Bus Ticket Management System

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Abstract: Bus Ticket Management System is a Web based application that works within a centralized network. Bus Ticket Management System is built for managing and computerizing the traditional database, ticket booking and tracking bus and travel made. It maintains all customer details, bus details, reservation details. There are various technologies that are used in implementing the system such as Ja va (for implementing the backend process of the system) and HTML/PHP (for implementing the frontend process or interface of the syst em). For managing or for implementing the transactions process of the bus ticket management system the technologies used are PHP fo rms and my SQL for the database management.

Index Terms – Ticket Booking, route mapping, user details, bus details, transaction, payment method.

I. INTRODUCTION

The Bus Ticket Management SystemIs an web based application used to book the bus tickets via web or online with the payment or booking done online. This system is established for all the office/home users after taking request from the administrator. Bus ticket management System provides bus transportation system, a facility to reserved seats, cancellation of seats and different types of enquiry which need an instant and quick reservation. This system can be used by the users in performing online reservation via internet for their all business purposes. Users can use this program directly on their websites and no need to install it.

The use of bus traveling is a large growing business in India and other countries; hence bus ticket management system deals with maintenance of records of each passenger who had reserved a seat for a journey. It also includes maintenance of information like schedule and details of each bus, Also, we get to know that there are many operations, which they have to do manually. It takes a lot of time and causes many errors. Due to this, sometimes a lot of problems occur and they were facing many disputes with customers. To solve the above problem, and further maintaining records of items, seat availability for customers, price of perseat, bill generation and other things, we are offering this proposal of reservation system. The reservation system has three modules. First module helps the customer to enquire the availability of seats in a particular bus at particular date, the second module helps him to reserve a ticket and with the third module he can cancel a reserved ticket.

II. PROBLEM STATEMENT

Currently, the type of system being used at the counter is an internal system which is manually used in selling the bus tickets. The problems facing the company are that customers have to go to the counter to buy bus ticket or ask for bus schedule, customers will also have to queue up for a long time in order to secure a bus ticket and will also need to pay cash when they buy the bus ticket.

II.I OBJECTIVE OF THE STATEMENT

The main purpose of this study is to automate the manual procedures of reserving a bus ticket for any journey made through Imo Transport Company (ITC). This system is said to be an automatic system and customers can select seats by themselves. Specifically, objectives of this project will consist of:

1. Providing a web-based bus ticket reservation function where a customer can buy bus ticket through the online system without a need to queue up at the counter to purchase a bus ticket.
2. Enabling customers to check the availability and types of busses online. Customer can check the time departure for every ITC bus through the system.
3. Easing bus ticket payment by obtaining a bank pin after payments is made to the various designated banks.
4. Admin user privileges in updating and canceling payment, route and vehicle records.

III. RESEARCH GAPS

According to Kevin (2012) Web-based Bus Ticket Management System is a generic web portal application that aids bus customers to reserve a seat in a certain bus company anytime and anywhere and variety of buses that satisfy the customer's requirements are provided. The project, on the bus company's side, serves as a marketing strategy and aids an efficient processing and delivery of itinerary receipts. The project used software like Adobe Photoshop CS4 for the creation of the images, Adobe Dreamweaver CS4 and Notepad++ as a development tool, My SQL for the database, Apache as the web server, mpdf for the creation of PDF and PayPal Sandbox for the payment. For the main effects, it used jQuery.

However, the softwares adopted in this project, has in recent times been upgraded. Therefore, Adobe Dreamweaver CS6, Adobe Photoshop CS6, MySQL are going to be used to implement this project.

III.I STUDY OF ELECTRONIC TICKETING IN PUBLIC TRANSPOSRT

A consultant with European Metropolitan Transport Authority (EMTA), Mohamed Mezghani (2008) stated that EMTA has established a working group to work on the issue of electronic ticketing. This group is mandated to generate knowledge, exchange/compile information and learn from the experience of its members in the field of electronic ticketing. In his framework, EMTA has launched a study on electronic ticketing in public transport under the supervision of the working group and they designed certain concepts such as the public transport pricing, public transport ticketing and electronic ticketing in public transport.

On the contrary, his research which discussed certain concepts in relation to electronic ticketing in public transport was a one-directional article which didn't relate the idea about customer reserving seats and for their journey at a date chosen by them. Nevertheless, this project will be designed to encapsulate these areas mentioned as well as display certain screenshots of the customers' reservations system.

