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A DBMS MINI- PROJECT REPORT

ON

"TRAVEL AGENCY MANAGEMENT SYSTEM"

Submitted to Visvesvaraya Technological University in partial fulfillment of the requirement for the award of Bachelor of Engineering degree in Computer Science and Engineering.

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National Educational Society ®

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CERTIFICATE

This is to certify that the DBMS - MINI project entitled

"TRAVEL AGENCY MANAGEMENT SYSTEM"

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ABSTRACT

The project titled **"TRAVEL AGENCY MANAGEMENT SYSTEM" i**s designed with the motive of maintaining all the database of the concern. The basic aim of the project is develop a system, which is very simple, user friendly ,easily retrieval and simple access. The project has been developed using Java NetBeans as front end and MySQL as back end for the Travel Agency Management System.

This project is insight into the design and implementation of a Travel Agency Management System. The primary aim of is to improve accuracy and enhance safety and efficiency in the Travel Agency. Today management is one of the most essential features of all form. Management provides sophistication to perform any kind of task in a particular form. This is travel management system; it is used to manage most travel related activities in the travel agencies.

ACKNOWLEDGEMENT

On presenting the Database Management Systems Mini – Project report on "**TRAVEL AGENCY MANAGEMENT SYSTEM",** I feel great to express my humble feelings of thanks to all those who have helped me directly or indirectly in the successful completion of the project work.

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Thanking you all,

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CHAPTER 1

INTRODUCTION

Database management system or DBMS is a software designed to assist in managing and utilizing large collection in data, and the need of such system, as well as their use, is growing rapidly. The Alternative to using a DBMS is used to hoc approaches that do not carry over from one application to another.

1.1Overview of DBMS

A database management system stores data in such a way that it becomes easier to retrieve, manipulate, and produce information. Database is a collection of related data and data is a collection of facts and figures that can be processed to produce information. The area of the Database Management system is microcosm of computer science in general. The issues addressed and the technique used to span a wide spectrum, including languages, object orientation and other programming paradigm ,compilation, operating system, concurrent programming ,data structures, algorithms, theory, parallel and distributed systems user interface, expert systems and artificial intelligence, statistical techniques, and dynamic programming.

1.2History

From the earliest days of computers, storing and manipulating data have been a major application focus. The first general purpose DBMS was designed by Charles Bachman at General Electric in the early 1960s was called The Integrated Data Store. It formed the basis for the network data model, which was standardized by the Conferences on Data Systems Languages (CODASYL) and strongly influenced database systems through the 1960s.Bachman was the first recipient of ACM's Turing Award(the computer science equivalent of a Nobel prize) for work in the database Area; he receives the award in 1973.

In the late 1960's IBM developed the Information Management System (IMS)

DBMS, used even today in many major installations. IMS form, the basis for an alternative data representation framework called the hierarchical data model. The SABRE system for making airlines reservation was jointly developed by American Airlines and IBM around the same time, and it allowed several people to access the same data through.

An interesting phenomenon is the emergence of several enterprise resource planning (ERP) and management resources planning (MRP) packages, which add a substantial layer of application –oriented features on top of a DBMS widely used packages include systems from Bann, Oracle, peopleSoft , SAP and Siebal.

1.3 Applications of DBMS

Nowadays DBMS are used in almost all the areas ranges from science, engineering, medicine, business, industry, government, art, entertainment, education and training.

DBMS in the field of Library Management System

There are thousands of books in the library so it is very difficult to keep records of all the books in a copy or register. DBMS is used to maintain all the information related to book issue date, name of book, author and availability of book.

DBMS in the field of Banking

Another major application is the banks. Thousands of transactions through daily can do this without going bank. To manage such huge transactions is just because of DBMS that manages bank transactions.

DBMS in the field of universities and colleges

Examinations are done online today and universities and colleges maintain all these records through DBMS. Student’s registrations details, results, courses and grades all the information is stored in database.

DBMS in the field of Telecommunications

Any telecommunication company cannot even think about their business without DBMS.DBMS is required for these companies to store the call details and monthly postpaid bills.

DBMS in the field of Online Shopping

Online shopping has become a big trend of these days. No one wants to go to shops and to waste his time. Everyone wants to shop from home. So all these products are added and sold only with the help of DBMS. Purchase information, invoice and payment all these are done with the help of DB

DBMS in the field of Military

Military keeps records of millions of soldiers and it has millions of files that should be kept secure and safe. As DBMS provides a big security assurance to military information so it is widely used in militaries. One can easily search for all the information about anyone within seconds with the help of DBMS.

1.4 Problem Statement

The tourism industry faces a great challenge in the age of the information technology development. The traditional tourism distribution channel faces a threat of the emerging IT environment. Throughout years the tourism industry was dependent on the intermediaries, who enabled the interaction between the suppliers and the customers. Nowadays, however, the suppliers can reach the customer directly via internet having the geographical distance barriers and costs associated to them, disappeared. The internet age changed the complexity of the tourism distribution, enabling the entry of the new virtual intermediaries characterized by a strong competitive advantage towards other players of the sector. The internet allows a wide range of benefits for the companies and the customers, making the information widely available, reducing the difficulties in purchasing, marketing and distribution, allowing the sellers and the buyers to direct transact with each other. However, companies still face the difficulties on how to capture the benefits in order to position themselves in the digital reality. The entry of the new tourism intermediaries, known as the online travel agencies, introduced an innovative approach to the integration platform,

collecting the suppliers and integrating them into a one stop shopping place for the customers. The success of the platform depends however on the participation level of the tourism products, suppliers. This raises the question of how to attract the various tourism suppliers to join the platform. The thesis presents a cost/benefit analysis of the joining the platform for every participant. The analysis considers the financial aspects of the decision, but also the intangibles which should influence the long-term strategy for every tourism supplier (hotels, airlines, car rentals companies, cruises). The evaluation compares different distribution channels of the suppliers, both the traditional and emerging ones. The real-life examples to support arguments presented are mostly based on the current world successful cyber-mediaries: Expedia, Travelocity and Orbitz.

