Database System Lab

Section: DE

Project Report

INSTRUCTOR:

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GUB

BILLING

Management System



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TABLE OF CONTENT

INTRODUCTION:

Database:

Database is a collection of inter-related data which helps in efficient retrieval, insertion and deletion of data from database and organizes the data in the form of tables, views, schemas, reports etc. For Example, university database organizes the data about students, faculty, and admin staff etc. which helps in efficient retrieval, insertion and deletion of data from it.

DDL is short name of Data Definition Language, which deals with database schemas and descriptions, of how the data should reside in the database.

- **CREATE:** to create a database and its objects like (table, index, views, store procedure, function, and triggers)
- **ALTER:** alters the structure of the existing database
- **DROP:** delete objects from the database
- **TRUNCATE:** remove all records from a table, including all spaces allocated for the records are removed
- **COMMENT:** add comments to the data dictionary
- **RENAME:** rename an object

DML is short name of Data Manipulation Language which deals with data manipulation and includes most common SQL statements such SELECT, INSERT, UPDATE, DELETE, etc., and it is used to store, modify, retrieve, delete and update data in a database.

- **SELECT:** retrieve data from a database
- **INSERT:** insert data into a table
- **UPDATE:** updates existing data within a table
- **DELETE:** Delete all records from a database table
- **MERGE:** UPSERT operation (insert or update)
- **CALL:** call a PL/SQL or Java subprogram
- **EXPLAIN PLAN:** interpretation of the data access path
- **LOCK TABLE:** concurrency Control

Database Management System:

The software which is used to manage database is called Database Management System (DBMS). For Example, MySQL, Oracle etc. are popular commercial DBMS used in different applications. DBMS allows users the following tasks:

Billing System:

Billing System is to manage the details of Bills, Customer, Payment, Login. It manages all the information about Bills, History, Login. The project is totally built at administrative end and thus only the administrator is guaranteed to access. The purpose of the project is to build an application program to reduce the manual work for managing Bills, Customers information, Products Information, Payment. It tracks all the details about the Payment and Deleted Customers and Product information.

The project developed in Java Programming using IDE Net Bean Software.

In this project, we can generate bills as we want. It is a simple project for billing system that used Database. It can also be store Buyers information and also Products with billing system .

Objective:

This project will serve the following objectives:-

- Add and maintain records of available products.
- Add and maintain customer details.
- Add and maintain description of new products.
- Add and maintain new entered category of products.
- Provides a convenient solution of billing pattern.
- Make an easy to use environment for users and customers.

Functionalities Provided in Project:

- Provided the filtering and Searching abilites based on various factors, such as Name, Number,Serial,email etc.
- Manage the information of Products and Buyers.
- Shows the information and Description of the Bills, Payment, Buyers and Product.
- Manage the information of Billing.
- Editing, Adding, and Updating of Records is improved which results in proper resource management of Bills and Buyers Data.

Report Generation:

- It generates the report on Bills, Customer, Products.
- Provide filter reports on Payment.
- User can easily export PDF for the Bills, Buyers and Product information

Limitation Of The Project:

- Does not export Excel file.
- PDF export has not been developed for Transections, Payments etc
- The trigger process of database is in offline mode, LocalHost,
- Becouse this is a Student project so we don't have any database server
- The free database server can only serve 5mb of storage and Many Limitation. That's why we can't use trigger in Realtime Database.
- The generated bills is saved in HDD not in realtime server.

Project category:

RDBMS:

The project is based on the concept of RDBMS (i.e. Relational Database Management System).

" A database which store data in the form of tables which has related with each other in as particular manner "

Technologies and Tools

- GUI Technology: Java (JAVA Swing Framework)
- Database: Aphache web Server (XAMPP 7.4)
- Development Tool: NetBeans IDE 8.2
- Web Server: Freemysqldatabase.com
- Web browser: Google Chrome
- Languages Used: Java, sql
- Others: Photoshop, Illustrator.

Hardware

CPU configuration

- Intel Pentium G4560 7th Gen or Above
- RAM 8 GB DDR4
- HDD: 1000 GB

Monitor

- 19” Samsung Color LCD

Operating System

- Windows 10 Version 20H2

Future Scope

- This project will help the store keeper in fast billing
- This project enable store keeper to maintain a great database of all
- customers visited and purchase product from store.
- Project will enable to see report regarding product and category.
- Easy to maintain in future prospect.

