and develop the process with patience. We are thankful to our thesis supervisor Meer Muttakin Alam, Teaching Assistant, Computer Science and Engineering Department, Bangladesh University of Business and Technology for his professional guidance and motivation during the work of this thesis which is a major part of it. Without his valuable support and guidance, this thesis could not reach this level of development from our point of view.

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Abstract

We are about to build a system where we can manage e-ticket bookings in train by using c Programming. So we named it ticket management system of train using C Programming. In such system we will create two part advised by our honorable course Supervisor. 1. The user end and 2. Admin panel. We will make a propose model to submit to our Supervisor to have permission to work further on it. We will keep the interface clean and simple, easy to use for the sake of all user. No user will find it difficult to use. In user section, we will add important things like info, train schedule , train purchase , train information ,account details , complain , emergency contact etc. these information will be served from a central server and an admin will handle the server.Admin can edit and delete any information .When a passenger wanted book a e-ticket,he or she will have to create a account by registration . Than passengers get a user id .They can log in with the user id and get access in the system . After that passenger can be assisted through the ticket management system . After finishing the coding part, we will make a report based on the project. We will overview the whole project in the project report which will contain 6 chapters. In those chapter we will describe one by one about the key parts of the project. We will compare the manual system and the modern technology of ticket management system. For security purpose we will implement string comparison to create a login page. We will mainly use file handling in c to create the whole structure of the system. Apart from that we will be using some basic function and basic knowledge in c language. We will be using windows machine with code blocks IDE to write code. Firstly we will make a propose model to convenes our course Supervisor to work on it and will hardly try to describe the whole idea through the propose model. We will add the propose model in the report in a certain chapter. With the help of our course Supervisor, we are about to implement the whole plan and we wish to have a good experience doing this project.

Declaration

We hereby declare that the Project on Ticket Management System of Train using C Programming Languese submitted in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering of Bangladesh University of Business and Technology (BUBT) is our own work and that it contains no material which has been accepted for the award to the candidate(s) of any other degree or diploma, except where due reference is made in the text of the project. To the best of our knowledge, it contains no materials previously published or written by any other person except where due reference is made in the project.

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Copyright

Dedication

Dedicated to our parents, teachers, friends and who loved us for all their love and inspiration.

Certificate

This is to certify that Md Kamruzzaman (19202103526), Fabia Zaman Ekah (19202103225) and Habiba Rahman (19202103232), were belong to the department of Computer Science and Engineering, have completed their Project on Ticket Management System of Train using C Programming Languese satisfactorily in partial fulfillment for the requirement of Bachelor of Science in Computer Science and Engineering of Bangladesh University of Business and Technology in the year 2021.

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Approval

A Project on Ticket Management System of Train using C Programming Languese is submitted by Md Kamruzzaman (19202103526), Fabia Zaman Ekah (19202103225) and Habiba Rahman (19202103232) under the department of Computer Science and Engineering of Bangladesh University of Business and Technology is accepted in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science and Engineering

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Acronyms List

TVM = Ticket Vending Machine

TTE = Travelling Ticket Examiner

USD = United State Dollar

UK = United Kingdom

IoT = Internet of Things

IBM = International Business Machines Corporation

MIT = Massachusetts Institute of Technology

VPNs = Virtual Private Network

URL = Uniform Resource Locator

CPU = Central Processing Unit

GPU = Graphics Processing Unit

SPV = Simplified Payment Verification

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Chapter 1

Introduction

1.1 Introduction

The railway reservation system facilitates the passengers to enquire about the trains available on the basis of source and destination, booking and cancellation of tickets, enquire about the status of the booked ticket, etc. The aim of this project is to design and develop a system for maintaining the records of different trains, train status, and passengers. The record of train includes its number, name, source, destination, and days on which it is available, whereas record of train status includes dates for which tickets can be booked, total number of seats available, and number of seats already booked. The system has been developed and tested on the CodeBlocks.The railway reservation system facilitates the passengers to enquire about the trains available on the basis of source and destination, booking and cancellation of tickets, enquire about the status of the booked ticket, etc. By using this system anyone can purchase ticket from anywhere. This system will digitalized all documents and all manual work.

1.2 Project Description

The train reservation system facilitates the passengers to enquire about the trains available on the basis of source and destination booking and cancellation of tickets enquire about the status (ac or non ac)of the booked ticket etc. The aim of our is to design and develop a

database maintaining the records of different trains, train status and passengers . The record of train includes its name , number, source, destination and days on which it is available ,whereas record of train status includes dates for which tickets can be booked total number of seats available and number of seats already booked .[**?**]

Passengers can book their tickets for the train in which seats are available .For this ,passenger has to provide the desired train number and the date for which ticket is to be booked.Before booking a ticket for a passenger ,the validity of train number and booking date is checked .Once the train number and booking date are validated , it is checked whether the seat is available . If yes, the ticket is booked with confirm status and corresponding ticket ID is generated which is stored along with other details of the passenger. The ticket once booked can be cancelled at anytime. For this ,the passenger has to provide the ticket ID(the unique key).The ticket ID is searched and the corresponding record misdeleted with this, the first ticket with waiting status also gets confirmed.[**?**]

1.3 Survey

Railway passengers frequently need to know about their ticket reservation status, ticket availability on a particular train or for a place, train arrival or departure details, special trains etc.. Customer information centers at the railway stations are unable to serve such queries at peak periods. The number of the reservation counters available to the passengers and customers are very less. On most of the reservation systems there are long queues, so it takes a long time for any individual to book the ticket. As now there are no call centers facilities available to solve the queries of the passengers. The online railway ticket reservation system aims to develop a web application which aims at providing trains details, trains availability, as well as the facility to book ticket in online for customers. So, we thought of developing a web based application which would provide the users all these facilities from his terminal only as well as help them in booking their tickets. The Application was to be divided into two parts namely the user part , and the administrator part. And each of these has their corresponding features.

