

# CHAPTER 1

## INTRODUCTION

### 1.1 INTRODUCTION TO DBMS

**Database** is a collection of related data and data is collection of facts and figure that can be procedure information.

Mostly data represents recordable facts. Data aids in producing information, which is based on facts. For example, if we have data about marks obtained by all students, we can then conclude about toppers and average marks.

A Database management system stores data in such a way that it becomes easier to retrieve, manipulate, and produce information.

#### **Characteristics of Database Management System:**

Traditionally, data was organized in file formats. DBMS was a new concept then, and all the research was done to make it overcome the deficiencies in traditional style of data management. A modern DBMS has the following characteristics,

- Real-word entity
- Relation-based tables
- Isolation of data and application
- Less redundancy
- Consistency
- Query language
- ACID Properties
- Multiple views
- Multi users and concurrent access
- Security

**Advantages and Disadvantages of DBMS:****Advantages:**

- **Reduction of Redundancy:** This is perhaps the most significant advantage of using DBMS. Redundancy creates several problems like, requiring extra storage space, entering same data more than once during data insertion, and deleting data from more than one place during deletion.
- **Sharing of Data:** In paper-based record keeping, data cannot be shared among many users. But in DBMS, many users can share the same database if they are connected via network.

**Features:**

- Minimum Duplication and Redundancy.
- Saves Storage Space and Cost.
- Large Database Maintenance.
- Provides High Level of Security.
- Permanent Storage of Data.
- Multi-user access.

**1.2 ABOUT SQL**

SQL is a language to operate database; it includes database creation, deletion, fetching rows, modifying rows, etc. SQL is an ANSI (American National Standards Institute) standard language, but there are many different versions of SQL language.

**What is SQL:**

SQL is a Structured Query Language, which is a computer language for storing, manipulating and retrieving data stored in a relation database.

SQL is the standard language for Relational Database System. All the Relation Database Management System (RDBMS) like My SQL, MS Access, Oracle, Sybase, Informix, Postgres and SQL Server use SQL as their standard database language.

**Why SQL?**

SQL is widely popular because it offers the following advantages:

- Allows user to access data in the RDBMS.
- Allows the user to describe the data.
- Allows user to create and drop database and table.
- Allows user to set permission on table, procedures and views.
- Allows user to create view, stored procedure, function in a database.

Allows user to define data in a database and manipulate that data.

- Allows to embed within other language using SQL modules, libraries and pre-compilers
- 

**Brief history of SQL:**

- 1970 – Dr. Edgar F. “Ted” Codd of IBM is known as the father of RDBMS. He described the relational model for database.
- 1974 – Structured Query Language appeared.
- 1978 – IBM worked to develop Codd’s ideas and released a product named System/R.
- 1986 – IBM developed the first prototype of relational database and standardized by ANSI. The first relational database was released by Relational Software which later came to be known as ORACLE.

**SQL Commands:****1)TABLE 1.2.1: DDL – Data Definition Language**

Commands	Description
CREATE	Creates a new table.
ALTER	Modifies an existing database objects, such as tables.
DROP	Deletes the table, a view or other objects of the table.

**2)TABLE 1.2.2: DML – Data Manipulation Language**

Commands	Description
SELECT	Retrieves certain records from one or more tables.
INSERT	Creates a record.
UPDATE	Modifies the record.
DELETE	Deletes records.

**3)TABLE 1.2.3: DCL – Data Control Language**

Commands	Description
GRANT	Gives a privilege to the user.
REVOKE	Takes back privileges granted from user.

## **1.3 USER INTERFACE DESIGN**

### **1.3.1 GRAPHICAL USER INTERFACES**

A graphical user interface (GUI) is a type of interface that allows users to interact with electronic devices or programs through graphical icons and visual indicators such as secondary notation, as opposed to text-based interfaces, typed command labels or text navigation. GUIs are easier to learn than command-line interfaces (CLIs), which require commands to be typed on the keyboard.

Third-party proprietary and free graphical administration applications (or "front ends") are available that integrate with MySQL and enable users to work with database structure and data visually. Some well-known front ends are:

#### **MySQL Workbench**

MySQL Workbench is the official integrated environment for MySQL. It was developed by MySQL AB, and enables users to graphically administer MySQL databases and visually design database structures. MySQL Workbench replaces the previous package of software, MySQL GUI Tools. Similar to other third-party packages, but still considered the authoritative MySQL front end, MySQL Workbench lets users manage database design & modelling, SQL development (replacing MySQL Query Browser) and Database administration (replacing MySQL Administrator).

MySQL Workbench is available in two editions, the regular free and open source Community Edition which may be downloaded from the MySQL website, and the proprietary Standard Edition which extends and improves the feature set of the Community Edition.

### **1.3.2 COMMAND LINE INTERFACES**

A command-line interface is a means of interacting with a computer program where the user issues commands to the program by typing in successive lines of text (command lines). MySQL ships with many command lines tools, from which the main interface is the MySQL client.

MySQL Utilities is a set of utilities designed to perform common maintenance and administrative tasks. Originally included as part of the MySQL Workbench, the utilities are a stand-alone download available from Oracle.

## **1.4 INTRODUCTION TO JAVA:**

Java is a programming language created by James Gosling from Sun Microsystems (Sun) in 1991. The target of Java is to write a program once and then run this program on multiple operating systems. The first publicly available version of Java (Java 1.0) was released in 1995. Sun Microsystems was acquired by the Oracle Corporation in 2010. Oracle has now the steer Manship for Java. In 2006 Sun started to make Java available under the GNU General Public License (GPL). Oracle continues this project called OpenJDK.

Over time new enhanced versions of Java have been released. The current version of Java is Java 1.8 which is also known as Java 8.

Java is defined by a specification and consists of a programming language, a compiler, core libraries and a runtime (Java virtual machine) The Java runtime allows software developers to write program code in other languages than the Java programming language which still runs on the Java virtual machine. The Java platform is usually associated with the Java virtual machine and the Java core libraries.

### **1.4.1 MAIN FEATURES OF JAVA:**

#### **Java is a platform independent language**

Compiler(java) converts source code (.java file) to the byte code (.class file). As mentioned above, JVM executes the bytecode produced by compiler. This byte code can run on any platform such as Windows, Linux, Mac OS etc. Which means a program that is compiled on windows can run on Linux and vice-versa. Each operating system has different JVM, however the output they produce after execution of bytecode is same across all operating systems. That is why we call java as platform independent language.