1.5 Objectives of the project

The Tourism Management System is a web-based application and maintains a centralized repository of all related information. The Objective of this project is to develop a system that automates the process and activities a travel agency and customer details. The purpose is to design a system using which one can perform all operations related to travelling and sight- seeing.

1.6 Organization of the report

This section deals with the Introduction and organization of the project report. Chapter 2 discusses the Specific to the problem-Requirement Analysis-Design. Chapter 3 discusses the Design and Implementation Chapter 4 gives information about the snapshot and results Chapter 5 include conclusion and future scope. Chapter 6 gives the references of the project.

Chapter 2

REQUIREMENT ANALYSIS AND DESIGN

This chapter includes the requirements for the development of the project. These requirements describe high level system design, software requirements etc.

2.1 Basic Definition

Travel management is a specialism, which is based around organizing corporate travel, tracking your various travel expenses, and devising a comprehensive travel strategy. As a discipline, it is intended to help businesses and their employees to optimize the way they deal with their travel needs.

2.2 Advantages

- This system decreases the chance of error.
- This system requires less time for completion of any work.
- It is used to maintain the information such as vehicles and tourists information.
- Work load and man power is very fast.

2.3 Requirement Analysis

SOFTWARE

Operating System: Windows 7/8/10.

Software's used: MySQL, NetBeans IDE 8.2, NetBeans IDE 11.1.

Libraries: Java JDK 8 (64 bit)

MySQL Connector Net 8.0.13.

MySQL Server 3.5.

MySQL Workbench 8.0 CE.

NetBeans IDE 8.2, NetBeans IDE 11.1.

BACK END

Interactive enterprise manager screens display details about a SQL statement. This includes the SQL text, Top activity by various dimensions, CPU and wait activity over time, key SQL statistics, and execution plans, SQL profiles and SQL plan baselines will be displayed if they exist, and a monitored execution is displayed, if available.

FRONT END

Java database connectivity (JDBC) is an application programming interface (API) for the programming language java, which defines how a client may access a database.it is java-based data access technology and user for java database connectivity .it is Part of the java standard edition platform, form MySQL corporation.it provides methods to query and update data in a database, and is oriented towards relational databases. A JDBC-to-ODBC bridge enables connections to any ODBC-accessible data source in the java virtual machine (JVM) host environment.

Software requirements

- Operating system - Windows 7/8/10/11
- Backend - MySQL
- Front end - Java swings
- Platform - Jdbc jar

Hardware components

- Processor - Intel core i3
- Processor speed - 2.1 GHz
- Ram - 4 GB
- Hard disk - 1 TB

Chapter 3:

Design and Implementation

This chapter describes entities, the attributes and from that how the design has been achieved to provide the ER diagram. It also covers how the schema diagram is evolved.

SCHEMA DESCRIPTION

VEHICLE: It contains the attributes VID, VNAME, CAPACITY, TYPE, REGNO.

EMPLOYEE: It contains the attributes EID, ENAME, EADDRESS, EPHONE, EJDATE.

CUSTOMER: It contains the attributes CID, CNAME, CADDRESS,CPHONE.

PAYMENT: It contains the attributes CID, TID, DATE, DISTANCE TRAVEL, PDATE.

BOOKED_FOR: It contains the attributes CID, VID, TID, BDATE.

DRIVEN_BY: It contains the attributes EID, VID, TID, DDATE.

PACKAGE: It contains the attributes P_NAME , P_ID,P_AMOUNT,TID.

3.1 ER DIAGRAM

Figure 3.1 gives ER diagram.

