VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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A Mini -Project Work on

"Courier Management System"

A Dissertation work submitted in partial fulfillment of the requirement
for the award of the degree

Bachelor of Engineering
In
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Submitted by

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Certificate

This is to Certify that the Mini-Project work entitled **"Courier Management System"** is a bonafide work carried out by **Jeevan M H(1AY18IS047) and Dheeraj Bharadwaj R(1AY18IS035)** in partial fulfillment for the award of the degree of **Bachelor of Engineering** in **Information Science and Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year 2020-21. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the Report deposited in the departmental library. The Project has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

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ABSTRACT

The project "**COURIER MANAGEMENT SYSTEM**" is aimed to automate the courier sector which is manually maintained. After the automation this will mean better services and good keeping of records, data integrity, data security, quick search and also paperless environment. The project has mainly tackled management of information for the customers.

Every user of the system will have to log into the system using username and password so that security and authentication will be ensured. Once logged in, a customer can check courier status or even give feedback. The system administrator is able to manage customer information and also update records.

This will help in realizing the vision 2030 where the government wants its people to be digitally informed and also automate all the government sectors and ministries, hence embracing Electronic Governing.

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CHAPTER 1

INTRODUCTION

We are in a world where it is not easy for corporations and small enterprises to survive without using computer. Companies that want to grow have to use computerized systems in order to perform their tasks. Saving time and money is a very crucial matter for enterprises therefore companies will make use of computers and internet in order to speed up their transactions. In the era we are living now, it is very difficult for an enterprise that does not use technology means to compete with other enterprises. Not using computerized system will let you behind others and will slow down your enterprise. Paper-based systems have no place nowadays. Recording data on paper is very obsolete. A very efficient to keep data is to create an online database. Once the data are saved in a database, we can access the data anywhere anytime. The information retrieved from the database with easiness and within seconds. As a company there it is important to have a database in order to keep data regarding your customers. Business depends on customers therefore we need to use technology tools to collect data of the clients.

Enterprises want to complete their work faster, so interactive, responsive and efficient applications are decisive. People love to use systems that are user-friendly with a nice interface.

Looking at the impact of technology on business, it is very important for small and big businesses to use computerized systems.

Like others entrepreneurs, it's efficient and interesting for the tailors to use computerized system to perform their daily tasks. A system that is interactive, fast that allows them to do tasks quickly and with easiness.

1.1   Introduction to DBMS

DBMS stands for **D**ata**b**ase **M**anagement **S**ystem. We can break it like this DBMS = Database + Management System. Database is a collection of data and Management System is a set of programs to store and retrieve those data. Basically DBMS is a software tool to organize (create, retrieve, update and manage) data in a database.

The main aim of a DBMS is to supply a way to store up and retrieve database information that is both convenient and efficient. By data, we mean known facts that can be recorded and that have embedded meaning. Normally people use software such as DBASE

IV or V, Microsoft ACCESS, or EXCEL to store data in the form of database. A datum is a unit of data. Meaningful data combined to form information. Hence, information is interpreted data – data provided with semantics. MS. ACCESS is one of the most common examples of database management software.

Database systems are meant to handle large collection of information. Management of data involves both defining structures for storage of information and providing mechanisms that can do the manipulation of those stored information. Moreover, the database system must ensure the safety of the information stored, despite system crashes or attempts at unauthorized access.

1.1.1 Why DBMS?

- To develop software applications in less time.

- Data Independence and efficient use of data.

- For uniform data administration.

- For data integrity and security.

- For concurrent access of data, and data recovery from crashes.

- To use user-friendly declarative query language.

1.1.2 Database applications

- **Telecom:** There is a database to keeps track of the information regarding calls made, network usage, customer details etc. Without the database systems it is hard to maintain that huge amount of data that keeps updating every millisecond.

- **Industry:** Where it is a manufacturing unit, warehouse or distribution centre, each one needs a database to keep the records of ins and outs. For example distribution centre should keep a track of the product units that supplied into the centre as well as the products that got delivered out from the distribution centre on each day; this is where DBMS comes into picture.

- **Education sector:** Database systems are frequently used in schools and colleges to store and retrieve the data regarding student details, staff details, course details, exam

details, payroll data, attendance details, fees details etc. There is a hell lot amount of inter-related data that needs to be stored and retrieved in an efficient manner.

- **Online shopping:** You must be aware of the online shopping websites such as Amazon, Flipkart etc. These sites store the product information, your addresses and preferences, credit details and provide you the relevant list of products based on your query. All this involves a Database management system.

- **Banking system:** For storing customer info, tracking day to day credit and debit transactions, generating bank statements etc. All this work has been done with the help of Database management systems.

1.1.3 Advantages of DBMS

A DBMS manage data and has many advantages.

- **Data Independence:** Application programs should be as free or independent as possible from details of data representation and storage. DBMS can supply an abstract view of the data for insulating application code from such facts.

- **Efficient data access:** DBMS utilizes a mixture of sophisticated concepts and techniques for storing and retrieving data competently and this feature becomes important in cases where the data is stored on external storage devices.