#### **Java is an Object-Oriented language**

Object oriented programming is a way of organizing programs as collection of objects, each of which represents an instance of a class.

4 main concepts of Object-Oriented programming are:

1. Abstraction
2. Encapsulation
3. Inheritance
4. Polymorphism

#### **Simple**

Java is considered as one of simple language because it does not have complex features like Operator overloading, Multiple inheritance, pointers and Explicit memory allocation.

**Robust Language**

Robust means reliable. Java programming language is developed in a way that puts a lot of emphasis on early checking for possible errors, that's why java compiler is able to detect errors that are not easy to detect in other programming languages. The main features of java that makes it robust are garbage collection, Exception Handling and memory allocation.

**Secure**

We don't have pointers and we cannot access out of bound arrays (you get `ArrayIndexOutOfBoundsException` if you try to do so) in java. That's why several security flaws like stack corruption or buffer overflow is impossible to exploit in Java.

**Java is distributed**

Using java programming language, we can create distributed applications. RMI (Remote Method Invocation) and EJB (Enterprise Java Beans) are used for creating distributed applications in java. In simple words: The java programs can be distributed on more than one system that are connected to each other using internet connection. Objects on one JVM (java virtual machine) can execute procedures on a remote JVM.

**Multithreading**

Java supports multithreading. Multithreading is a Java feature that allows concurrent execution of two or more parts of a program for maximum utilization of CP.

**Portable**

As discussed above, java code that is written on one machine can run on another machine. The platform independent byte code can be carried to any platform for execution that makes java code portable.

**1.5 INTRODUCTION TO IDE:**

IDE is a free, open source, integrated development environment (IDE) that enables you to develop desktop, mobile and web applications. The IDE supports application development in various languages, including Java, HTML5, PHP and C++. The IDE provides integrated support for the complete development cycle, from project creation through debugging, profiling and deployment. The IDE runs on Windows, Linux, Mac OS X, and other UNIX-based systems.

The IDE provides comprehensive support for JDK 7 technologies and the most recent Java enhancements. It is the first IDE that provides support for JDK 7, Java EE 7, and JavaFX 2. The IDE fully supports Java EE using the latest standards for Java, XML, Web services, and SQL and fully supports the Glassfish Server, the reference implementation of Java EE.

Eclipse is an integrated development environment (IDE) for developing applications using the Java programming language and other programming languages such as C/C++, Python, PERL, Ruby etc.

The Eclipse platform which provides the foundation for the Eclipse IDE is composed of plug-ins and is designed to be extensible using additional plug-ins. Developed using Java, the Eclipse platform can be used to develop rich client applications, integrated development environments and other tools. Eclipse can be used as an IDE for any programming language for which a plug-in is available.

### **1.5.1 INTRODUCTION TO JDBC:**

**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 used for Java database connectivity. It is part of the Java Standard Edition platform, from Oracle Corporation. It provides methods to query and update data in a database, and is oriented towards relational databases.



**1.6 PROJECT DESCRIPTION:**

The main objective of the Tourism Management System is to manage the details of Customer, Hotel Booking, Cancellation and Tourism places. It manages all the information about Users, Hotel, Packages etc. The project is totally built at administrative end and thus only the administrator is guaranteed the access to the backend database. The purpose of this project is to build an application program to reduce the manual work for managing Tourists, Booking, Places etc.

□ This application will help in accessing the information related to the travel to the particular destination with great ease. The users can track the information related to their tours with great ease through this application. The travel agency information can also be obtained through this application.

□ Through this system, the propose system is highly automated and makes the travelling activities much easier and flexible. The user can get the very right information at the very right time. This system will include all the necessary fields which are required during online reservation time. This system will be easy to use and can be used by any person. The basic idea behind this project is to save data in a central database which can be accessed by any authorize person to get information and saves time and burden which are being faced by their customers.

□ Administrator can access and modify the information stored in the database of this system, this includes adding and updating of details, and it will give accurate information and simplifies manual work and also it minimizes the documentation related work. Provides up to date information. Finally booking confirmation notification will be send to the users.

□ Tourists can register by providing personal details, make new reservation and book only one hotel and package and can make cancellation.

## **CHAPTER 2**

### **REQUIREMENTS SPECIFICATION**

#### **2.1 SOFTWARE SPECIFICATION**

- Operating system: Microsoft windows 10.
- Integrated Development Environment: Netbeans
- MySQL Command Line Client
- Programming language: JAVA

#### **2.2 HARDWARE SPECIFICATION**

- System type: 64-bit Operating System, x64-based processor.
- Installed memory (RAM):8.00 GB (7.43 GB Usable)
- Total size of Hard disk: 1 TB

## CHAPTER 3

### SYSTEM DESIGN

#### 3.1 INTRODUCTION

System design is the process of defining the elements of a system such as the architecture, modules and components, the different interfaces of those components and the data that goes through that system. It is meant to satisfy specific needs and requirements of a business or organization through the engineering of a coherent and well-running system.

System designing in terms of software engineering has its own value and importance in the system development process as a whole. To mention it may though seem as simple as anything or simply the design of systems, but in a broader sense it implies a systematic and rigorous approach to design such a system which fulfils all the practical aspects including flexibility, efficiency and security.

Before there is any further discussion of system design, it is important that some points be made clear. As it goes without saying that nothing is created that is not affected by the world in which it's made. So, the systems are not created in a vacuum.

They are created in order to meet the needs of the users. They are not only intended to solve the existing problems, but they also come up with acceptable solutions to the problems that may arise in the future. The whole process of system development, from blueprint to the actual product, involves considering all the relevant factors and taking the required specifications and creating a useful system based on strong technical, analytical and development skills of the professionals.