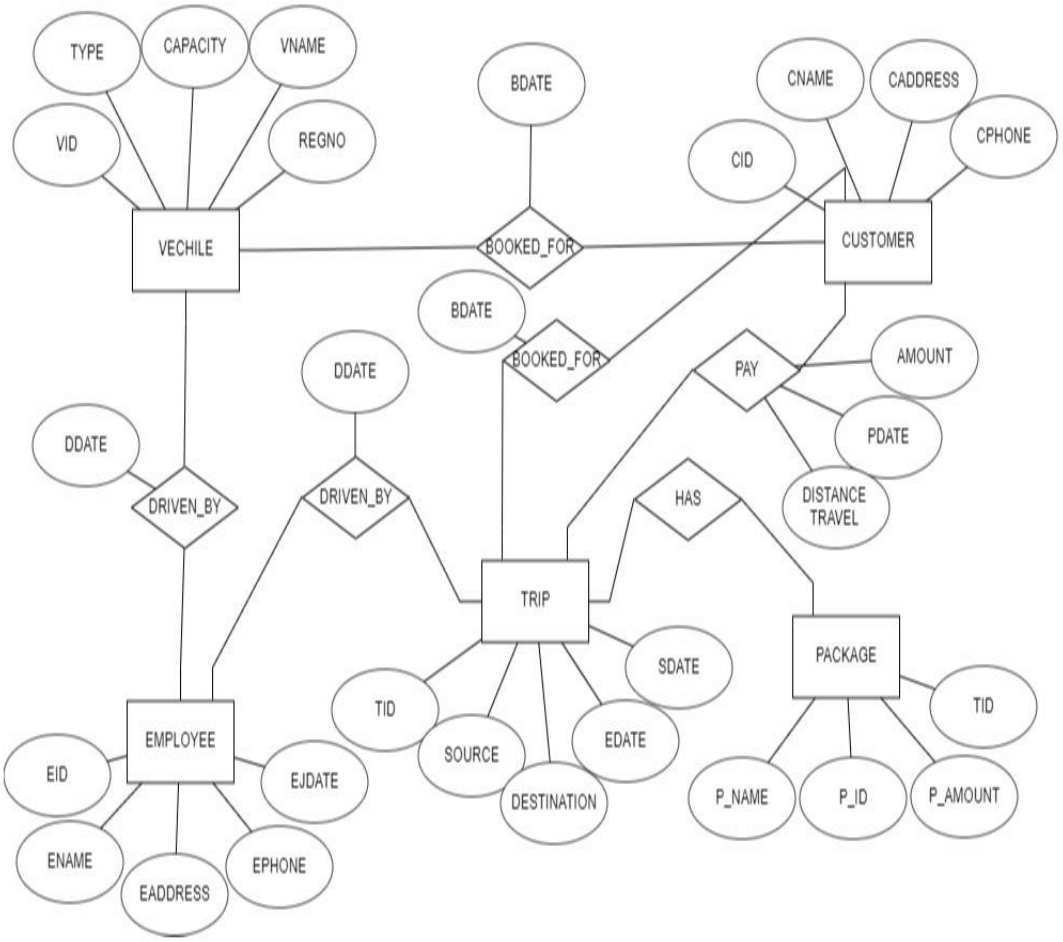

Figure 3.1 ER Diagram

3.2 SCHEMA DIAGRAM

Figure 3.2 gives schema diagram.