- **Data integrity and security:** If data is accessed through the DBMS, the DBMS can enforce integrity constraints on the data.

- **Data administration:** When several users share the data, integrating the administration of data can offer major improvements. Experienced professionals understand the nature of the data being managed and can be responsible for organizing the data representation to reduce redundancy and make the data to retrieve efficiently.

- **Providing backup and recovery:** A DBMS must provide facilities for recovering from hardware or software failures. The backup and recovery subsystem of the DBMS is responsible for recovery.

- **Permitting inferencing and actions using rules:** Some database systems provide capabilities for defining deduction rules for inferencing new information from the stored database facts.
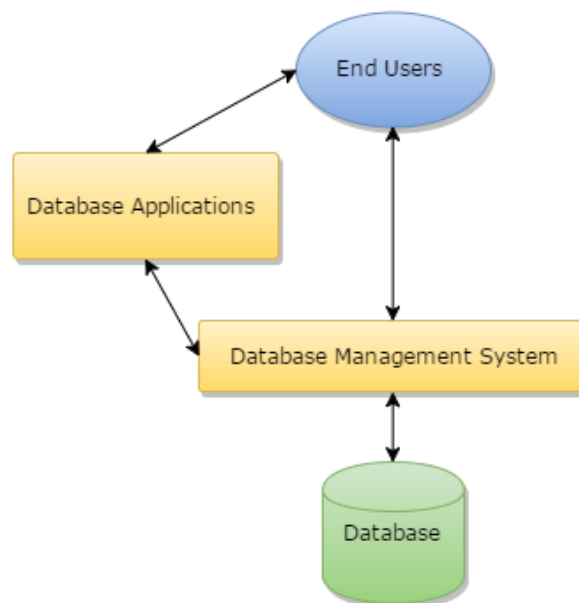
1.1.4 Components of DBMS

Fig-1.1: Components of a Database Management System

- **Users:** Users may be of any kind such as DB administrator, System developer or database users.

- **Database application:** Database application may be Departmental, Personal, organization's and / or Internal.

- **DBMS:** Software that allow users to create and manipulate database access.

- **Database:** Collection of logical data as a single unit.

- **Database access language:** This is used to access the data to and from the database, to enter new data, update existing data, or retrieve required data from databases. The user writes a set of appropriate commands in a database access language, submits these to the DBMS, which then processes the data and generates and displays a set of results into a user readable form.

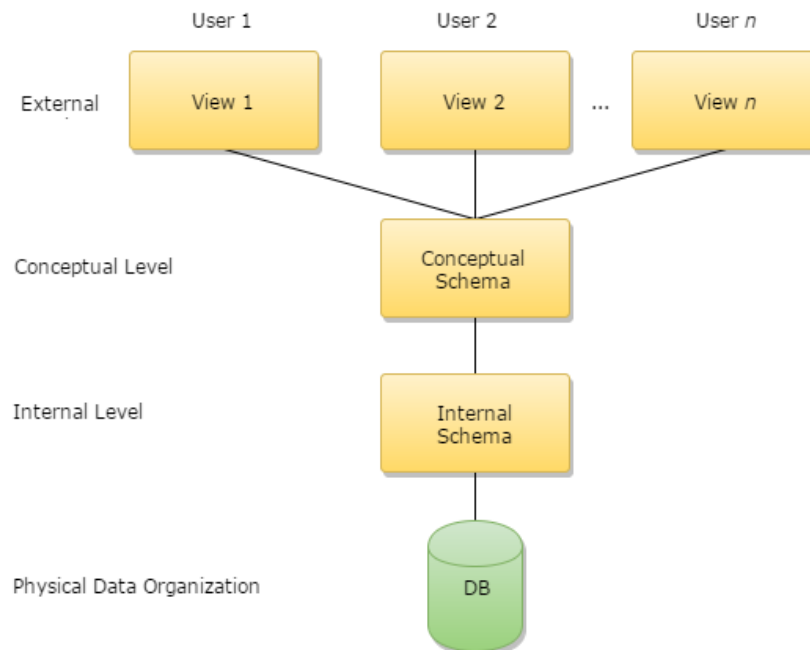## 1.1.5 Three-Schema architecture

Fig-1.2: Architecture of database system

The levels form a three-level architecture that includes an external, a conceptual, and an internal level. The way users recognize the data is called the external level. The way the DBMS and the operating system distinguish the data is the internal level, where the data is actually stored using the data structures and file. The conceptual level offers both the mapping and the desired independence between the external and internal levels.

CHAPTER 2

SYSTEM REQUIREMENTS

2.1 Hardware Requirements

- **Processor:** Intel Core2 Quad @ 2.4Ghz on Windows® Vista 64-Bit / Windows® 7 64-Bit / Windows® 8 64-Bit / Windows® 8.1 64-Bit.

- **RAM:** 2GB of RAM

- **Memory:** 256GB Hard drive

- **Keyboard:** MS compatible keyboard

- **Mouse:** MS compatible mouse

2.2 Software Requirements

- **Operating system:** Windows® Vista 64-Bit / Windows® 7 64-Bit / Windows® 8 64-Bit / Windows® 8.1 64-Bit / Windows® 10 32/64-Bit.