1.3.1 Statement Of Problem

The old manual system was suffering from a series of drawbacks. Since whole of the system was to be maintained with hands the process of keeping, maintaining and retrieving the information was very tedious and lengthy. The records were never used to be in a systematic order. there used to be lots of difficulties in associating any particular transaction with a particular context. If any information was to be found it was required to go through the different registers, documents there would never exist anything like report generation. There would always be unnecessary consumption of time while entering records and retrieving records. One more problem was that it was very difficult to find errors while entering the records. Once the records were entered it was very difficult to update these records.[**?**]

The reason behind it is that there is lot of information to be maintained and have to be kept in mind while running the business. for this reason we have provided features present system is partially automated (computerized) actually existing system is quite laborious as one has to enter same information at three different places[**?**]

Benefits by using our system

Seats Availability: The users through the use of our system can check whether the seats are available in the particular train to travel .[**?**]

Train Tickets: The users can access their train tickets through the online mode through the use of our system.[**?**]

Stations :Our system can also contain the details of the various stations from the source to the destination of the passenger .[**?**]

Train schedules : Even the schedules of different trains can be mentioned through our system.

1.4 Aim And Objectives

The main aim of this project is to develop an automated train ticketing system which is cost effective and suits the transport system. The system will effectively reduce the time taken to obtain a ticket at a ticketing counter. The project objectives are as follows

1.To identify the usefulness of a real time web based system on providing information useful

to railway commuters and provide compute based system to overcome shortfalls in current manual system.

2.To design and implement an online train reservation information system to facilitate online booking and Train scheduling.

The objective of the online railway ticket reservation system Project is to design software to fully automate the process of issuing a railway ticket. That is:-

1. To create a database of the trains.

2.To search the trains it's arrival and departure time,distance between source and destination.

3.To check the availability of the ticket.

4.To calculate fare.

5.To book the ticket.

6.To cancel the ticket if necessary.

1.5 Analysis

Online railway ticket reservation is a online ticket booking website, which is capable of booking ticket and search the train availability . This website is mainly created to fulfil the following requirements, it comprises of the following properties:-

1. A central database that will store all information.

2.An online website that will provide real- time information about the availability of tickets their prices .

3.Every registered user is able to view his booking id that has been made in his/her name.

4.Every registered user can change his password any time he wants to change.

5.Every guest user can search train availability ,price of the ticket,arrival and departure time ,distance between source and destination etc.

6.Every registered user has the facilities to print his ticket any time he wishes.

Administration login

1. In admin mode the administrator can make changes in train details.

2. He can also view all booking that has been made by different users.

3.The booking window contains all the facilities at one place, the user can simply login to his account and can book his ticket.

1.6 Motivation

In this project we can manage the ticket purchasing system. Here user can purchase a ticket and an admin can manage the system. We know that buying a ticket from ticket counter is very difficult, sometimes not possible. And here comes this system, because by using this, user will able to purchase the ticket from home.

1.7 Conclusions

Our whole system is based on a concept to reserve train tickets of various destinations .Here , as the program is executed , there is a login system then the user has to choose between reserving a ticket , viewing all the available trains and cancel the reservation . By choosing reservation of ticket , user has to enter the Name ,Number of tickets and choose by which train to travel according to their destination . Then the system will ask for ticket confirmations .User can also view full list of all the trains available .After reserving a ticket you can call also cancel your reservation . Our whole project is designed in "C "programming language and different variables and strings have been used for the development .It is easy to operate and understandable for user.

Chapter 2

Literature Review

2.1 Introduction

We reappraisal literally focuses on what a dealing processing system is all about in footings of the demands related to operations of this system and as it is made in different theoretical accounts for different specifications. This is an of import portion in proposal composing since it gives a direct over position of other surveies done on the same and how information is shared in the bureau that is from the lower degree where rent is collected to the in-between degree where records are defined to the upper degree where studies are made and brief history of TPS and besides an illustration of a TPS and its failing and the decision.

2.2 History of dealing processing system

Transaction processing was the first type of information system. Transaction treating systems were used during the 1950s when the electronic computing machine became available for concern usage. The first commercially available electronic computing machine was called Universal Automatic Computer. It was designed by John Presser Eckert and John William Mauchly. The first was delivered to the U. S. Bureau of Census. It could treat both numerical and alphabetical computations with easiness and was used by organisations to batch procedure concern minutess. such as paying employees and entering client purchases and payments. These initial

applications of a TPS are still of import today .

2.3   Literature Review

Japan Railways West (JR West) recently launched an online ticket service that allows you to buy tickets online and pick them up in person at a train station in western Japan. You can buy shinkansen tickets and regular train tickets, as well as some regional rail passes (but not the all country Japan Rail pass). Here's our full guide to this service.The TakeawayIn September 2019, Japan Railways West (JR West) launched a website that allow you to purchase train tickets online.The service is only offered by JR West, so it only covers tickets in western Japan (including Kyoto, Osaka, Kobe and points west). It does cover shinkansen tickets that originate in west Japan and end elsewhere (like shinkansen tickets from Kyoto to Tokyo, but not in the other direction).You can buy tickets for express trains, airport express trains, and shinkansen (bullet train) tickets.You can purchase tickets up to one month in advance. You can do so from inside and outside Japan.You pick up the tickets in person at special ticket machines or ticket counters at major train stations in west Japan (Kyoto, Osaka, Kobe, Kansai International Airport etc). You CANNOT pick up tickets in Tokyo.You can also buy regional rail passes, but NOT the all-country Japan Rail Pass. (See our detailed guide to the Japan Rail Pass for info on how to purchase and use it).The website and the ticket machines where you pick up your tickets are a little clunky, so read this page carefully before making your purchase. When you pick up your tickets in Japan, you will need three things: 1) reservation number, 2) ID code, and 3) the credit card you used to make the purchase.And of course, you don't have to buy tickets in advance. You can simply buy shinkansen tickets and railway tickets in person at any rail station in Japan, either from ticket machines or the ticket office.You can also still buy shinkansen tickets and Japan Rail Passes from Japan Railway approved agents like Voyagin.The Details Here is the JR West website for online ticket purchases:JR West Online Ticket Purchasing Site.This service is operated by Japan Railways West (JR West) and it only covers tickets in west Japan and those originating in west Japan and terminating elsewhere. Also, you must pick up your tickets at major train stations in west Japan (so it is not possible to pick up tickets in Tokyo etc).The service also allows you to purchase regional rail passes (but not the all-country Japan Rail Pass – see our guide