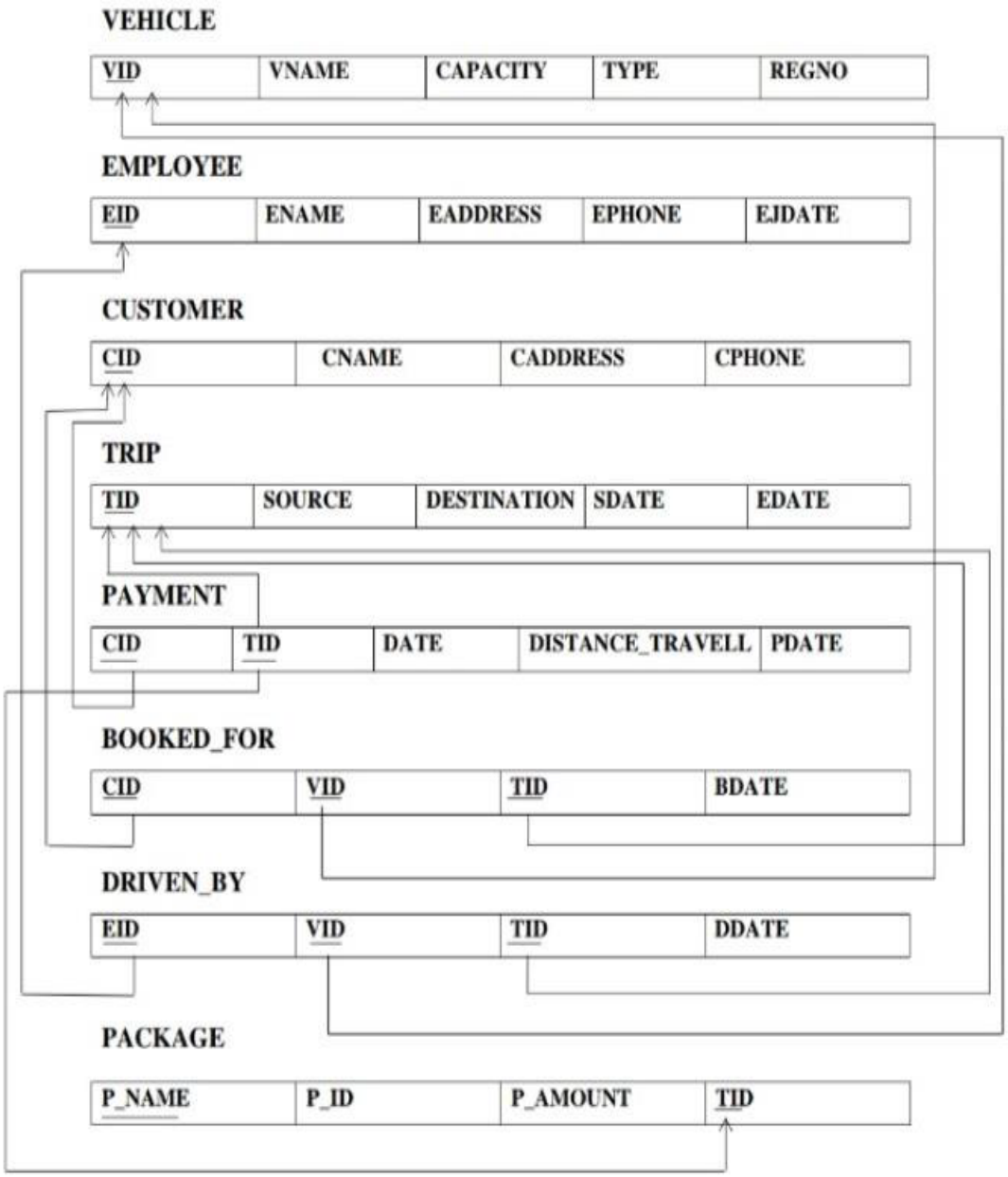

Figure 3.2 gives schema diagram

3.3 TABLE STRUCTURE

3.3.1 Vehicle Relation

CREATE TABLE `DB`. `VEHICLE` (`VID` INT (3) NOT NULL, `VNAME` VARCHAR (20) NULL, `CAPACITY` INT (3) NULL, TYPE` VARCHAR(15) NULL, `REGNO` VARCHAR(15) NULL, CONSTRAINT CPK_VID PRIMARY KEY (`VID`));

NAME	TYPE
VID	INT (3)
VNAME	VARCHAR (20)
CAPACITY	INT (3)
TYPE	VARCHAR (15)
REGNO	VARCHAR (15)

Figure 3.3.1 Vehicle Table Structure

3.3.2 Employee Relation

CREATE TABLE `DB`. `EMPLOYEE` (`EID` INT(3) NOT NULL, `ENAME` VARCHAR(20) NULL, `EADDRESS` VARCHAR(25) NULL, `EPHONE` INT(10) NULL `EJDATE` DATE NULL, CONSTRAINT CPK_EID PRIMARY KEY (`EID`));

NAME	TYPE
EID	INT(3)
ENAME	VARCHAR(20)
EADDRESS	VARCHAR(25)
EPHONE	INT(10)
EJDATE	DATE

Figure 3.3.2 Employee Table Structure

3.3.3 Trip relation

CREATE TABLE `DB`. `TRIP` (`TID` INT (3) NOT NULL, `SOURCE` VARCHAR (20) NULL, `DEST` VARCHAR (25) NULL, `SDATE` VARCHAR (45) NULL, CONSTRAINT CPK_TID PRIMARY KEY (`TID`));

NAME	TYPE
TID	INT (3)
SOURCE	VARCHAR (20)
DESTNATION	VARCHAR (25)
SDATE	DATE
EJDATE	DATE

Figure 3.3.3 Trip Table Structure

3.3.4 Customer Relation

CREATE TABLE `DB`. ` CUSTOMER` (`CID` INT NOT NULL, `CNAME` VARCHAR (20) NULL, `CADDRESS` VARCHAR (25) NULL, `CPHONE` INT(10) NULL PRIMARY KEY (`CID`));

NAME	TYPE
CID	INT(3)
CNAME	VARCHAR(20)
CADDRESS	VARCHAR(25)
CPHONE	INT(10)

Figure 3.3.4 Customer Table Structure

3.3.5 Booked_for Relation

CREATE TABLE `DB`.`BOOKED_FOR` (`CID` INT(3) NOT NULL, `VID` INT(3) NOT NULL, `TID` INT(3) NOT NULL, `BDATE` DATE NULL, CONSTRAINT CPK_CVT PRIMARY KEY (`CID`, `VID`, `TID`, CONSTRAINT `CFK-AID` FOREIGN KEY (`VID`) REFERENCES `DB`.`VEHICLE` (`VID`) ON DELETE CASCADE, ON UPDATE CASCADE, CONSTRAINT `CFK_EID` FOREIGN KEY (`CID`) REFERENCES `DB`.`CUSTOMER` (`CID` ON DELETE CASCADE,ON UPDATE CASCADE, CONSTRAINT `CFK-TID` FOREIGN KEY (`TID`) REFERENCES `DB`.`TRIP` (`TID`)ON DELETE CASCADE,ON UPDATE CASCADE);

NAME	TYPE
CID	INT (3)
VID	INT (3)
TID	INT (3)
BDATE	DATE

Figure 3.3.5 Booked_for Table Structure

3.3.6 Driven-by Relation

CREATE TABLE `DB`.`DRIVEN_BY` (`EID` INT(3) NOT NULL, `VID` INT(3) NOT NULL, `TID` INT(3) NOT NULL, `DDATE` DATE NULL, CONSTRAINT CPK_CVT1 PRIMARY KEY (`EID`, `VID`, `TID`), CONSTRAINT `CFK-AID1` FOREIGN KEY (`VID`) REFERENCES `DB`.`VEHICLE` (`VID`) ON DELETE CASCADE, ON UPDATE CASCADE, CONSTRAINT `CFK_EID` FOREIGN KEY (`EID`) REFERENCES `DB`.`EMPLOYEE` (`CID`) ON DELETE CASCADE,ON UPDATE CASCADE, CONSTRAINT `CFK-TID` FOREIGN KEY (`TID`) REFERENCES `DB`.`TRIP` (`TID`ON DELETE CASCADE, ON UPDATE CASCADE)