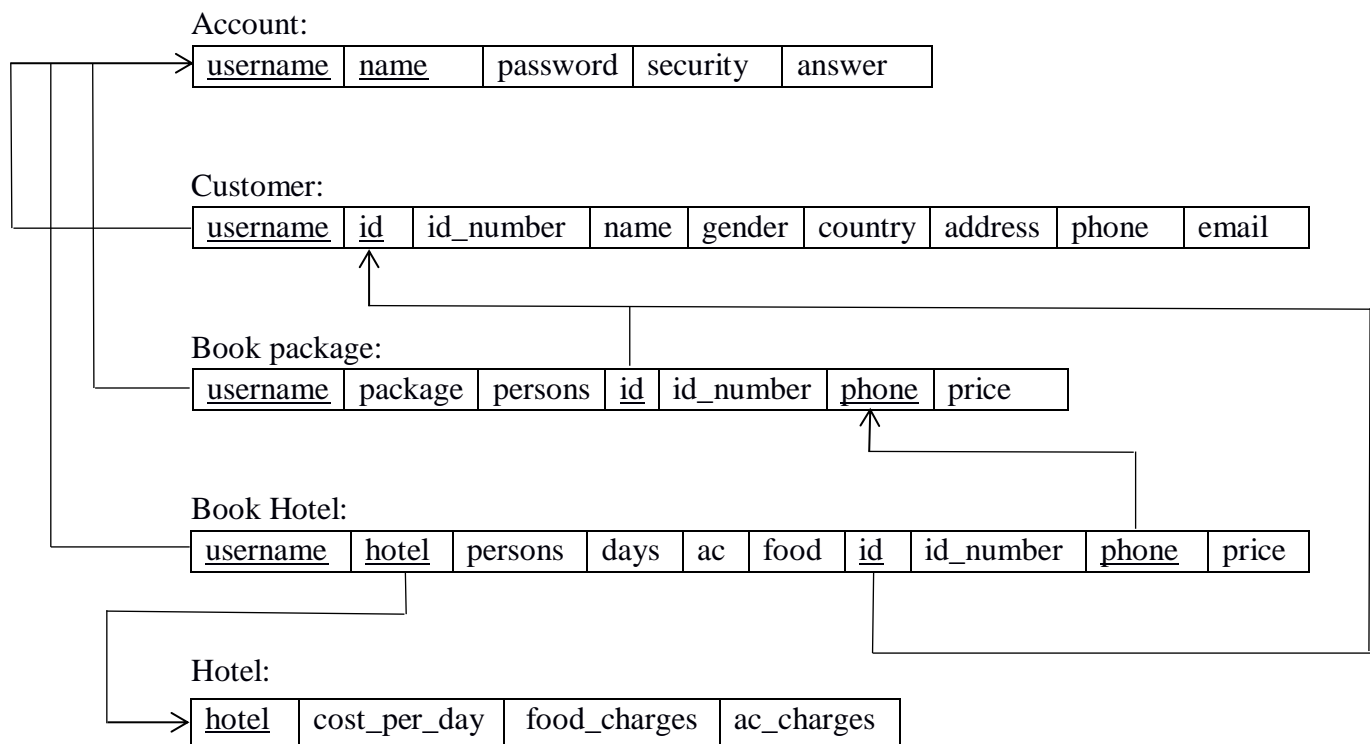
Let's get back to our discussion about what the system design phase is and the importance of system design in the process of system development. Being another important step in the system development process, system designing phase commences after the system analysis phase is completed. It's appropriate to mention that the output or the specifications taken through the phase of system analysis become an input in the system design phase which in turn leads to workout based on the user defined estimations.

The importance of this phase may be understood by reason of the fact that it involves identifying data sources, the nature and type of data that is available. For example, in order to design a salary system, there is a need for using inputs, such as, attendance, leave details, additions or deductions etc. This facilitates understanding what kind of data is available and by whom it is supplied to the system so that the system may be designed considering all the relevant factors. In addition, system designing leads to ensure that the system is created in such a way that it fulfils the need of the users and keep them at ease being user-oriented.

### 3.2 SCHEMA DIAGRAM:

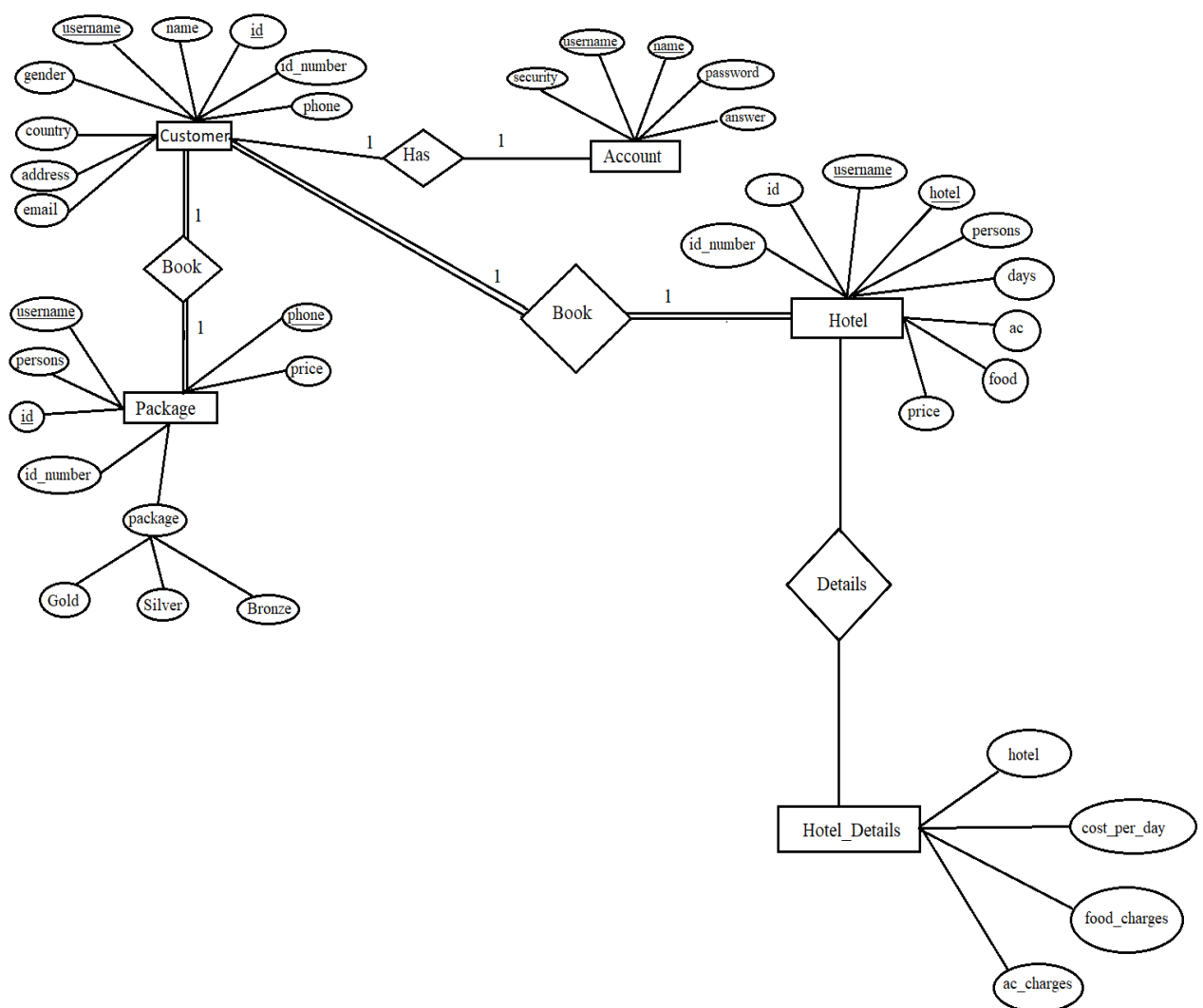
A database schema is the skeleton structure that represents the logical view of the entire database. It defines how the data is organized and how the relations among them are associated. It formulates all the constraints that are to be applied on the data.