IV. RESEARCH METHODOLOGY

The system of collecting data for research project is known as research methodology. The data may be collected for either theoretical or practical research for example management research may be strategically conceptualized along with operational planning method and change management. Information which was used for this study was carried out by oral interview.

IV.I CHOICE OF METHODOLOGY

For any project to be completed, it has to go through stages called Development Life Cycles. System Development Life Cycle (SDLC) is the process of understanding how an Information System (IS) can support business needs, designing the system, building it and delivering it to users. The SDLC composes of four phases: Planning, Analysis, Design and Implementation.

In order for this project to be developed, the methodology that will be used is the System Structured Analysis and Design Methodology. The SSADM is classified as a Waterfall Development. With Waterfall Development, analyst and users proceed sequentially from one phase to the next and each phase can be mapped out and evaluated. Below is a diagram on the waterfall methodology.
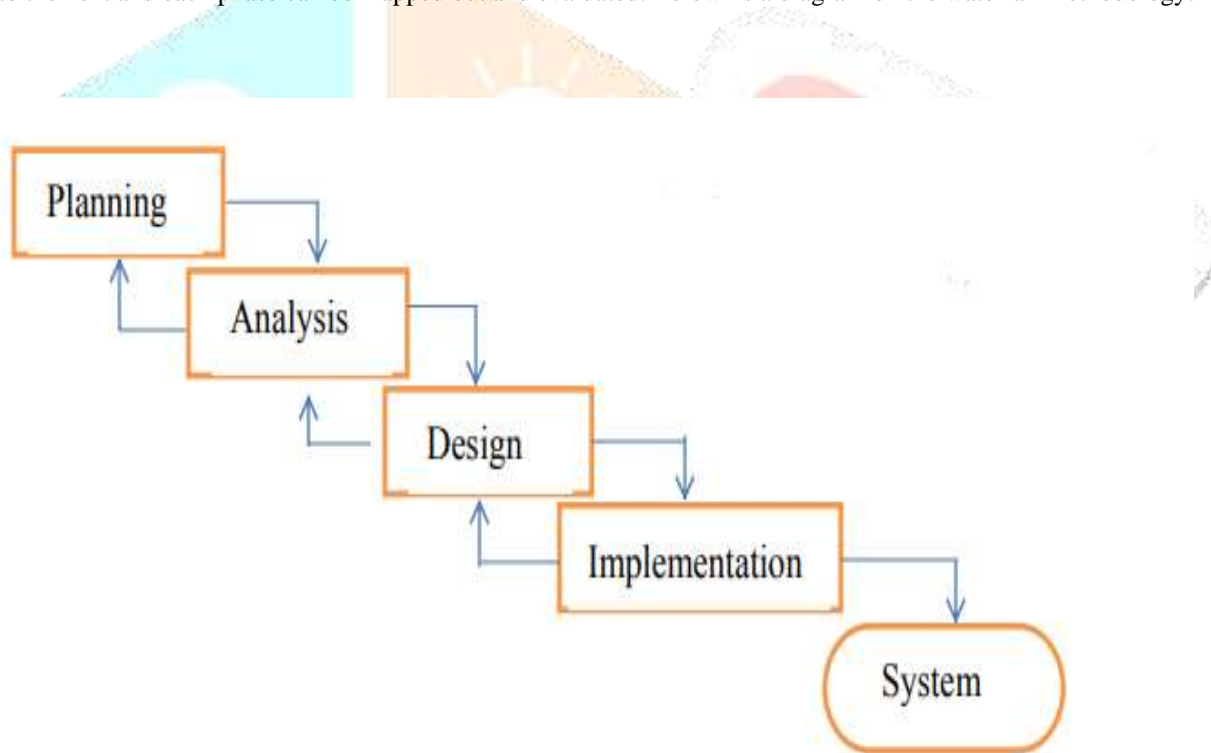

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modeling its process aspects. A DFD shows what kind of information will be input to and output from the system, where the data will come from and go to, and where the data will be stored.

The development of DFD'S is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level. The Top-level diagram is often called context diagram. It consist a single process bit, which plays vital role in studying the current system. The process in the context level diagram is exploded into other process at the first level DFD. to a data flow diagram about the system.