NAME	TYPE
EID	INT(3)
VID	INT(3)
TID	INT(3)
DDATE	DATE

Figure 3.3.6 Driven_by Table Structure

3.3.7 Payment Relation

CREATE TABLE `DB`. `PAYMENT` (TID` INT NOT NULL, `CID` INT NOT NULL, `PDATE` DATE NULL, `DISTANCE TRAVEL` INT(4) NULL, AMOUNT` DECIMAL (6) NULL, PRIMARY KEY (`TID`, `CID`) ,CONSTRAINT `CFK_CID1` FOREIGN KEY (`CID`) REFERENCES `DB`.`CUSTOMER` (`CID`) ON DELETE NO ACTION ON UPDATE NO ACTION,CONSTRAINT `CFK_TID1` FOREIGN KEY (`TID`) REFERENCES `DB`.`TRIP` (`TID`) ON DELETE NO ACTION ON UPDATE NO ACTION);

NAME	TYPE
TID	INT(3)
CID	INT(3)
DISTANCE_TRAVEL	INT(6)
PDATE	DATE
AMOUNT	DECIMAL(6)

Figure 3.3.7 Payment Table Structure

3.4 Functionalities used in Travel Agency Management System

3.4.1 Connecting to Database

The "Travel Agency Management System" has been developed in JAVA. It used the MySQL database for storing the data and it is connected by the following syntax:

```
Class.forName("com.mysql.jdbc.Driver");

Connection conn =DriverManager.getConnection("jdbc: mysql://localhost/test1",
"root","11606");

return conn;
```

3.4.2 Insert

Insert operation is used to add vehicle details, employee details, customer details, trip details and payment details into the database.

```
String query = "INSERT INTO EMPLOYEE
(ENAME,EPHONE,EADDRESS,EJDATE)VALUES(?,?,?,?)";
 try{
        pst =conn.prepareStatement(query);

        pst.setString(1,Eid.getText());

        pst.setString(1,Ename.getText());

        pst.setString(2,Ephone.getText());
```

```
        pst.setString(3,Eaddress.getText());
        pst.setDate(4, new java.sql.Date(Ejdate.getDate().getTime()));
        pst.execute();
        JOptionPane.showMessageDialog(null,"Employee added");
        fetch();
       }
 catch(Exception e){
            JOptionPane.showMessageDialog(null,e);
     }
```

3.4.3 Modify

Modify operation is used to update the vehicle details, employee details, customer details, trip details and payment details into the database.

```
conn = Mysqlconnect.ConnectDB();
 int row = Etable.getSelectedRow();
 String cell = Etable.getModel().getValueAt(row,0).toString();
 System.out.println(cell);
 String modsql = "UPDATE EMPLOYEE SET ENAME=?,EPHONE
=?,EADDRESS=? WHERE EID ="+cell;
 try{
         pst=conn.prepareStatement(modsql);
         pst.setString(1,Ename.getText());
         pst.setString(2,Ephone.getText());
         pst.setString(3,Eaddress.getText());
         pst.setDate(4, new java.sql.Date(Ejdate.getDate().getTime()));
         pst.execute();
         JOptionPane.showMessageDialog(null,"Table Modified");
        fetch();
 }
    catch(Exception e){
        JOptionPane.showMessageDialog(null,e);
```

```
}
```

3.4.4 Delete

Delete operation is used to delete vehicles, employee, customer and trip details from the database.

```
conn = Mysqlconnect.ConnectDB();
 int row = Etable.getSelectedRow();
 String cell = Etable.getModel().getValueAt(row,0).toString();
 System.out.println(cell);
 String delsql = "DELETE FROM EMPLOYEE WHERE EID = "+ cell;
 try{
        pst=conn.prepareStatement(delsql);
        pst.execute();
        JOptionPane.showMessageDialog(null,"Employee Deleted");
        fetch();
 }
      catch(Exception e){
            }
 }
```

3.4.5 Trigger

Trigger operation is used raise an error message if the entered phone number in employee table is less than 10 digits.

```
CREATE TRIGGER PHVAL
 BEFORE INSERT ON EMPLOYEE
 FOR EACH ROW
 BEGIN
 IF LENGTH (NEW.ephone) > 10 OR LENGTH(NEW.ephone) < 10
 THEN
signal sqlstate '45000'
 set message_text = '`Phone Number` is not valid';
 END IF;
 END;//
```

3.4.6 Stored Procedure

A procedure is created in our project to display the contents on booking table. The procedure is called by callable statement.

```
CREATE PROCEDURE DISP1()
 BEGIN select t.tid,c.cid,t.source,t.dest,sdate,edate,cname,caddress,cphone from trip t,customerc,booked_for bwhere t.tid = b.TID and c.cid = b.CID;
 END;
```

Chapter 4

RESULT AND ANALYSIS

This chapter includes result and snapshots of the implementation.

Figure 4.1 describes the login page.