A database schema defines its entities and the relationship among them. It contains a descriptive detail of the database, which can be depicted by means of schema diagrams. It's the database designers who design the schema to help programmers understand the database and make it useful.



### 3.3 E R DIAGRAM:

**ER Diagram** stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships. ER Diagrams contain different symbols that use rectangles to represent entities, ovals to define attributes and diamond shapes to represent relationships.



3.3 The above figure represents the ER Diagram.

## CHAPTER 4

### IMPLEMENTATION

#### 4.1 DESCRIPTION OF TABLES:

**TABLE 4.1.1: ACCOUNT:**

Field	Type	Null	Key	Default	Extra
username	varchar(30)	NO	PRI	NULL	
Name	varchar(30)	NO	PRI	NULL	
password	varchar(30)	NO		NULL	
security	varchar(30)	NO		NULL	
Answer	varchar(30)	NO		NULL	

**TABLE 4.1.2: CUSTOMER:**

Field	Type	Null	Key	Default	Extra
username	varchar(30)	NO	MUL	NULL	
id	varchar(30)	NO	PRI	NULL	
id_number	varchar(30)	NO		NULL	
name	varchar(30)	NO		NULL	
gender	varchar(30)	NO		NULL	
country	varchar(30)	NO		NULL	
address	varchar(30)	NO		NULL	
phone	varchar(30)	NO		NULL	
email	varchar(30)	NO		NULL	

**TABLE 4.1.3: BOOK PACKAGE:**

Field	Type	Null	Key	Default	Extra
username	varchar(30)	NO	MUL	NULL	
package	varchar(30)	NO		NULL	
persons	int(10)	NO		NULL	
id	varchar(30)	NO	MUL	NULL	
id_number	varchar(30)	NO		NULL	
phone	varchar(30)	NO	PRI	NULL	
price	varchar(30)	NO		NULL	

**TABLE 4.1.4: BOOK HOTEL:**

Field	Type	Null	Key	Default	Extra
username	varchar(30)	NO	MUL	NULL	
hotel	varchar(30)	NO	MUL	NULL	
persons	int(10)	NO		NULL	
days	int(10)	NO		NULL	
Ac	varchar(30)	NO		NULL	
food	varchar(30)	NO		NULL	
Id	varchar(30)	NO	MUL	NULL	
id_number	varchar(30)	NO		NULL	
phone	varchar(30)	NO	MUL	NULL	
price	varchar(30)	NO		NULL	

**TABLE 4.1.5: HOTEL:**

Field	Type	Null	Key	Default	Extra
hotel	varchar(30)	NO	PRI	NULL	
cost_per_day	int(10)	NO		NULL	
food_charges	int(10)	NO		NULL	
ac_charges	Int(10)	NO		NULL	

## 4.2 TRIGGERS AND STORED PROCEDURE:

### TRIGGERS:

A trigger is a named database object that is associated with a table, and that activates when a particular event occurs for the table. Some uses for triggers are to perform checks of values to be inserted into a table or to perform calculations on values involved in an update.

A trigger is defined to activate when a statement inserts, updates, or deletes rows in the associated table. These row operations are trigger events. A trigger can be set to activate either before or after the trigger event. For example, you can have a trigger activate before each row that is inserted into a table or after each row that is updated.

### Trigger used in this application:

```
create trigger `trigger_on_login` after insert on `customer` for each row insert into
users(username,id,id_number,name,country,gender,address,phone,email)
values(NEW.username,NEW.id,NEW.id_number,NEW.name,NEW.country,NEW.gender,
NEW.address,NEW.phone,NEW.email);
```

**STORED PROCEDURE:**

A stored procedure is a prepared SQL code that you can save, so the code can be reused over and over again. So, if you have an SQL query that you write over and over again, save it as a stored procedure, and then just call it to execute it. You can also pass parameters to a stored procedure, so that the stored procedure can act based on the parameter value(s) that is passed.

The most important part is parameters. Parameters are used to pass values to the Procedure. There are 3 different types of parameters, they are as follows:

- **IN:** This is the Default Parameter for the procedure. It always receives the values from calling program.
- **OUT:** This parameter always sends the values to the calling program.
- **IN OUT:** This parameter performs both the operations. It Receives value from as well as sends the values to the calling program.