- **Front end:** Html, CSS, Bootstrap, JavaScript

- **Back end:** MySQL Database

- **Server Side Scripting:** PHP

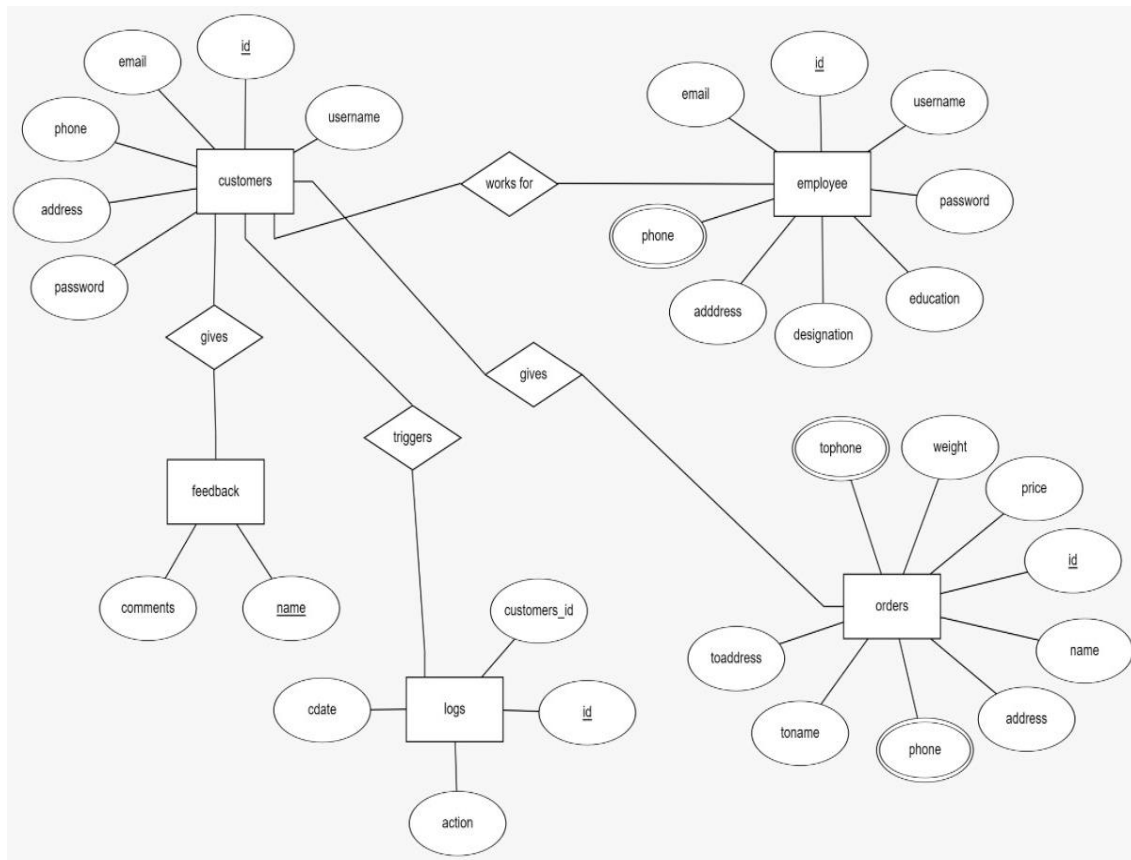- **Web Server:** XAMPP OR MAMP

CHAPTER 3

DESIGN

3.1 ER Diagram

Fig-3.1: Entity Relationship Diagram of Courier Management System
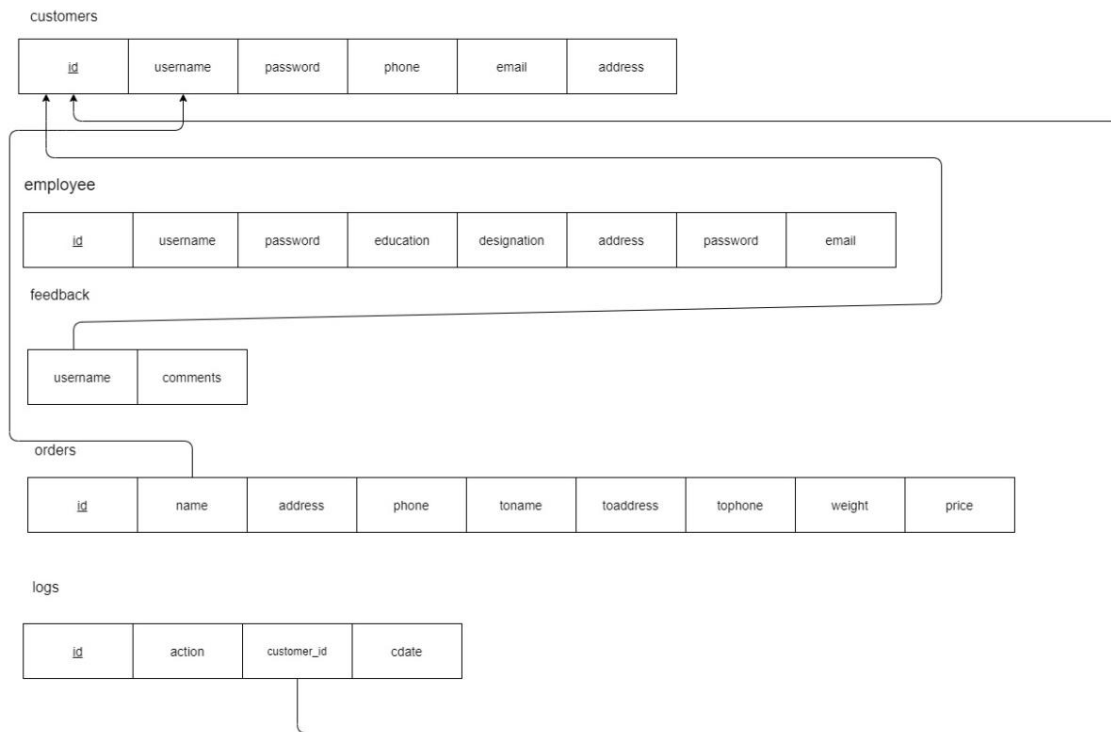
3.2 Schema Diagram