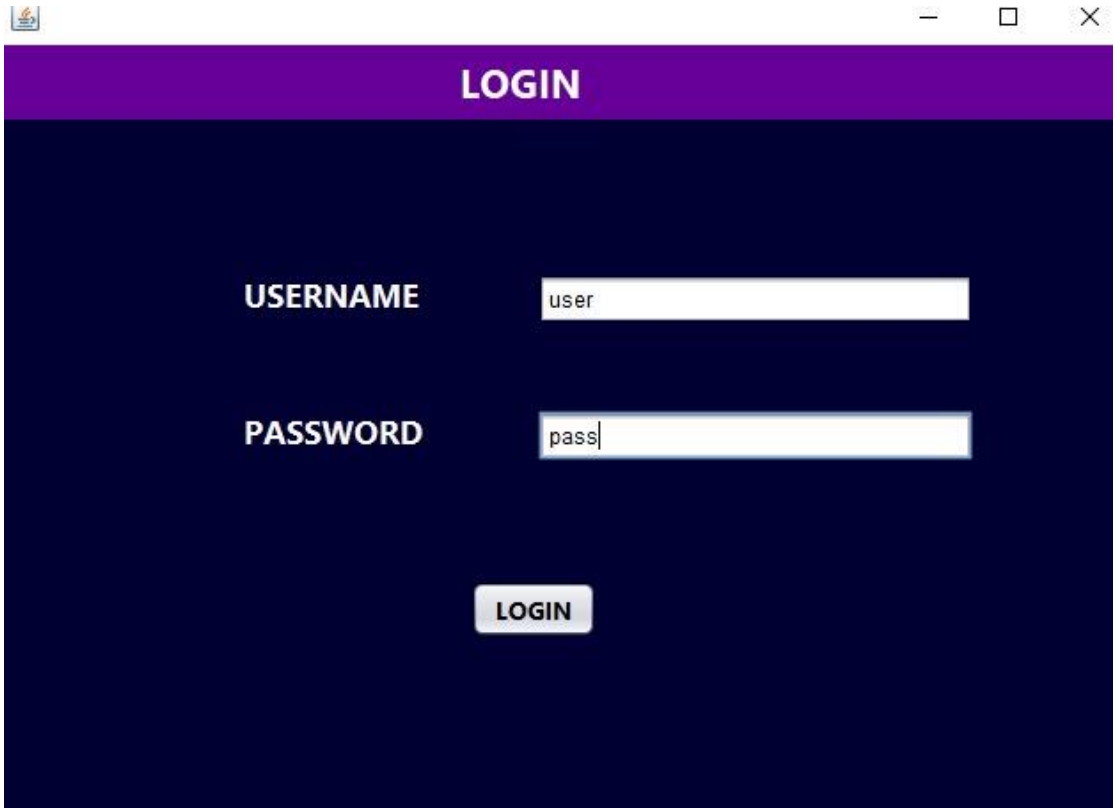

Fig: 4.1 LOGIN PAGE

Figure 4.2 describes the home page.