FEASIBILITY ANALYSIS

Title:

Feasibility report for the computerization of the various activities of the company.

Background:

The Company facing the problem of inconsistent and out of time information in its activities. Very much time is consuming for report generation, which is not very helpful for decision making. So we want a system, which provide immediate information.

Method of study: The analysis procedure comprised of field trips in the various departments of the company. The following documents and sources were looked up:

- The purchase order that contain items to be purchased.
- The accounts register.
- Purchase order issues to vendors.
- Bills receive from vendors.
- Bills give to the customers.
- Purchase return forms (if any) give to vendors.

CHARACTERSTIC OF THE PROPOSED SYSTEM

- Easiness in modification of data: The proposed system provides managing of huge data effectively and efficiently for efficient results, storing the details of the customers, employees etc. in such a way that the database can be modified.

- User friendly: The proposed system is user friendly because the retrieval and storing of data is fast and data is maintained efficiently. Moreover the graphical user interface is provided in the proposed system, which provides user to deal with the system very easily.

- Reports are easily generated: Reports can be easily generated in a proposed system. So any type of reports can be generated in a proposed system, which helps the managers in a decisions-making activity.

- Sharing the data is possible: Data can be shared in proposed system. This means that two or more persons can use the same data in existing system provided that they have right to access that data. Also the two or more departments in an organization can easily interact with each other without the actual movement of data.

- No or very few paperwork: The proposed system either does not require paper work or very few paper works is required. All the data is feted into the computer immediately and various bills and reports can be generated through computers. Since all the data is kept in a database no data of the organization can be destroyed. Moreover work becomes very easy because there is no need to keep data on papers.

- Support strategic competitive advantage: Proposed system supports strategic competitive advantages. Since the proposed systems provide easiness in reports generating it will provide strategic advantages among competitors.

- Computer operator control: Computer operator control will be there no errors. Moreover storing and retrieving of information is easy. So work can be done speedily and in time.

TECHNICAL FEASIBILITY

Technical feasibility centers on the existing computer system (hardware, software etc) and to what extent it can support the proposed system addition. For example, if the current system is operating at 70% capacity (an arbitrary value), then another application could overload the system or require additional hardware. If the budget is serious constrain then the project is judged not feasible.
The technologies ant the environment which are used in this project are

SOFTWARE

Front End
Language used: JAVA. We use this language is supports event driven programming feature.