to buying and using a Japan Rail Pass).Thus, this service is of limited use for international travelers to Japan. Those who might really benefit from it are people flying into Kansai International Airport (KIX).As mentioned above, this site is a little clunky, so we suggest that you read the following section to avoid getting stuck.Buying Tickets OnlineFirst, access the JR West Online Ticket Purchasing Site.Scroll down and select either regular tickets (for shinkansen etc) or special discounted tickets (for regional rail passes). We'll choose the regular tickets option for this article. There are two options for this: Reserve Ticket by Selecting Train or Reserve Ticket by Selecting Stations. We'll choose the Selecting Stations option. NOTE: This only works during normal working hours in Japan (5:30 am – 11:30 pm JST).Input the date and time of your trip and the departure and arrival stations. Also, click the box for shinkansen if you want to go by shinkansen (most people will choose this option for long trips). We're inputting a short trip from Kyoto to Shin-Osaka (the Osaka shinkansen station) on the shinkansen on November 1, 2019. After inputting the information, hit Search.The system will return several possible trains that fulfill your search requirements. The Ordinary Car and Green Car buttons are for reserved seats. If the button for Non-reserved seating reads Available, you can also choose a non-reserved ticket, which will be cheaper than reserved or Green Car seats. Click the button that you want. This turns it red. After making your choice, hit Select.The next page shows the ticket prices. You will be asked to select Ticket Type. For most shinkansen journeys, there will be only one choice here: Regular Ticket. Click Select.You will then be asked to input your name, email address and a four-digit identification number (ID number). Use a number you can easily remember or MAKE A NOTE OF THE NUMBER, because you will need it when you pick up your ticket!! Then tick the Agree box and hit Agree and Continue.Read the Terms and Conditions, tick Agree and then click Agree and Continue.You'll then have to input the number of users (ie, passengers or tickets), your preferred seats, and which ticket you buy. Options include one-way and roundtrip. A third option is no basic fare ticket. This third option is not really an option for foreign travelers, so you can ignore this option. One you've made your selections, click Next (New Reservation). NOTE: The New Reservation button is confusing and makes you wonder how you'll pay for the present reservation. Don't worry, if you click Next, you'll be brought to the payment page (even if you aren't going to make another reservation, ie, this is the only way to the payment

page).You'll then have to confirm your information and, lower down on the same page, input your credit card information. After inputting the information, hit Purchase.You will then see the Processing page.You will then see the Reservation Confirmation page.You will receive an email a few minutes later stating that JR West is processing your purchase. This email will show your ticket details.You will receive another email a day or so later stating that JR West has accepted your purchase. This email will also show your ticket details.Shortly before the date of your train trip, you will receive a reminder email about your trip and ticket information.

Railway is the most affordable way to travel in India .To make your train ticket booking more convenient, we are pleased to tie up IRCTC. Customer can book IRCTC train tickets in the most convenient way with our website. The best thing is that you will get the cheapest train tickets for your preferred locations through EaseMyTrip as we don't charge convenience fee train ticket booking as well. So, get ready for amazing offers on railway booking and plan your trip soon.To book train tickets online, log on to the EaseMyTrip website and click on the train tab. Search trains for your preferred route and date and then check availability. If your tickets are available, you can proceed to next step. If there is waiting list, you can still go for booking your train tickets. Once you click on continue option, you will be asked to verify your IRCTC id to continue booking online train tickets. Now, you can enter the passenger details and proceed to book. You will be prompted about your IRCTC password. Now you will be directed to the "Payment Option" section where choose the method for payment. After entering the details, you have to fill your IRCTC password and then your transaction of online train booking will be processed and you will receive a booking confirmation.Tatkal ticket reservation is a facility that allows the passengers taking a train journey on a short notice. Tatkal quota opens one day advance excluding the date of journey from the originating station of the train.Tatkal Train Ticket Booking Timings are:AC Class - 10:15 AMSleeper Class - 11:15 AMYou have to opt for Tatkal quota to book tatkal tickets.All of the above except RAC are the types of waiting list available with train booking. WL with a number suggests the waitlisted status of a passenger.RAC means Reservation against Cancellation. If you have an RAC ticket, then your travel with a train is guaranteed but you will be given a seat (half of a side lower berth mostly) to sit and travel not an entire berth.GNWL General

Waiting List waitlisted tickets are issued to the passenger who begins his/her journey from the originating station of a route or stations closer to the originating station.PQWL Pooled Quota Waiting List is shared by several small stations of a train route. The quota generally operates from originating station of a train route and only one Pooled Quota is there for entire run. The Pooled Quota is usually selected for the passengers travelling from the originating station to one or few stations short of the terminating station, or from a midway station to the terminating station, or between two stations coming midway of the entire route.RLWL Remote Location Waiting List ticket is issued for the stations between the originating and terminating stations. Usually these are important towns or cities of that particular route. These tickets are given a separate priority and their confirmations will depend on the cancellations of a confirmed ticket. Remote location stations prepare their own chart 2-3 hours prior to the actual departure of train. There are less chances of confirmation for such waitlisted tickets.TQWL Tatkal Quota Waiting List was earlier CKWL. It is the waiting list tickets booked under Tatkal Quota. TQWL tickets directly get confirm and don't go through RAC. However, GNWL is given priority over TQWL. Premium Tatkal is a new quota introduced by railway to book online train tickets. Under this quota, dynamic fares are applicable. Premium Tatkal fare increases following the number of bookings. Booking Premium Tatkal (PT) ticket is much costlier than Tatkal because of the dynamic fare pricing. In this case, train ticket prices depend on the booking rates and availability of seats.On cancellation of confirmed Tatkal tickets, no refund is given. On the cancellation of contingent and wait listed Tatkal tickets, amount will be charged as per the existing rules of Railway. However, you can partially cancel the Tatkal e-tickets.To get refunds on cancellation of train tickets, passengers should cancel their tickets before chart preparation. If a confirmed train ticket is cancelled more than 48 hrs prior to the scheduled departure of the train, cancellation charges will be Rs.240/- for AC First Class/Executive Class, Rs.200/- for AC 2 Tier/First Class, Rs. 180 for AC 3 Tier/AC Chair car/ AC 3 Economy, Rs.120/- for Sleeper Class and Rs.60/- for Second Class. These cancellation charges are applicable per ticket per passenger and same will be deducted before processing the refunds. If a confirmed ticket is cancelled between 48 and 12 hours prior to the scheduled departure of the train, cancellation charges will be 25Traveling on Amtrak is as easy as telling us where and you want to travel. With several ways to reserve