Fig-3.2: Schema Diagram of Courier Management System

Schema Diagram: An illustrative display of (most aspects of) a database schema.

Schema Construct: A component of the schema or an object within the schema, e.g., STUDENT, COURSE.

CHAPTER 4

IMPLEMENTATION

4.1 Tables

4.1.1 customers

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	___id___	Integer	Primary Key
2	username	Varchar	
3	password	Varchar	
4	address	Varchar	
5	phone	Bigint	
6	email	Varchar	

CREATE TABLE customers (

 `id` int(11) NOT NULL,

 `username` varchar(20) NOT NULL,

 `password` varchar(20) NOT NULL,

 `address` varchar(60) NOT NULL,

 `phone` bigint(20) NOT NULL,

 `email` varchar(40) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

4.1.2 employee

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	Id	Integer	Primary key
2	username	Varchar	
3	password	Varchar	
4	education	Varchar	
5	Designation	Varchar	
6	address	Varchar	
7	phone	Bigint	
8	email	Varchar	

CREATE TABLE `employee` (

 `id` int(11) NOT NULL,

 `username` varchar(20) NOT NULL,

 `password` varchar(20) NOT NULL,

 `education` varchar(40) NOT NULL,

 `designation` varchar(20) NOT NULL,

 `address` varchar(60) NOT NULL,

 `phone` bigint(20) NOT NULL,

 `email` varchar(40) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

4.1.3 orders

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	id	Integer	
2	name	Varchar	
3	address	Varchar	
4	phone	Bigint	
5	toname	Varchar	
6	toaddress	Varchar	
7	tophone	Bigint	
8	weight	Varchar	
9	price	Integer	

CREATE TABLE `orders` (

`id` int(11) NOT NULL,

`name` varchar(255) NOT NULL,

`address` varchar(255) NOT NULL,

`phone` int(11) NOT NULL,

`toname` varchar(255) NOT NULL,

`toaddress` varchar(255) NOT NULL,

`tophone` int(11) NOT NULL,

`weight` varchar(100) NOT NULL,

`price` int(11) NOT NULL

) ENGINE=InnoDB DEFAULT CHARSET=latin1;

4.1.4 logs

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	id	Integer	Primary Key
2	customer_id	Integer	Foreign Key to customer
3	Action	Varchar	
4	Cdate	DATETIME	

CREATE TABLE 'logs'(

'ID'int(11) NOT NULL,

'vendorID' int(11) NOT NULL,

'action' varchar(20) NOT NULL,

'date' datetime NOT NULL

)

4.1.5 feedback

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	Comments	Varchar	
2	name	Varchar	

CREATE TABLE 'feedback' (

'id' int(11) NOT NULL,

'comments' varchar (255) NOT NULL)

ENGINE=InnoDB DEFAULT

CHARSET=latin1;

4.2 Triggers

CREATE TABLE 'logs'(

'ID'int(11) NOT NULL,

'vendorID' int(11) NOT NULL,

'action' varchar(20) NOT NULL,

'date' datetime NOT NULL

)

4.3 Stored Procedure

$rec=mysqli_quert($db, " CALL 'getorders'(:oid);");

$rec->bindParam(":oid",$id);