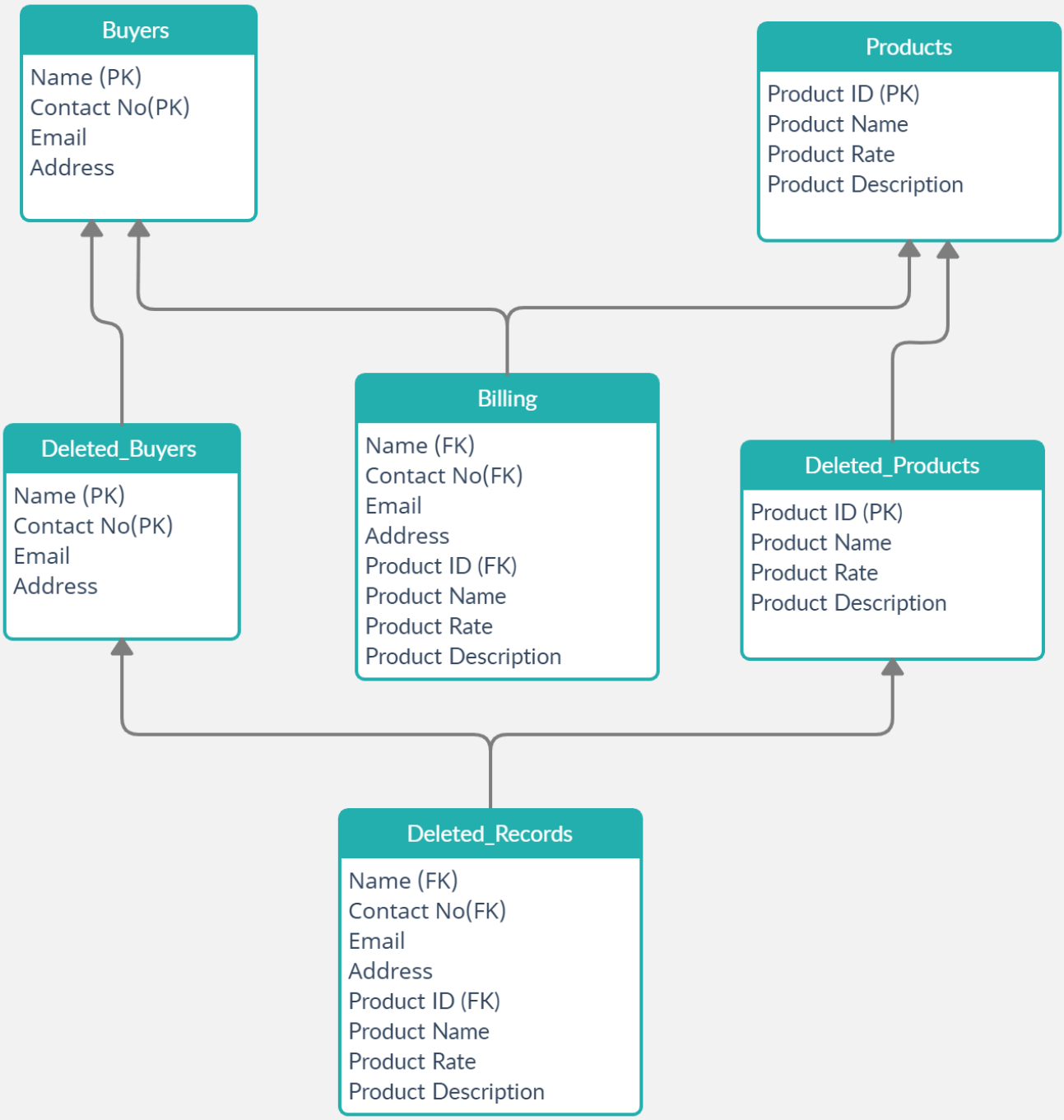
Back end
Supporting Software: SQL Server 2005. This is used to storing data in the form of tables. It is easy to use.

OPERATING SYSTEM:
Platform: Windows 10 . Our system requires window operating system, which is easily available.

HARDWARE:
Intel based processor-run computer system, which have keyboard and mouse as input devices. This has been decided for its case of availability and up-gradation.

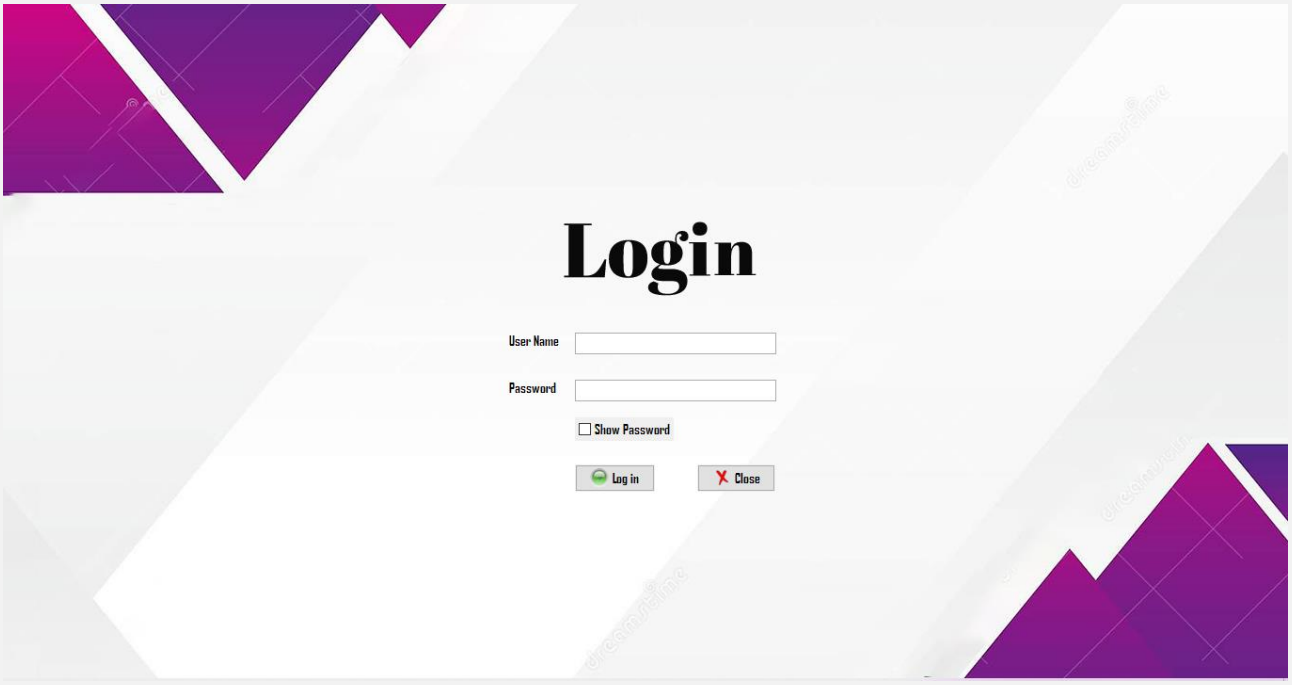
The various registers maintained at the different department have enough information recording, which will help in digitizing the available data