and buy your tickets, we're ready to help you get your ticket to ride.Online and Amtrak App Purchase tickets at any time on Amtrak.com and the Amtrak app with:Valid credit card (American Express, Discover®, Mastercard®, VISA, Universal Air Travel Plan, Diners Club, JCB or China Union Pay),Apple Pay, Google PayTM and PayPal,Amtrak Guest Rewards points,Amtrak gift card,e Voucher, Download the free Amtrak app for iPhone® and Android™ today for simple, intuitive access to all the travel information you need, whenever you need it.For added protection against potential fraud, credit card transactions will be screened by Mastercard® ID Check™, Visa Secure®, American Express SafeKey® and Discover® ProtectBuy®.   Although we host these sessions, they are private exchanges between the customer and their card issuer. Amtrak does not monitor or capture any information from the screening exchange. Management and maintenance of the security screening program is the responsibility of the card issuer.Quik-Trak Kiosk:As an alternative, you can purchase your tickets at a Quik-Trak kiosk at the station. Quik-Trak kiosks are located at most larger Amtrak stations.Over the Phone:You can get information and purchase tickets 24 hours a day by calling 1-800-USA-RAIL (1-800-872-7245). Julie, the Amtrak automated, voice-activated agent, is happy to help. Or, if you need live, personal assistance, just say "agent" or press the "0" button on your telephone. For TTY service, call 1-800-523-6590.Travel Agent:You can purchase Amtrak tickets through a qualified travel agent.Onboard:In most circumstances, you must purchase a ticket before you board a train. On most Amtrak trains, only the full, undiscounted, unrestricted fare will be available for purchase onboard the train.   This is regardless of reservations made or fares previously quoted by ticket agents, Amtrak.com or elsewhere. Higher fares usually apply when purchasing tickets onboard the train. To secure the best available fare, passengers should purchase tickets prior to boarding the train.Ticket Agent at the Station:You can purchase tickets in person at any staffed Amtrak station. At most staffed stations, we accept Amtrak gift cards, credit cards, and debit cards with a credit card logo.Accepted Forms of Payment at the Station Credit and Debit Cards:Credit and debit cards are accepted for the purchase of Amtrak tickets and services at all staffed stations. Debit cards must have a credit card logo and will be processed as credit card transactions; cards that require the entry of a PIN (personal identification number) are not accepted. There is no minimum amount required for credit and debit card purchases.The following rules govern

the acceptance of credit and debit cards at Amtrak ticket counters:We accept American Express, Discover®, MasterCard®, VISA, Universal Air Travel Plan, Diners Club, JCB or China Union Pay credit and debit cards at ticketing locations.Amtrak ticket agents accept only valid, unexpired cards.The person whose name is embossed on the front must sign the card on the back of the card. Unsigned cards are not accepted. The signature on the back of the card must match the signature on the ticket or charge form.Credit and debit cards are accepted for the amount of the sale only and may not be used to obtain cash.In all cases, the Amtrak policies pertaining to identification requirements apply when using a credit or debit card for purchase of tickets or services.Amtrak gift cards may also be redeemed at the station.Travelers Cheques, Money Orders, Personal Checks and Cashier's Checks.Amtrak does not accept travelers cheques or money orders. Personal checks and cashier's checks are only accepted for group travel, by prior arrangement with the Amtrak Group Desk.

2.4   Bangladesh Train System

The history of Railway in Bangladesh is of 150 years (Banglapedia, 2016). Railway operation in today's Bangladesh began on November 15 in 1862 when 53.11 kilometres of broad gauge line was opened for traffic between Darshona in Chuadanga and Jagotee in Kushtia (The New Nation, 2014).Bangladesh Railway (BR) has around 2877.10 kilometers of railway network which connects 44 Districts out of 65 districts.

In the year 2014, Bangladesh Railway transported 65 million passengers and 2.52 million tons of freight (BR Information Book, 2014).This sector shares around 20

Intercity trains account for about 40

Year	Passenger	Coach	Employees	Route (km)	Track (Km)	Train: Daily (Passenger)
1970 - 2000	72,885,000	1165	55825	2858.23	4448.02	1120
2001 - 2010	53,816,000		29255	2858.23	4448.02	400-750
2013	67,342,000	1474	25646	2877.1	3976.08	341
2014	64,958,000	1476	25646	2877.1	3976.08	341
2015	67,342,000	1474	27620	2877.1	4093.15	341
2016	70,831,000	1218	27620	2877.1	4093.15	341
2017	77,807,000	1381	27620	2877.1	4093.15	345

Bangladesh railway has introduced e-ticketing system from 29 may 2012. To buy a ticket , we have to be a registered member. we can be registrar member for free. Any time we can log in and purchase ticket of Bangladesh railway.This website called "E-Sheba". Go to www.esheba.cnsbd.com website to purchase a ticket online. Now give your e-mail address, password and Security code shown on the page, then click "Sign in" button On the page, click on "Purchase ticket" menu. On this page, select your start station, journey date, arrival station, class and search train. Put the number of ticket on desire train. Click on auto or manual seat selection. You will be informed about "Registration seat available" and Ticket Value. If ticket available, then click on "Purchase ticket".You can buy ticket by Credit/Debit Card, Cash Card or Barack Bank account. After purchasing a ticket, you will get a confirmation e-mail with e-ticket. Print the e-ticket from e-mail and collect your main ticket from station with a photo ID.

2.5   Types Of Reservations In Reservation System

Guaranteed Reservation: This insures that the company will hold an item for the customer until a specific time following the customer's scheduled date. In return, the customer shall guarantee his/her reservation of an item unless reservation is properly canceled. In order to guarantee a reservation, customers might opt for one of the following methods. Prepayment guaranteed reservation Credit card guaranteed reservation. Advance deposit or partial payment Travel agent guaranteed reservation Non-guaranteed Reservation: Insures that the company agrees to hold an item for the customer until a stated reservation cancellation hour on that

day. A reservation agent always makes sure to encourage their customers to guarantee their reservations especially in the high season . However, the intended system will use the guaranteed Reservation.Where reservations are guaranteed only when a customer make payment on the site or at the train station.