CHAPTER 5

SNAPSHOTS

The following snapshot contains the Home page of the application where customer can view details about the Courier Management**.**
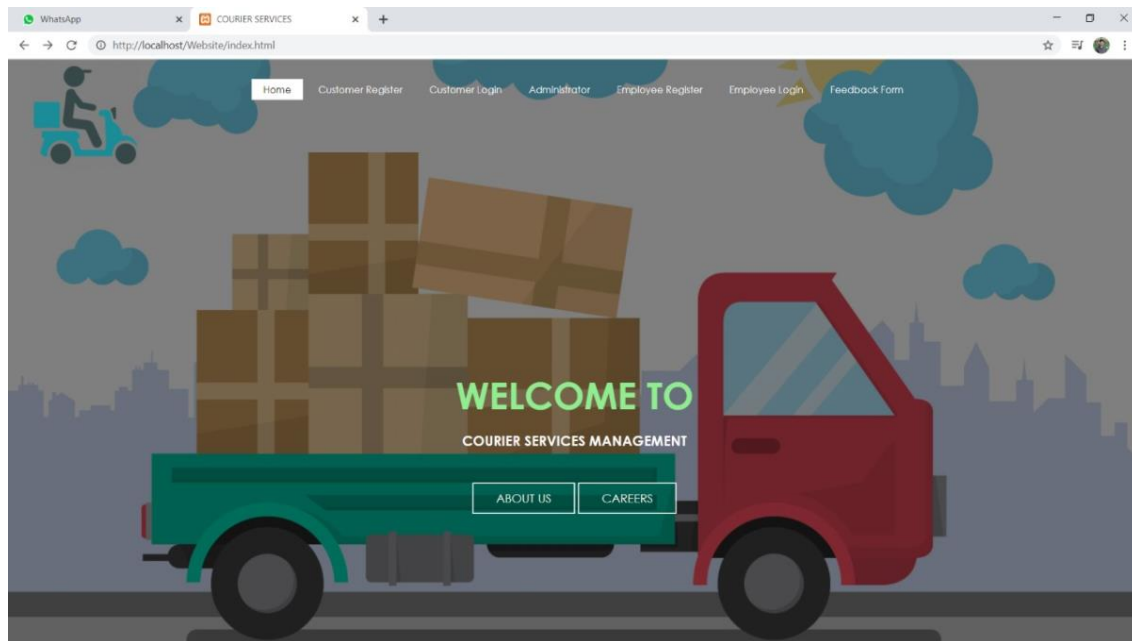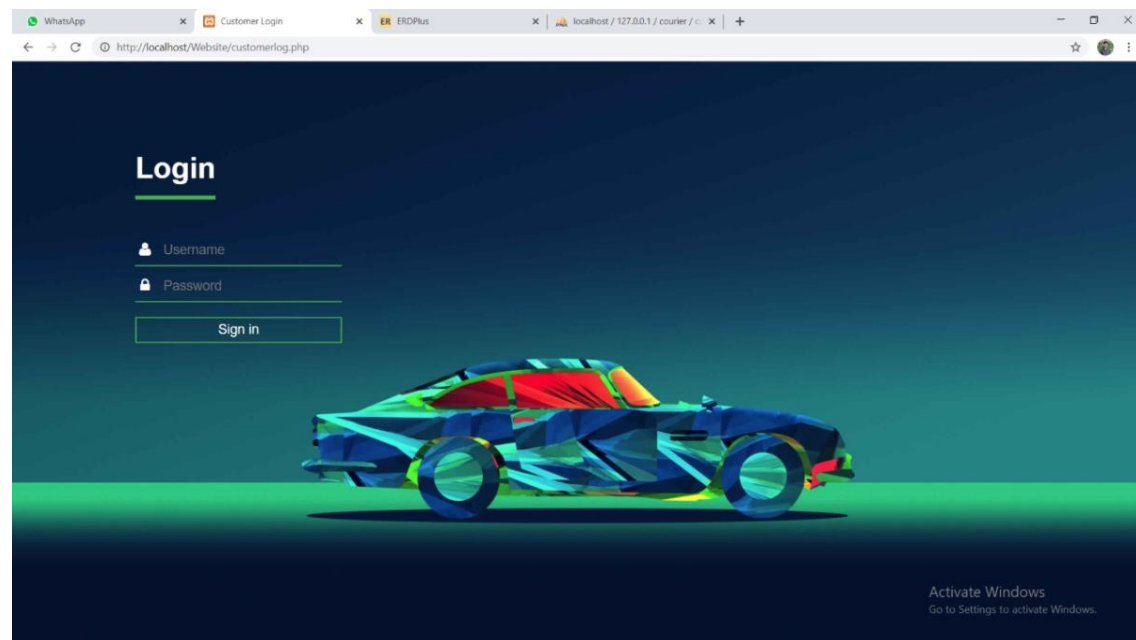