Fig 4.2: HOME PAGE

Figure 4.3 describes the booking dashboard

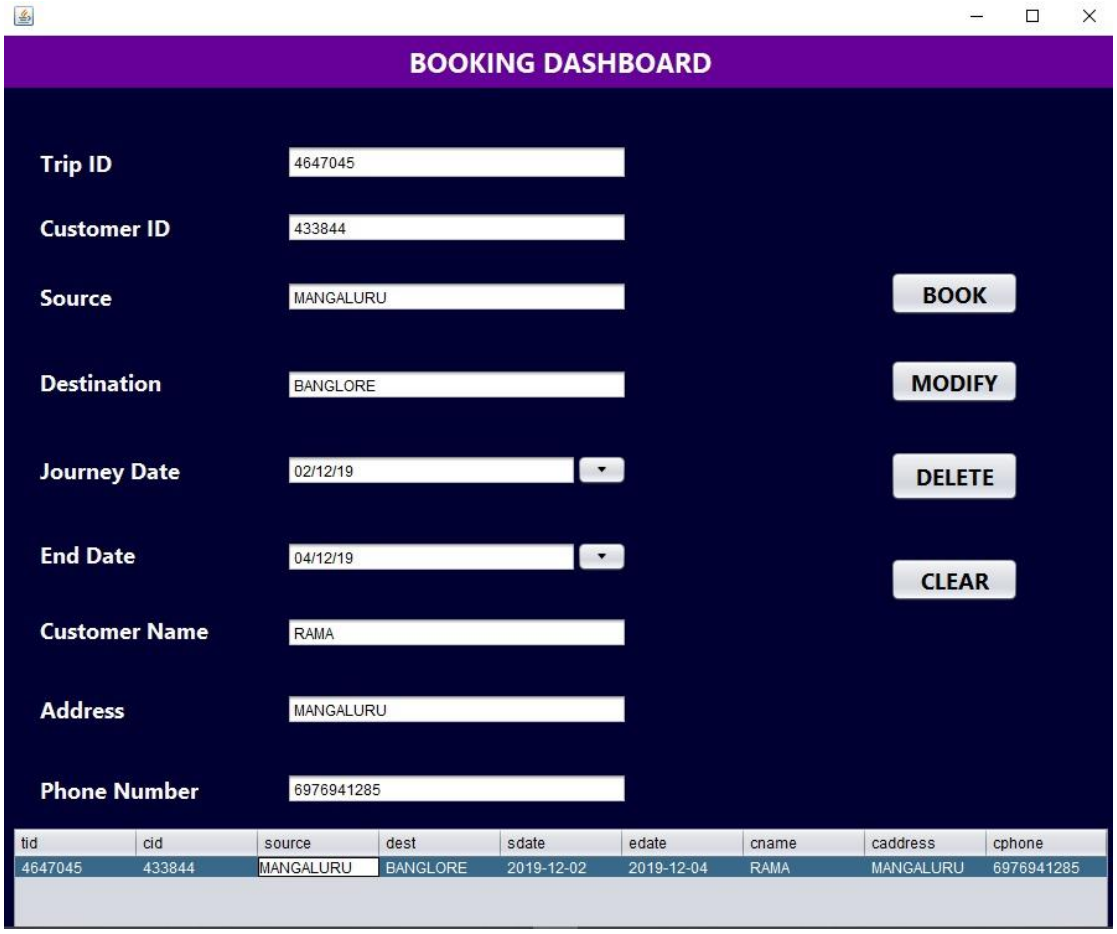

Fig: 4.3 BOOKING DASHBOARD

Figure 4.4 describes the confirm booking dashboard

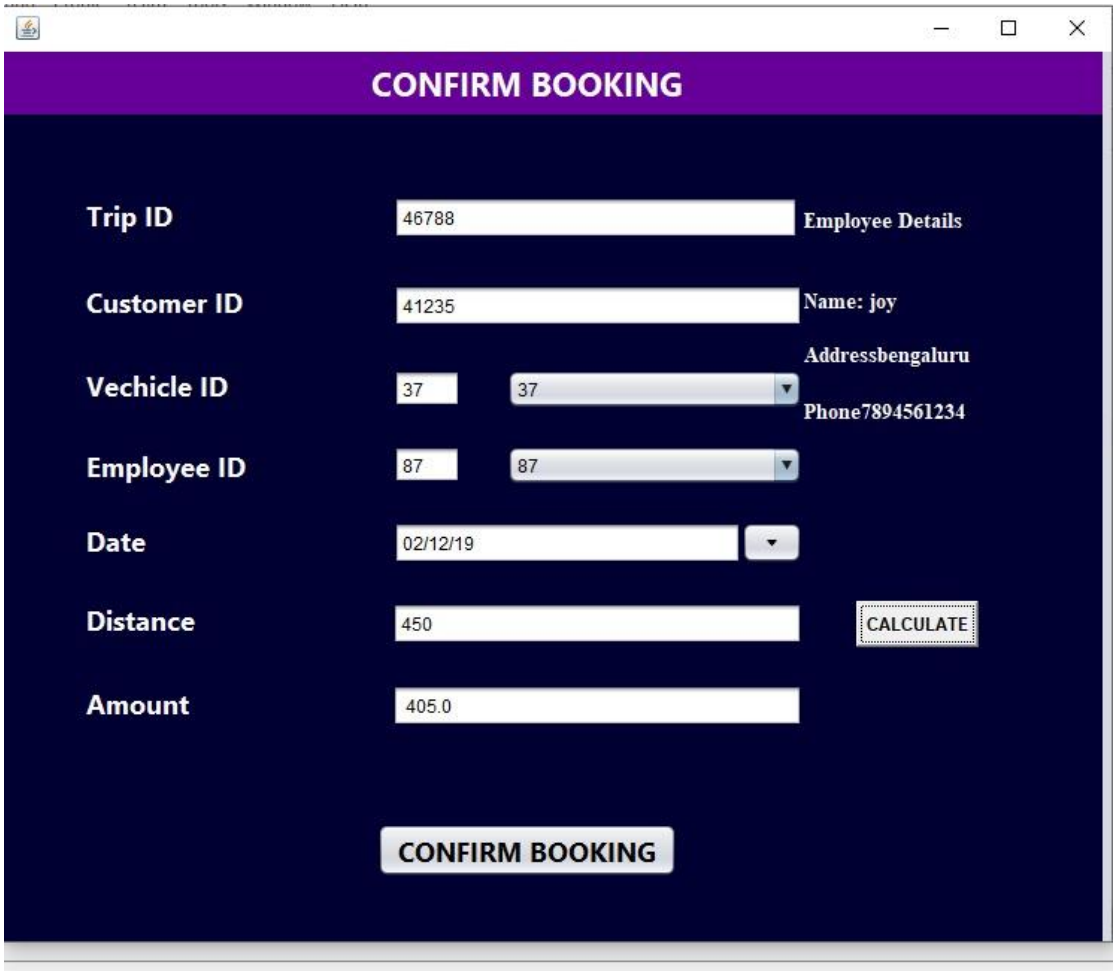

Fig: 4.4 CONFIRM BOOKING DASHBOARD

Figure 4.5 describes the vehicle dashboard

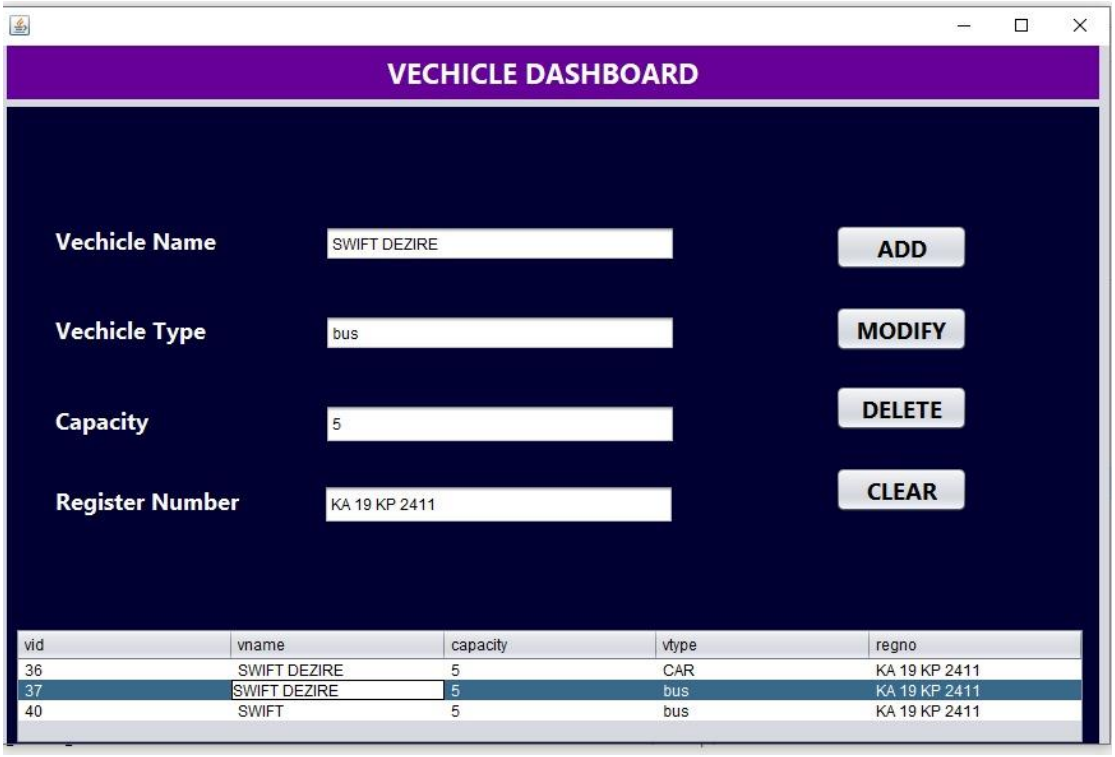

Fig: 4.5 VEHICLE DASHBOARD

Figure 4.6 describes the employee dashboard

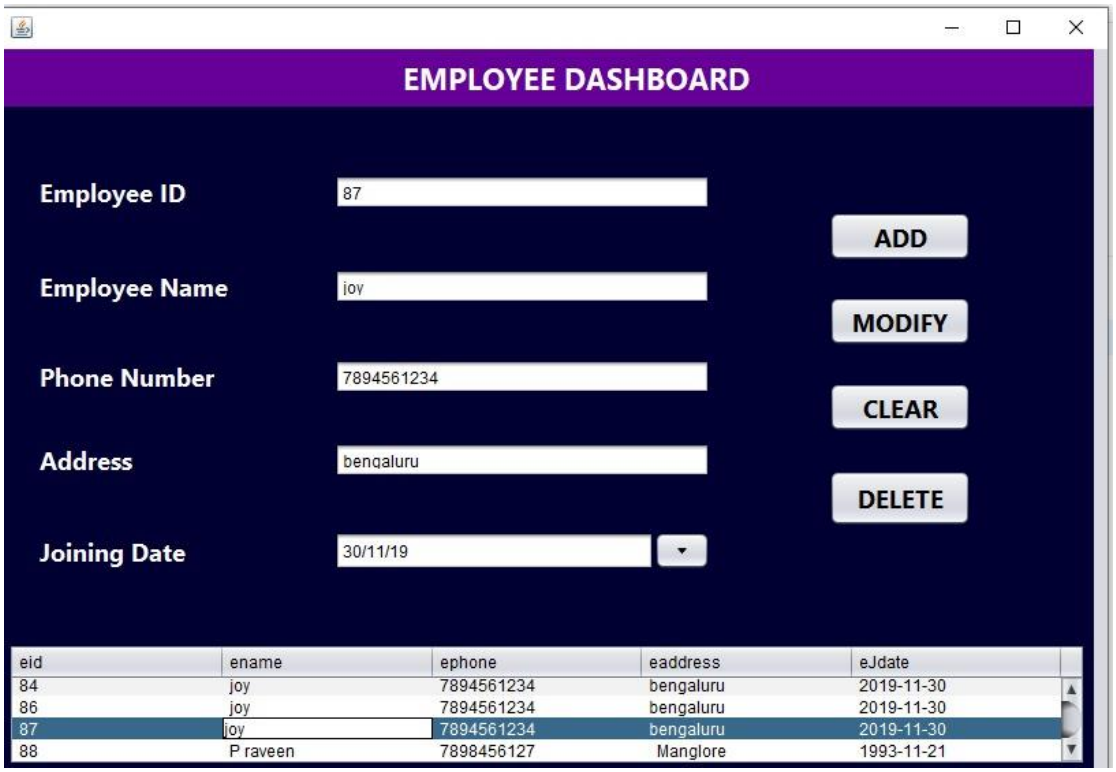

Fig: 4.6 EMPLOYEE DASHBOARD

CONCLUSION

It has been a matter of immense pleasure, honor and challenge to have this opportunity to take up this project and complete it successfully. Our project maintains the entire database of a Travel agency. The software can be used in any Travel agency to maintain its vehicle details, employee details, trip details and customers' details. While developing this project we have learnt a lot about Travel Agency Management, we have also learnt how to make it user friendly (easy to use and handle) by hiding the complicated parts of it from users. During the development process we studied more about developing a software, how to implement the backend stored database in the real time system. We have tried to implement the project making it as user friendly and error free as possible. In future this project can be improved by recording the day-to-day activities taking place in a Agency.

Future Scope

Any tourist agency can make use of it for saving customer details in database.

Tourism group can use it for managing their location, hotel, vehicles details.

• This application can easily be implemented under various situations.

• We can add new features as and when we require.

Reusability of this application is also possible.

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