**Stored Procedure used in above application:**

To select all the data from customer table:

DELIMITER \$\$

CREATE DEFINER=`root`@`localhost` PROCEDURE `getCustomer`

BEGIN

SELECT \* FROM CUSTOMER;

END;

DELIMITER;



## CHAPTER 5

### TESTING

Test cases No.	Test case	Input Data	Steps to execute the test case	Expected Result	Actual Result	Pass/Fail
1	Login Screen	Wrong username or password	After entering the data click on the login button	A proper message indicating the error should appear and the user should be redirected to login screen.	A message was displayed saying Invalid username or password	Pass
2	Insertion	If any field was not entered.	After entering the data click on the create button	A proper message indicating the error should appear and the user should be redirected to customer screen.	A message was displayed saying Enter all the details properly	Pass
3	Deletion	If any field was not entered.	After entering the data click on the delete button	A proper message indicating the error should appear and the user should be redirected to customer screen.	A message was displayed saying Enter all the details properly	Pass
4	Update	If any field was not entered.	After entering the data click on the update button	A proper message indicating the error should appear and the user should be redirected to update customer screen.	A message was displayed saying Enter all the details properly	Pass

## **CHAPTER 6**

### **CONCLUSION AND FUTURE ENHANCEMENT**

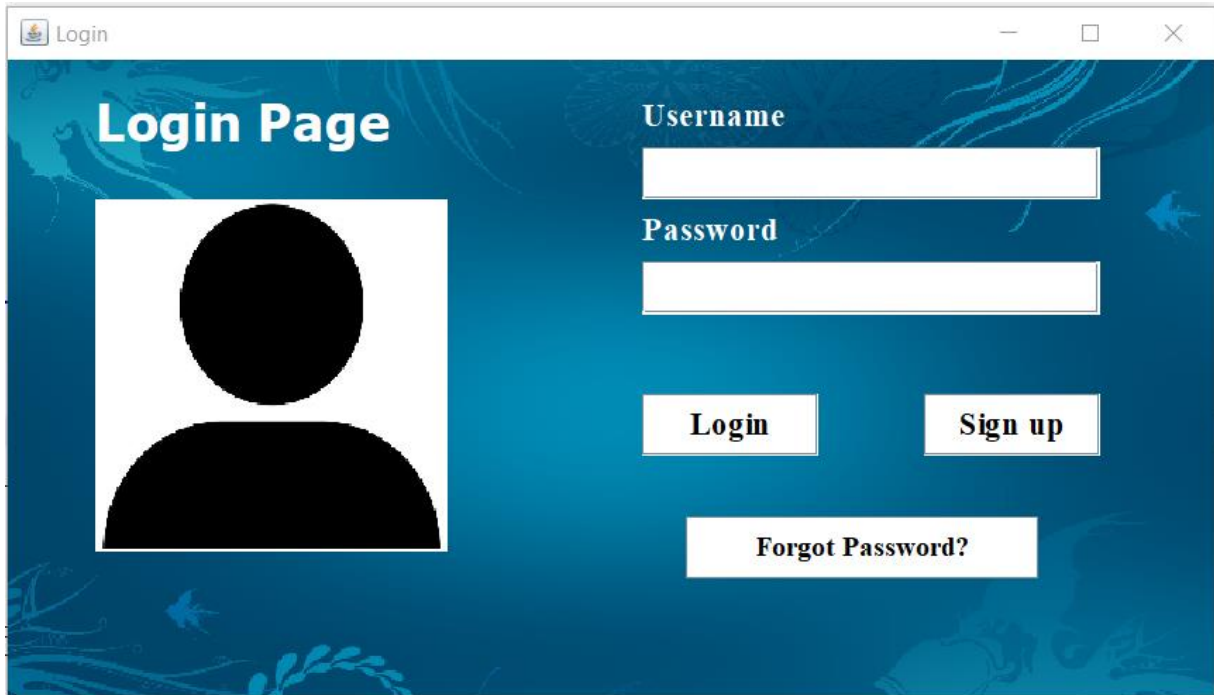
The process of the system we can consider here, can maintain the databases of the system. We can insert to the databases and retrieve all the information.

The main aim of this project is to help the tourists to manage their trip. It makes all operation of the tour company easy and accurate. The standalone platform makes tourism management easy by handling requests and providing servers for the customers located at different parts of the various cities. Different modules have been incorporated in this project to handle different parts and sector of the tour management field.

## CHAPTER 7

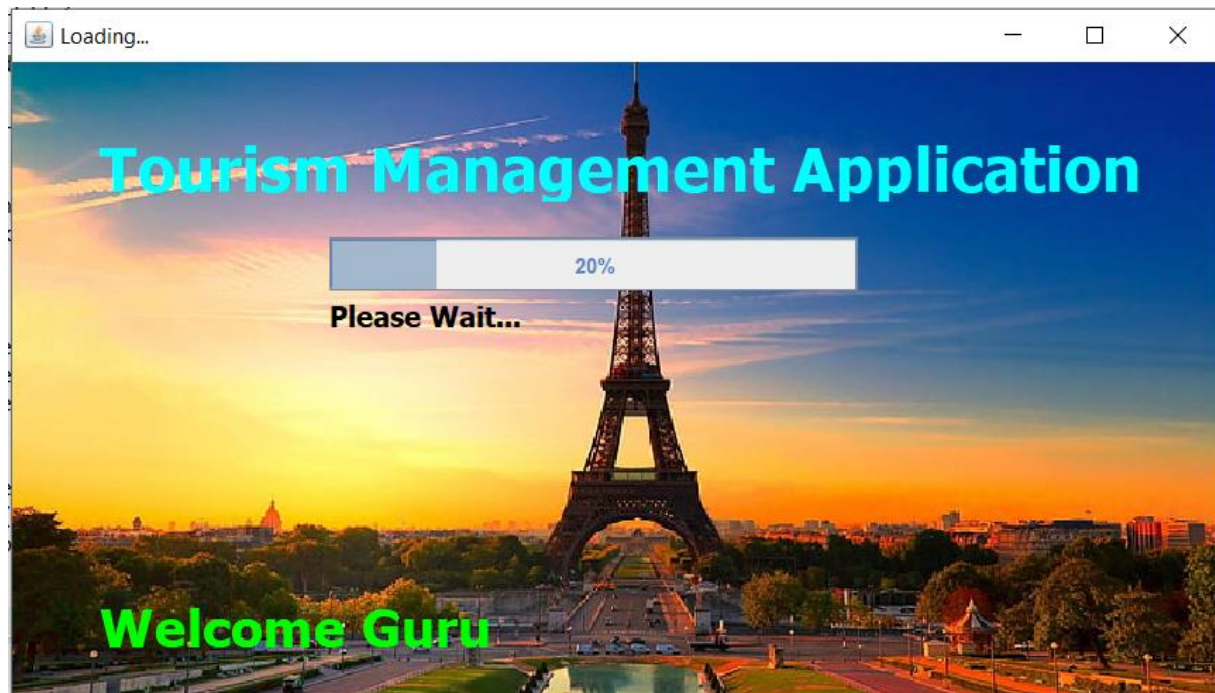
### SNAPSHOTS

#### LOGIN PAGE:



The screenshot shows a web browser window titled "Login". The page has a blue background with a subtle pattern. On the left, there is a large black silhouette of a person's head and shoulders. To the right of the silhouette, the text "Login Page" is displayed in a large, white, serif font. Below this, there are two input fields: "Username" and "Password", both with white text and white borders. Below the "Username" field is a "Login" button with white text on a blue background. To the right of the "Login" button is a "Sign up" button with white text on a blue background. Below these two buttons is a "Forgot Password?" link with white text on a blue background.