2.6   Weakness of the Manual Transaction processing System Incompatibility of information's:

There will be no information available for future usage. since information might acquire misplaced during manual filing. so data habit be preserved decently for future usage. Repeat of work if there are any alterations to be made. the information will hold to be entered once more. at times the worker would bury to do the alterations or bury that they had already altered it and might remake it once more. its once more clip devouring. Excessively much paper work: since everything and every item written down manually in paper there will be excessively much paper work! Space consuming: since the information and paper is stored in registering cabinets it consumes excessively much topographic point. as the sum of work done on paper increases the filing cabinets excessively additions. Slow retrieval of information's: the information of clients and inside information's are stored in different parts of the site and so takes a long clip to recover the information. It takes a long clip to happen the information about a relevant individual. in instance of a hold. the hold will be held back.

2.7   Conclusion

Decision In line with the presence of this computerized system processing of minute's will be efficaciously and expeditiously done in due short continuance of clip therefore salvaging the bureau cost and cut downing the work burden therefore giving its clients effectual services which in bend additions passenger assurance to relay on the services we offer.

Chapter 3

Proposed Model

3.1 Introduction

This chapter our fundamentally focus on the procedure of roll upping and forming information's related to our survey and putting out a basic rhythm on the procedure of developing the system with the usage of a system development flow chart and a clear definition of all the phases involved in the development procedure.

3.2 Description Of The Proposed System

The system is very simple in design and to implement. The system requires very low system resources and the system will work in almost all configurations. It has got following features:

- It will ensure data accuracy.
- Records will be efficiently maintained by DBMS.
- Availability of seats can be enquired easily.
- Minimum time needed for the various processing.
- It will provide better Service.

The system design is to create a technical solution that satisfies the functional requirements for the system. At this point in the project life cycle there should be a Functional Specification,written primarily in business terminology, containing a complete description of the operational needs of the various organizational entities that will use the new system.

The challenge is to translate all of this information into Technical Specifications that accurately describe the design of the system, and that can be used as input to System Construction.
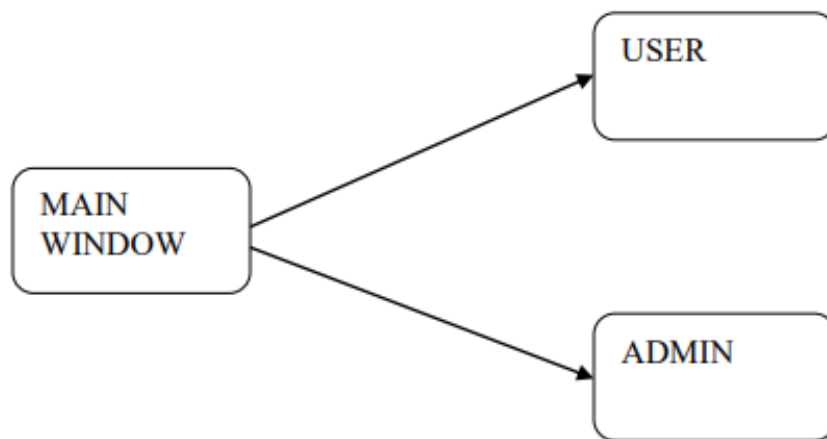
Fig: Homepage

Figure 3.1

3.3 System Description

This system has two part admin and user. But both have to registration first to enter in the system. Once they registered, then they can enter in the system by login with there user id and password. Admin part is for the maintaining system and here admin can add, update and delete any information like train schedule, ticket fare, emergency contact etc. Admin can see the user's complain and answer them.

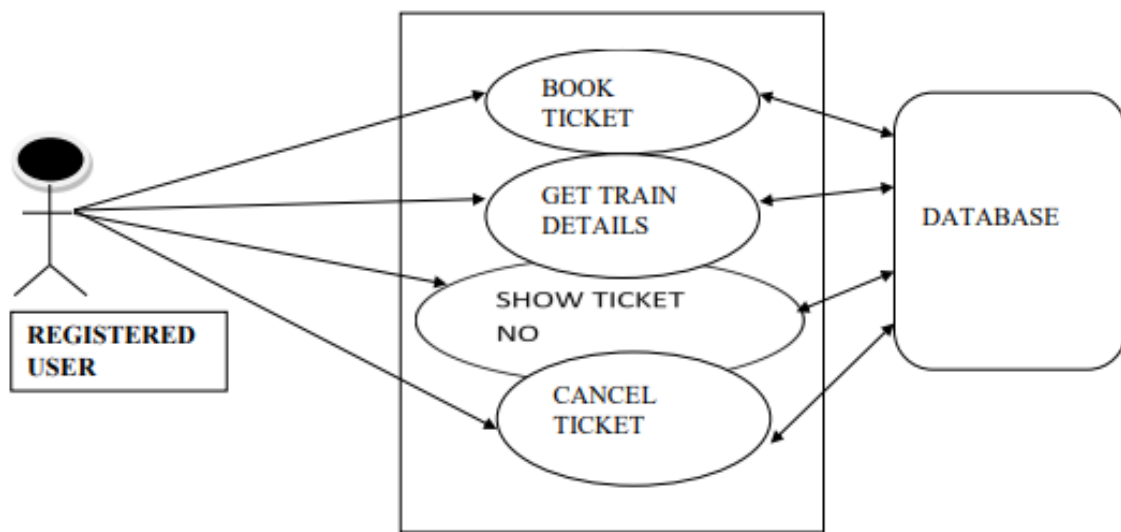In user module, user will get some option to choice, such as-
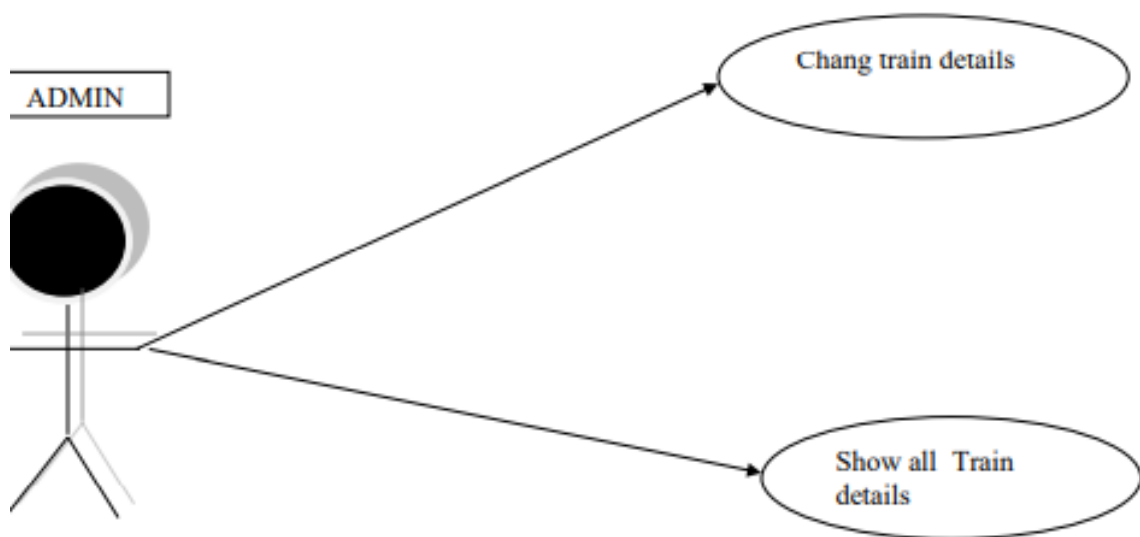
Fig: User's booking window