Fig-5.1: Snapshot of Home Page

The following snapshot contains the Customer registration page of the application. Where the customer will provide all the details to register to the application
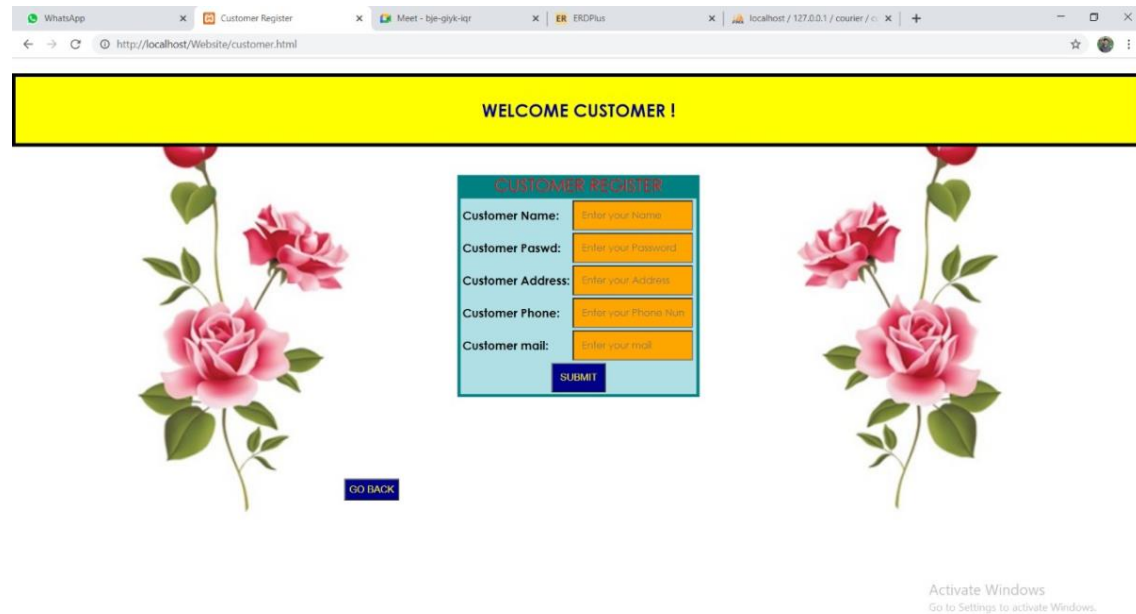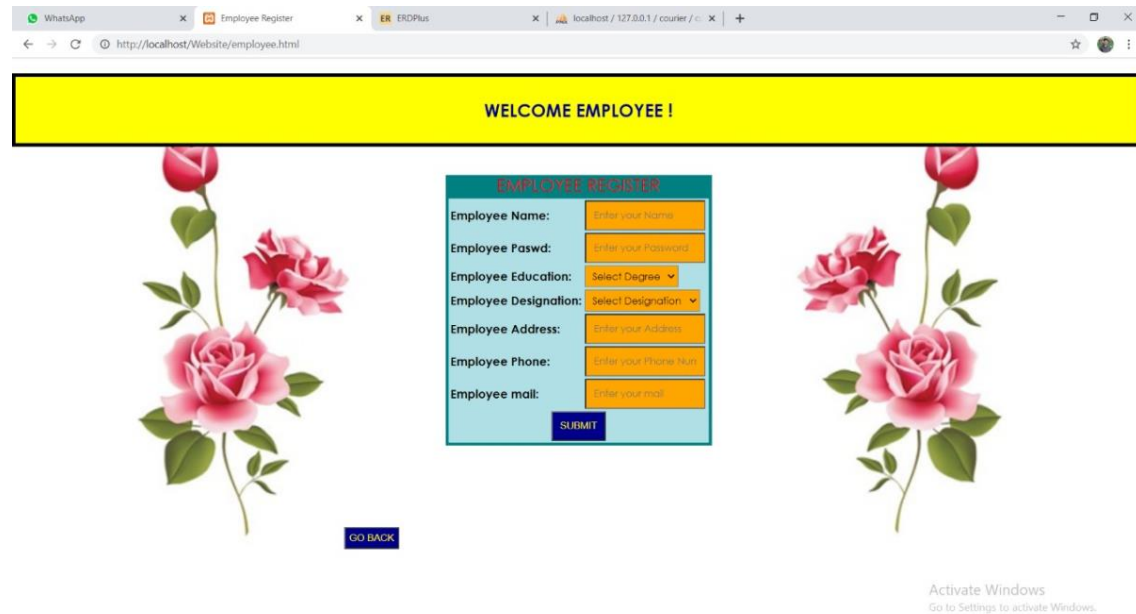