#### LOADING PAGE:



**MAIN FRAME:****PERSONAL DETAILS:**

Customer

### Add Personal Details

<b>Username :</b>	<input type="text" value="Guru"/>
<b>ID :</b>	<input type="text" value="Passport"/>
<b>ID Number :</b>	<input type="text"/>
<b>Name :</b>	<input type="text" value="Guruprasad"/>
<b>Gender :</b>	<input type="radio"/> Male <input type="radio"/> Female
<b>Country :</b>	<input type="text"/>
<b>Address :</b>	<input type="text"/>
<b>Phone :</b>	<input type="text"/>
<b>Email :</b>	<input type="text"/>

A cartoon illustration of a man with black hair, wearing a red jacket, a grey shirt, and blue jeans. He is smiling and standing next to a red rolling suitcase. The background is white.

### UPDATE CUSTOMER PAGE:

UPDATE CUSTOMER DETAILS

Username :

Guru

ID :

Aadhar Card

ID Number :

8745123690

Name :

Guruprasad

Gender :

☒ Male

☐ Female

Country :

India

Address :

Mysuru

Phone :


8887456321

Email :

guru@gmail.com

Update

Back



**VIEW CUSTOMER PAGE:**

VIEW CUSTOMER DETAILS

Username :	Guru	Country :	India
ID :	Aadhar Card	Address :	Mysuru
ID Number :	8745123690	Phone :	8887456321
Gender :	Male	Email :	guru@gmail.com
Name :	Guruprasad		

Delete ?

Back





**PACKAGE PAGE:**

Check Package

Package 1Package 2Package 3

## GOLD PACKAGE

2 days and 3 Nights

Airport Assistance


Welcome drinks on Arrival

Half Day City Tour

Daily Buffet

Indoor and Outdoor Games

English Speaking Guide



Back

Summer Special

Rs 32000 only

**BOOK PACKAGE:**

BOOK PACKAGE

Username :

Guru

Select Package :

Silver Package

Total Persons :

2

ID :

Aadhar Card

ID Number :


8745123690

Phone :

8887456321

Total Price :

Rs 50000



Check Price

Book Package

Back

**VIEW PACKAGE:**

VIEW PACKAGE DETAILS

Username :

Guru

Package :

Silver Package

Total Persons :

2

ID :

Aadhar Card

ID Number :

8745123690

Phone :

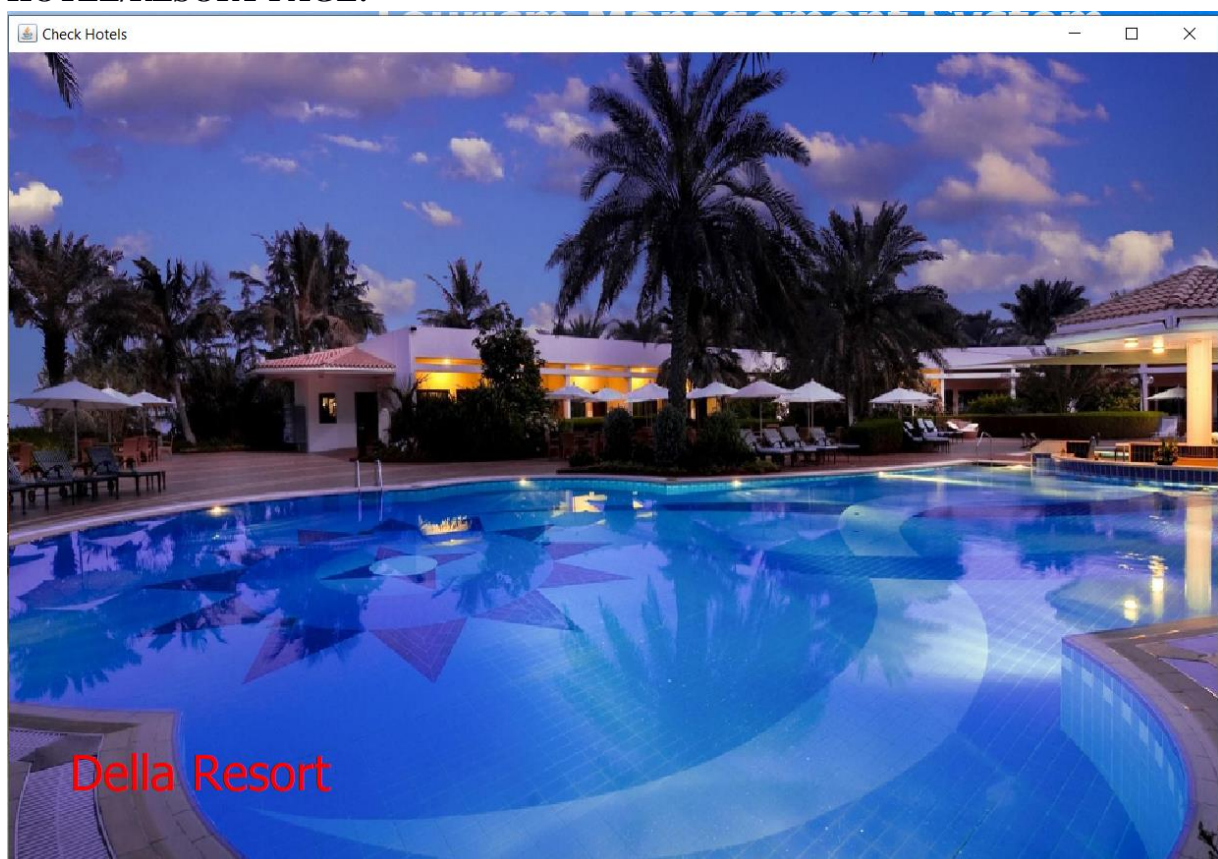
8887456321

Price :

Rs 50000

Delete ?