Figure 3.2

Figure 3.3

- Train Schedule - where user can see all the schedule of all train.

- Ticket Purchase – where user can purchase a ticket.

- Train Information – where user can know about the any govt. Notice(If any), meal rate,

any information of Bangladesh Railway etc.

• My Account – it's a record of user's activity.

• Complain – if user have any complain then he can submit his complain here. And he will get the answer from the admin.

• Emergency Contact - for any emergency situation, the user will get the contact number of Dhaka, Rajshahi, Khulna station including the National Emergency Hot-line 999.

Here some function that used for this system.

• User() – for user module.

• Admin() – for admin module.

• login form() - for user login system.

• user train schedule() – train schedule.

• ticket counter()- for purchasing a ticket.

• show ticket() – for showing ticket

• payment() – for payment.
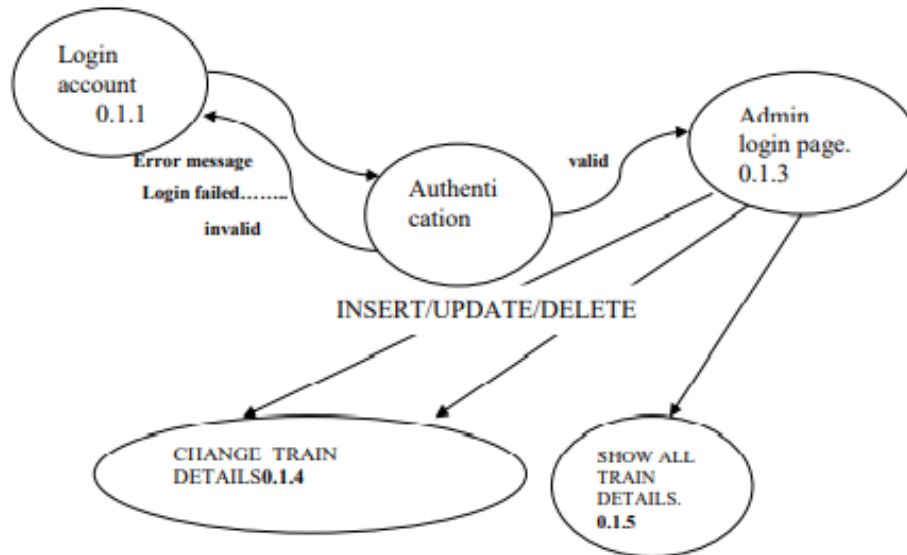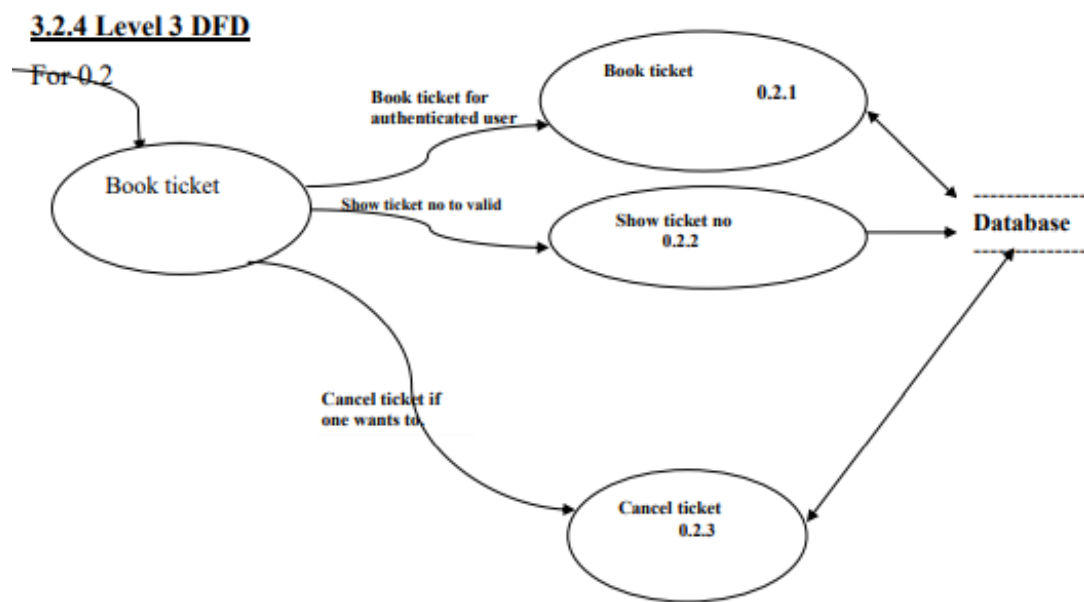
• System() – for clear screen.

(Administrator)

Login account 0.1.1

Error message
Login failed……..
invalid

Authenti cation

valid

Admin login page. 0.1.3

INSERT/UPDATE/DELETE

CHANGE TRAIN DETAILS0.1.4

SHOW ALL TRAIN DETAILS. 0.1.5

Figure 3.4

3.2.4 Level 3 DFD

For 0.2

Figure 3.5

3.4   List of Entities and Attributes

Entities	Attributes
user	user id
	password
	first name
	last name
	gender
	age
	email
	mobile-no.

Entities	Attributes
passenger	passenger id
	name
	gender
	age
	seat-no.
	$booked_b y$

Entities	Attributes
train	train no.
	train name
	source
	destination
	arrival time
	departure time
	availability of seats
	train no.