Level 0
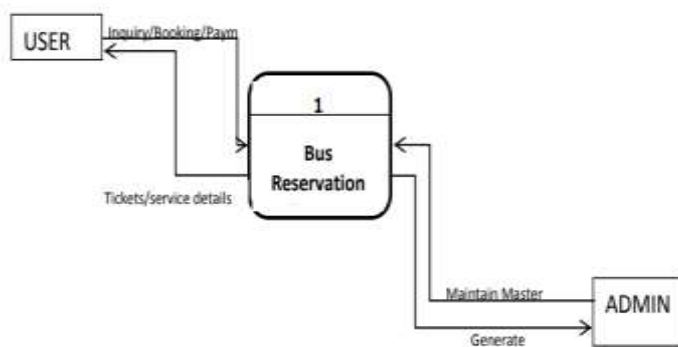
LEVEL 1
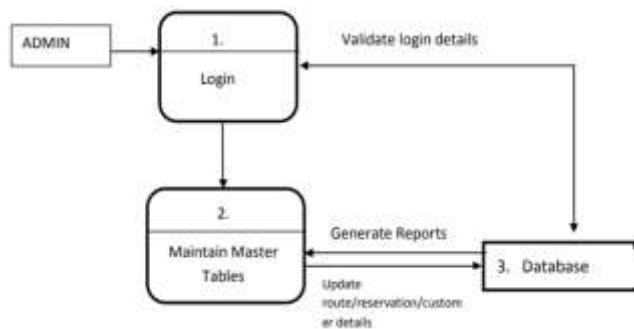
Level 2
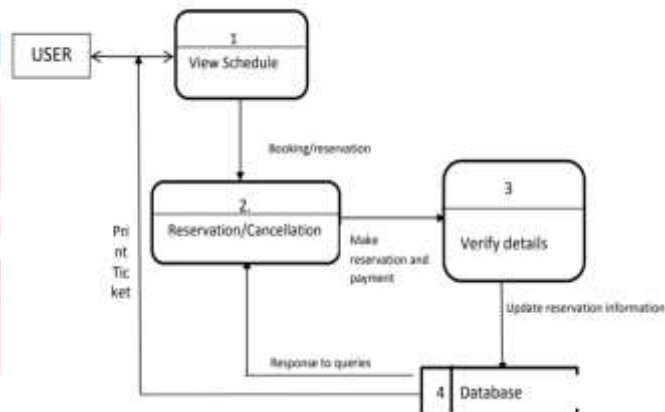
Use Case Diagram for Bus Ticket Management System
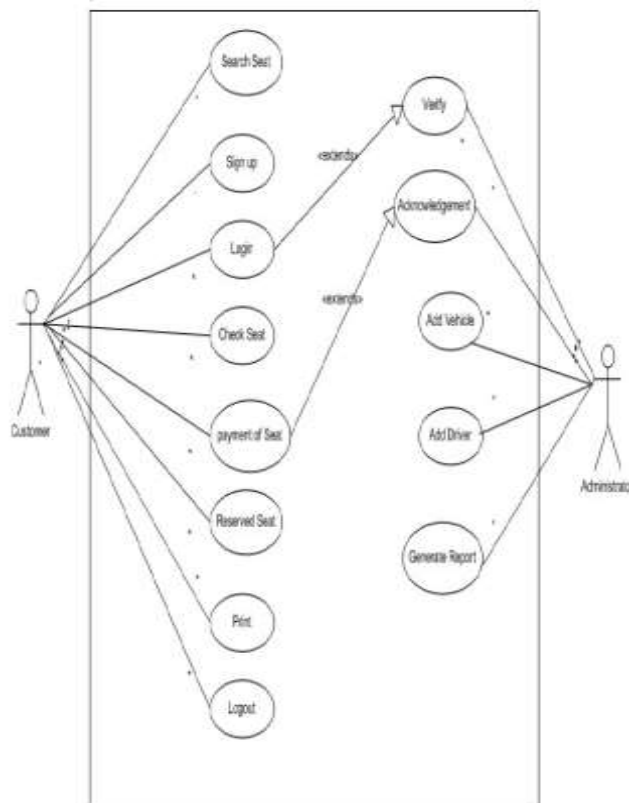
CONCLUSION

It can be observed that computer applications are very important in every field of human endeavor. Here all the information about customer that made reservation can be gotten just by clicking a button with this new system, some of the difficulties encountered with the manual system are overcome. It will also reduce the workload of the staff, reduce the time used for making reservation at the bus terminal and also increase efficiency. The application also has the ability to update records in various files automatically thereby relieving the company's staff the stress of working from file security of data.

This project, as a whole, will give a new way in bus reservations and ticketing processes. The automation and management of seats and reservations will be done online. However, this project does not limit the walk-in passengers that is passengers who visit the company's counter because it also caters for them. This also lessens the use of papers like in the traditional way of ticketing.

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