Fig-5.2: Snapshot of Customer registration page

The following snapshot contains the Customer login page of the application. Where the customer will login with username and password.
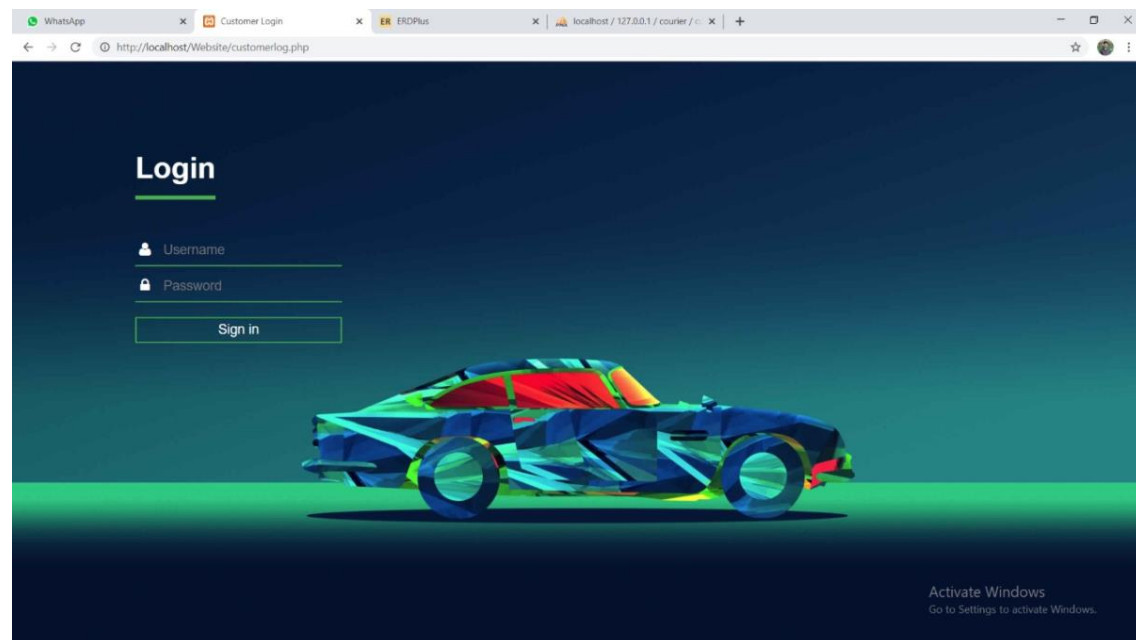

Fig-5.3: Snapshot of Customer login page

The following snapshot contains the Employee registration page of the application. Where the customer will provide all the details to register to the application

Fig-5.4: Snapshot of Employee registration page

The following snapshot contains the Customer login page of the application where the customer will login with username and password.

Fig-5.5: Snapshot of Employee login page

The following snapshot contains the customer page section. Where the customer logged in can place the order by giving the details.

Fig-5.6: Snapshot of Customer order placing page

The following snapshot contains the employee page section. Where the employee can edit or delete the order.
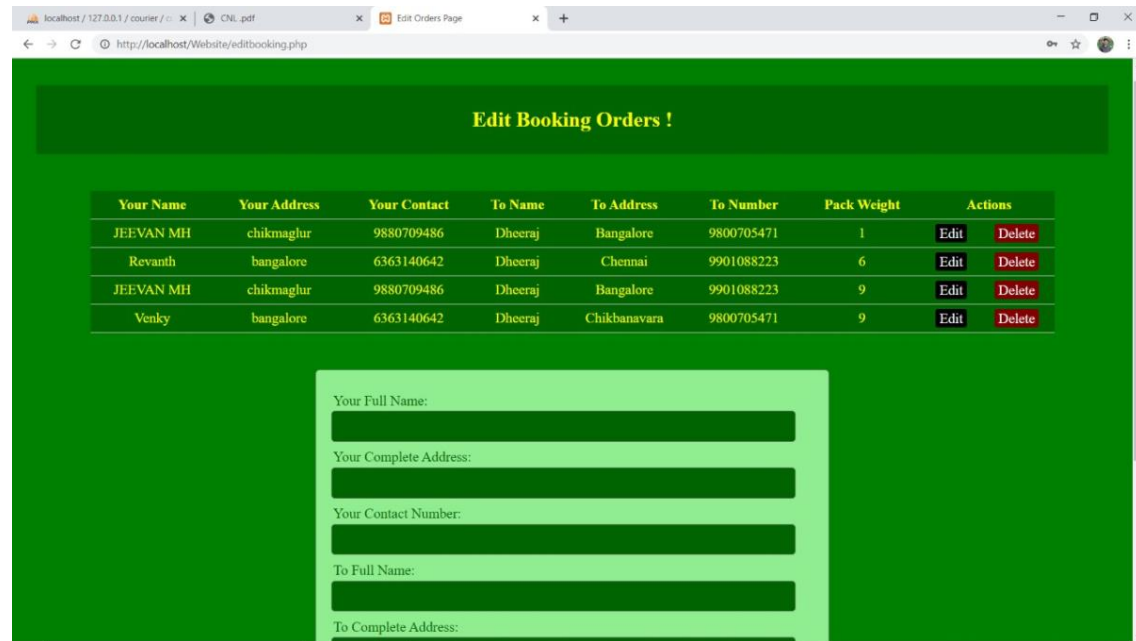