Entities	Attributes
station	name no.
	train no.
	arrival time

Entities	Attributes
ticket	ticket id
	train no.
	booked user
	status
	no of passengers

3.5   Conclusion

In this chapter we explain our procedure of roll upping and forming information related to our survey and putting out a basic rhythm on the procedure of developing the system with the usage of a system development flow chart and a clear definition of all the phases involved in our project.

E-R DIAGRAM
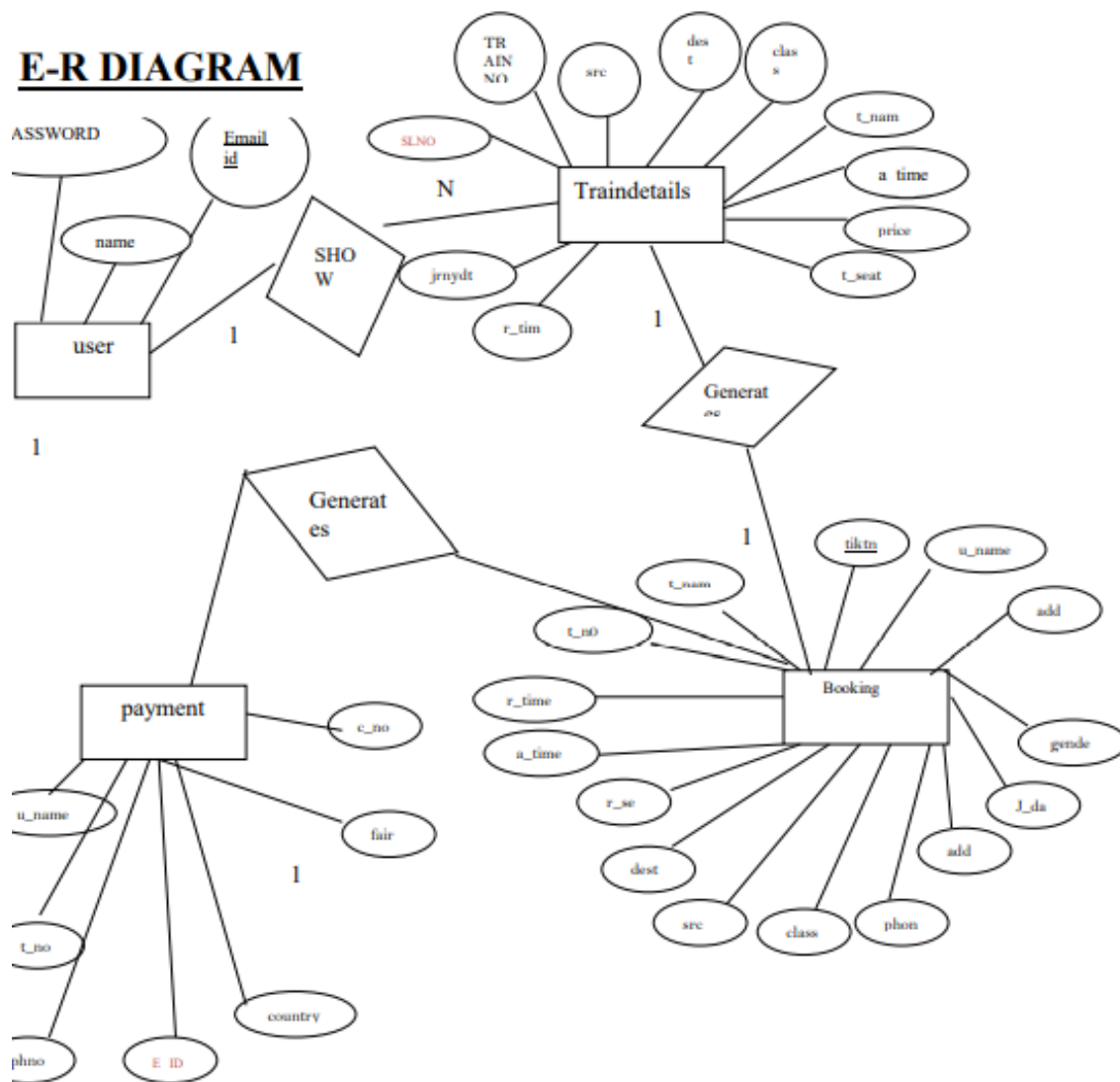
Chapter 4

System Analysis

4.1　Introduction

In this chapter we will discuss about the system and hardware we used to construct Train ticket management system. Its a vital section of the report which contains the detailed information about the hardware and software. Before beginning It can be mentioned this work doesn't need highly powered software or any hardware. simply you can go with your notebook or desktop to make such system but as per rule, we are giving the information of used hardware and software regarding this project.

4.2　Hardware

Computer hardware refers to the physical parts of a computer and related devices. Internal hardware devices include motherboards, hard drives, and RAM. External hardware devices include monitors, keyboards, mice, printers, and scanners. The internal hardware parts of a computer are often referred to as components, while external hardware devices are usually called peripherals. Together, they all fall under the category of computer hardware.Talking about our project, we did our entire project in HP Pavilion 15-cs 3006TU notebook which is contains the following parts as hardware • Intel 10 gen core i5 processor@1.19 GHz base clock • 8 GB DDR4 2666 HMz ram • 128 gigs of nvme ssd for booting up • 1 TB of hard disk drive as storage • Intel on board UHD graphics • 5.6" FHD(1920 x 1080) IPS Display

4.3   Software

Opareting System (OS) : WINDOWS 7, 8, 8.1, 10 .

IDE: CodeBlocks 13.12 , 17.12

Documents made by: LaTeX

Programming languese : C languese

4.4   Conclusion

In this chapter we explain about our software and hardware that involved in our project.

Chapter 5

Results

5.1 Introduction

In this chapter our fundamentally focus on result of the procedure of roll upping and forming information's related to our survey and putting out a basic rhythm on the procedure of developing the system .