Back

**HOTEL/RESORT PAGE:**

**BOOK HOTEL:**

### BOOK HOTEL

**Username :** Guru

**Select Hotel :** Anandvan Resort

**Total Persons:**

**No. of Days:**

**AC / Non-AC ?** AC

**Food Included ?** Yes


**ID :** Aadhar Card

**ID Number :** 8745123690

**Phone :** 8887456321

**Total Price :**

**Check Price** **Book** **Back**



**VIEW HOTEL:**

### BOOKED HOTEL DETAILS

**Username :** Guru

**Hotel Name :** Grand Hyatt

**Total Persons :** 2

**Total Days :** 3

**AC included? :** AC

**Food ? :** Yes


**ID :** Aadhar Card

**ID Number :** 8745123690

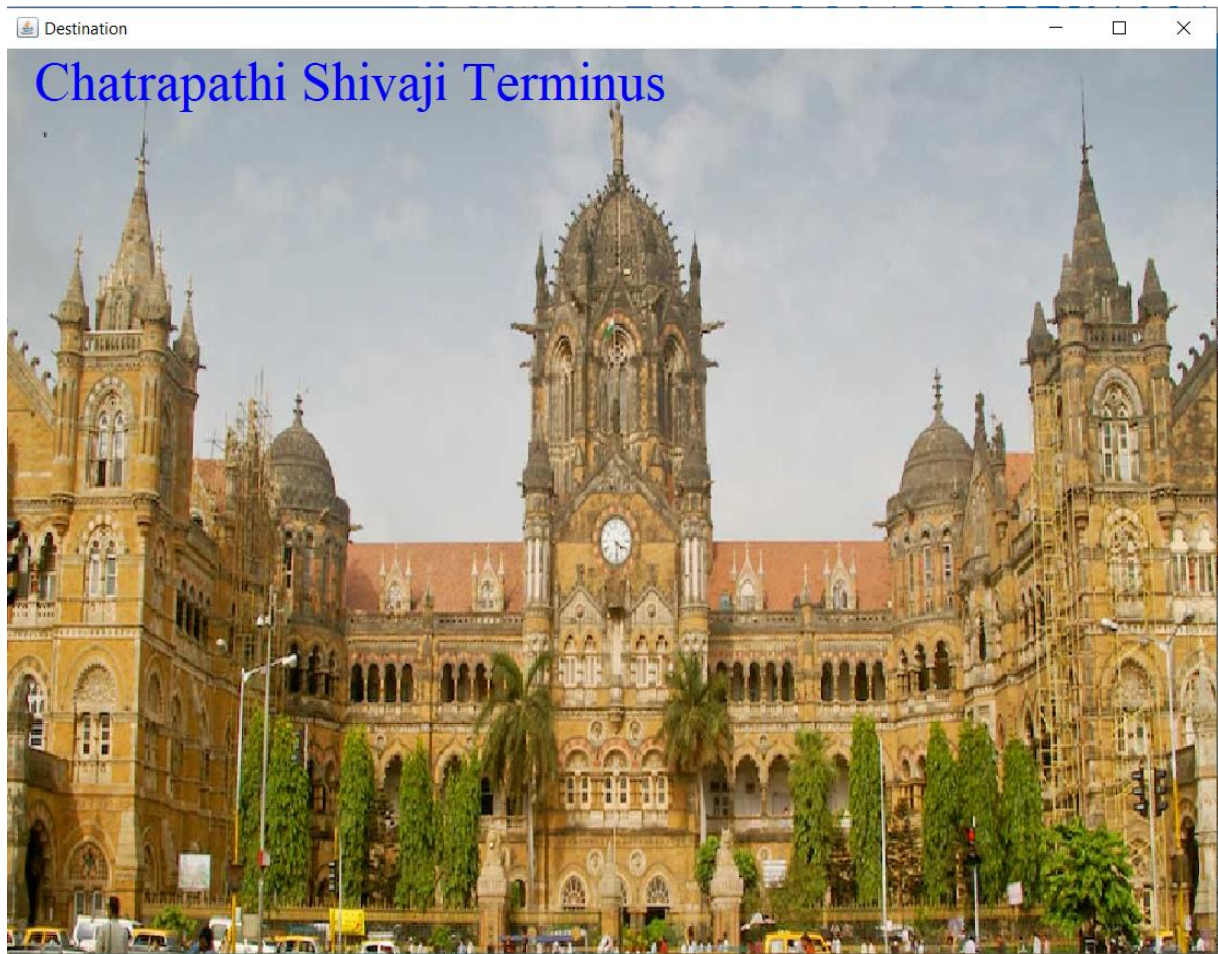
**Phone :** 8887456321

**Total Cost :** Rs 63000

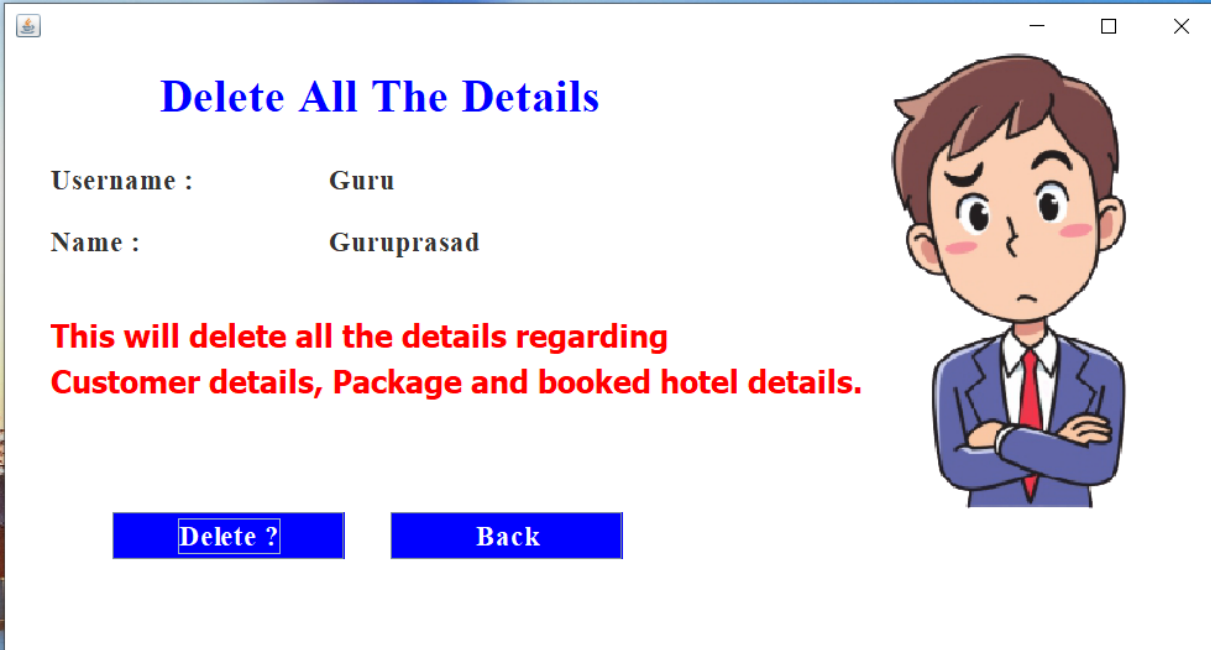
**Delete ?** **Back**





**DESTINATION PAGE:****PAYMENT:**

**DELETE ALL:**




**Delete All The Details**

Username :           Guru

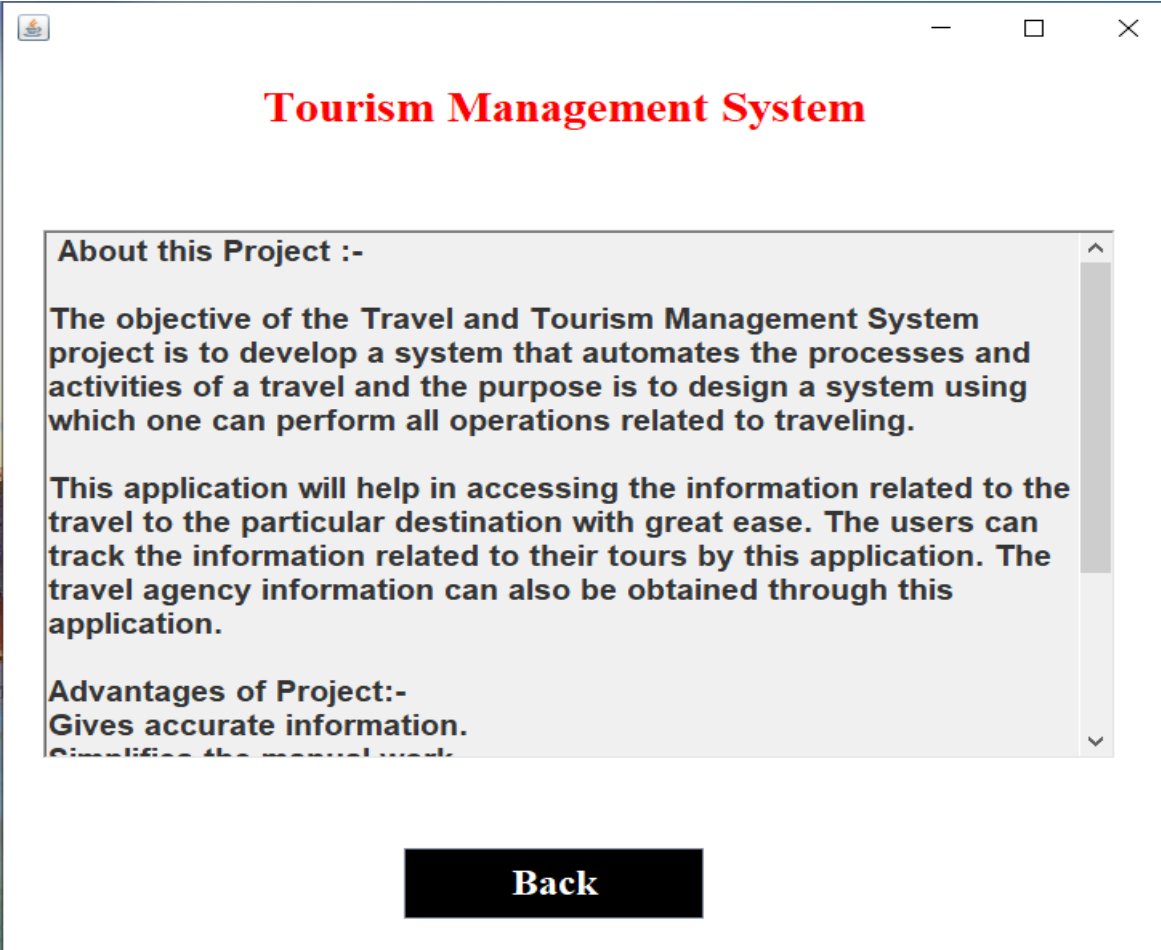
Name :               Guruprasad

**This will delete all the details regarding  
Customer details, Package and booked hotel details.**

**Delete ?**      **Back**



**ABOUT PAGE:**



**Tourism Management System**

**About this Project :-**

The objective of the Travel and Tourism Management System project is to develop a system that automates the processes and activities of a travel and the purpose is to design a system using which one can perform all operations related to traveling.

This application will help in accessing the information related to the travel to the particular destination with great ease. The users can track the information related to their tours by this application. The travel agency information can also be obtained through this application.

**Advantages of Project:-**  
Gives accurate information.  
Simplifies the manual work.

**Back**

## CHAPTER 8

### REFERENCES

We have taken references from many resources like YouTube and many websites.

Websites:

- <https://www.w3schools.com>
- <https://www.javatpoint.com>
- <https://www.codecademy.com>
- <https://www.stackoverflow.com>

YouTube video links:

1. <https://youtu.be/5vzCjvUwMXg>
2. [https://youtu.be/dwVj\\_g3TpZ4](https://youtu.be/dwVj_g3TpZ4)
3. <https://youtu.be/L5RpqspNAuc>