Fig-5.7: Snapshot of employee page

The following snapshot contains the admin page section. Where the administrator can edit or delete the order.
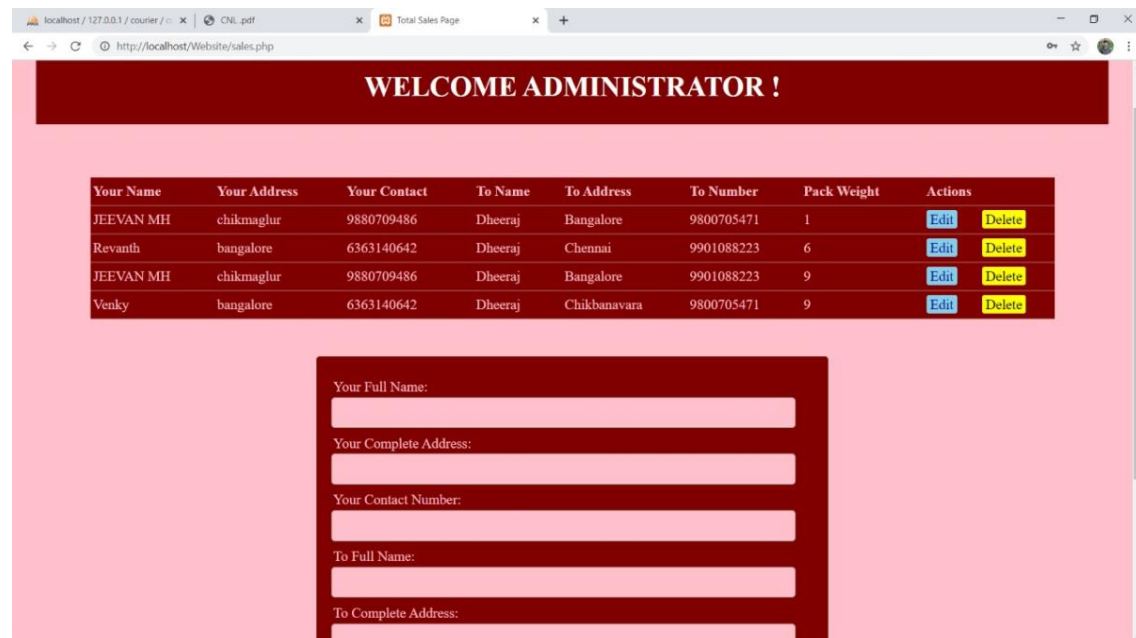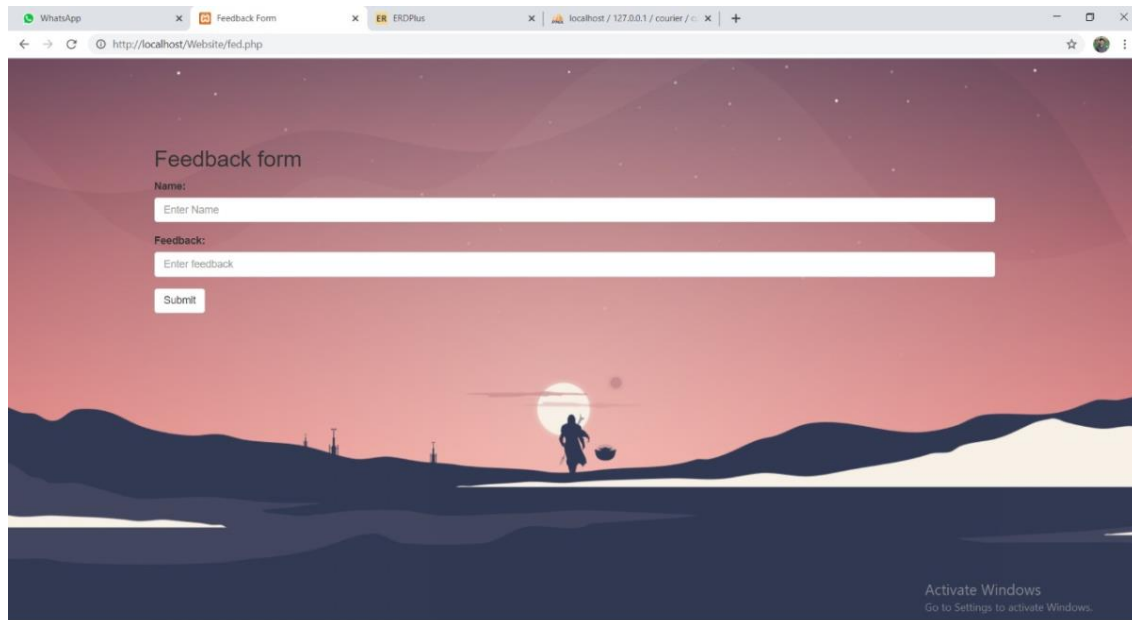

Fig-5.8: Snapshot of employee page

The following snapshot contains the feedback section. Where customer can give the feedback on courier service.

Fig-5.9: Snapshot of feedback page

CONCLUSION & FUTURE ENHANCEMENT

Conclusion

The objective of this courier management system is to reduce the day to day work hectic by automating all the manual work of courier related organizations into computer based work. Courier management system aims at keeping the track of employee information, apart from these details about day to day courier senders, receivers, courier men, hub details and prices and products which are sending using courier services. It is a better system compared to paper-based system. All the details are saved in a database and are retrieved whenever and wherever needed. In the future the system may be designed as a mobile application

Future Enhancement

In a nutshell, it can be summarized that the future scope of the project circles around maintaining information regarding:

- A printer can be added in the future for printing the bills.

- The platform can be hosted on the online servers to make it accessible worldwide.

- Integrate multiple load balancers to distribute the loads of the system.

The above mentioned points are the enhancements which can be done to increase the applicability and usage of this project. Here we can maintain the records of customers and their orders. I have left all the options open so that if there is any other future requirement in the system by the user for the enhancement of the system then it is possible to implement them.

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