5.2 Screenshots

Figure 5.1: Welcome Page
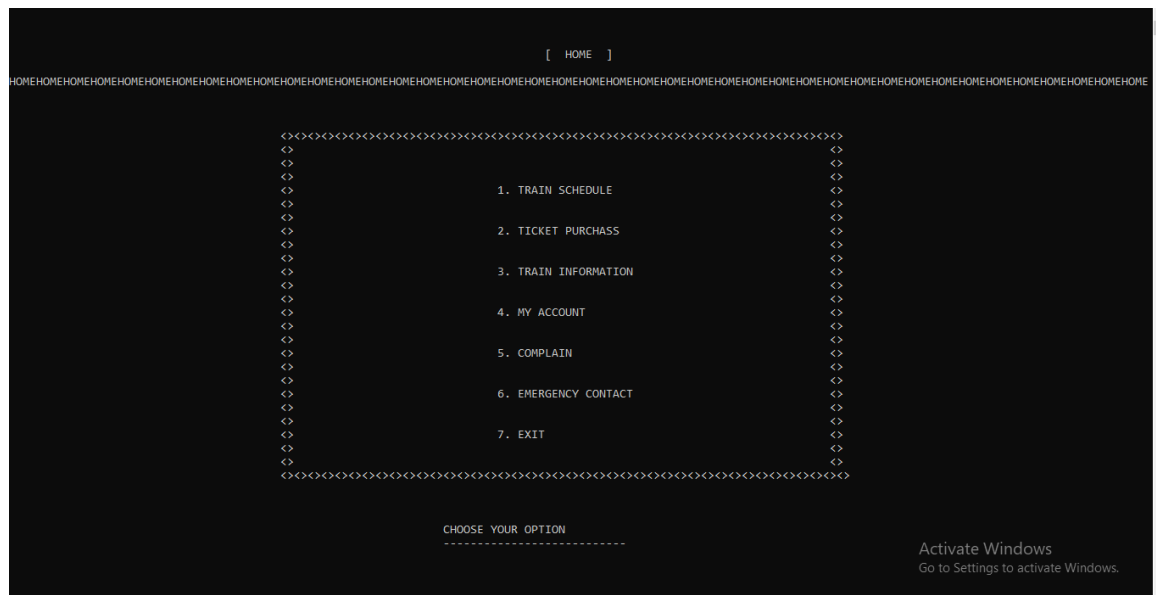
Figure 5.2: login

Figure 5.3: Choose Your Option

Figure 5.4: Home page

Figure 5.5: Train Schedule

Figure 5.6: Ticket Purchase

Figure 5.7: Ticket Purchase

Figure 5.8: Complain

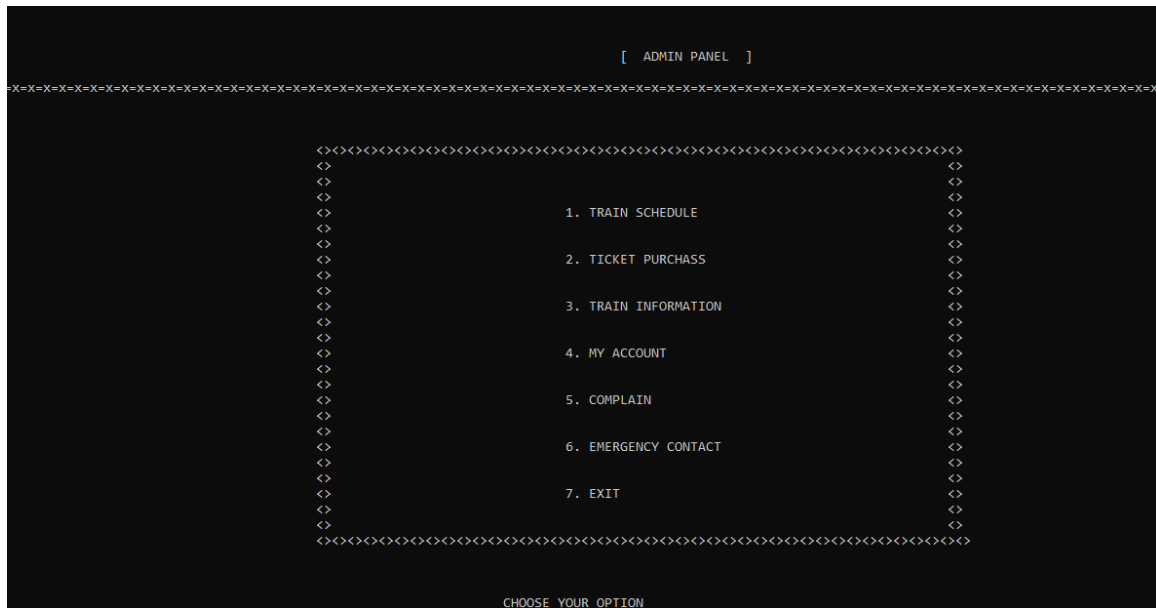Figure 5.9: Admin Plane

5.3   Conclusion

In this chapter we explain about our results after compiling the code of our project.Here we include some scrinshot.

Chapter 6

Conclusion and Future Work

6.1 Conclusions

Before modern computing, the reservation system was done using manual means. This means that a person about to travel had to spend a lot of unnecessary time waiting in queues in order to book their tickets. The manual process of reservation was also prone to human errors, which lead to a lot of dissatisfaction amongst travelers. Nowadays competition is so fierce between transport industries that there are lot of discounts and a lot of luxuries given to customers that will give an edge to that particular industry. The online train reservation automates these processes of booking railways tickets online, thus reducing the time wasted as well as the errors that are involved in the manual process. People will argue that online reservation system are expensive, and create unfair competition between industries that don't use them.From the research view, online train reservation is one the best innovation that has taken place in the rail industry and those companies that have not yet embraced online reservation system ought to lose out, they may sight additional costs, maintenance cost and the cost of development as their drawbacks but business is more than any other occupation, it is a continual dealing with the future; and continual calculation, an instinctive exercise in foresight. World Wide Web and the Internet is here and transport companies for the future will seize this opportunity to develop on line reservation systems and prosper.

6.2   Future Work

There is always room for improvement, and the software created can also be improved. This is especially because is created within a limited time. With more time, the software can be improved to include security and different types of users. This would be the first step in making the software network-enabled, and eventually more robust. This was the original after-thought to programming the software, In addition, the software can also be improved in terms of the calculations it can do, and more flexibility.The research recommends the following about the system.

Our future work will be:

1.Public Wi-Fi.

2.Automatic door sytem.

3.Using CCTV Camera.

4.Using ID checker at door.

5.Using Fingerprint scanner for ticket checking.

6.Using Face detection for security purpose.

7.Direct communication from locopilot.

8.Monitor for information.

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