Schema Diagram

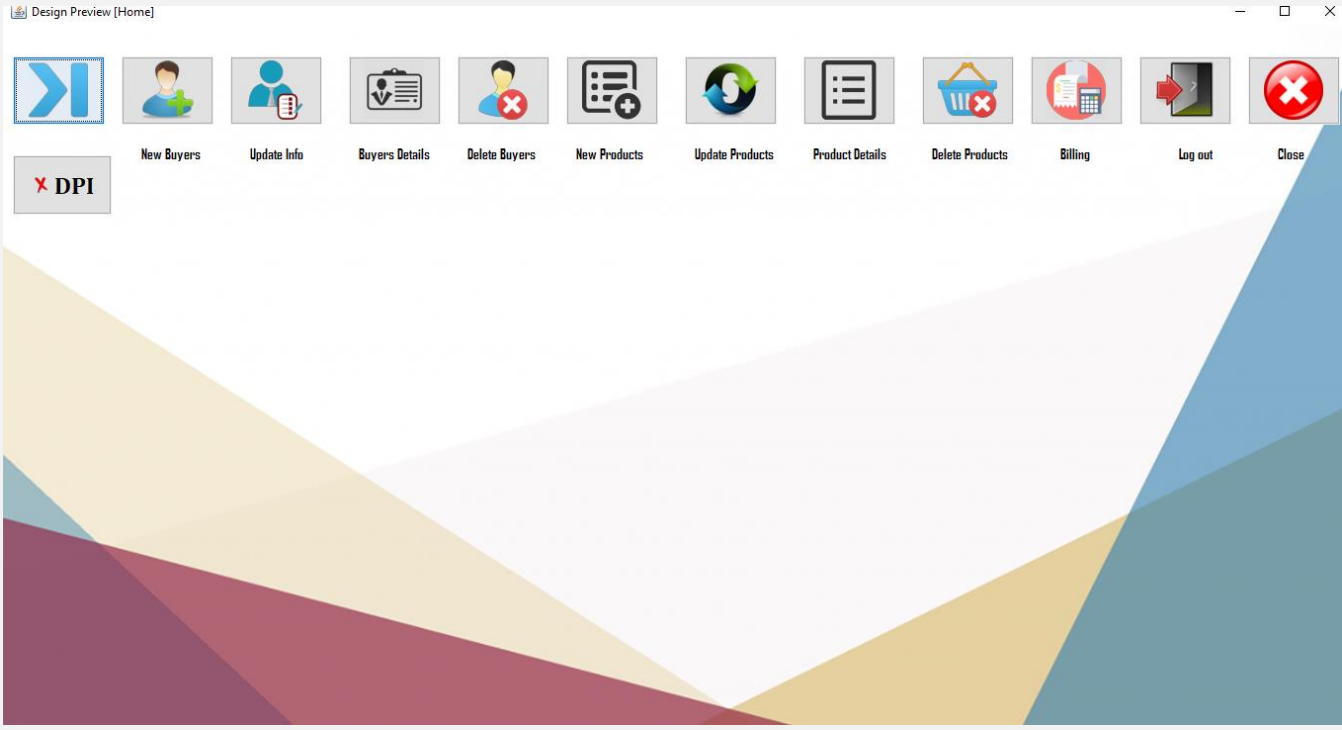


SNAPSHOT OF EVERY SECTION

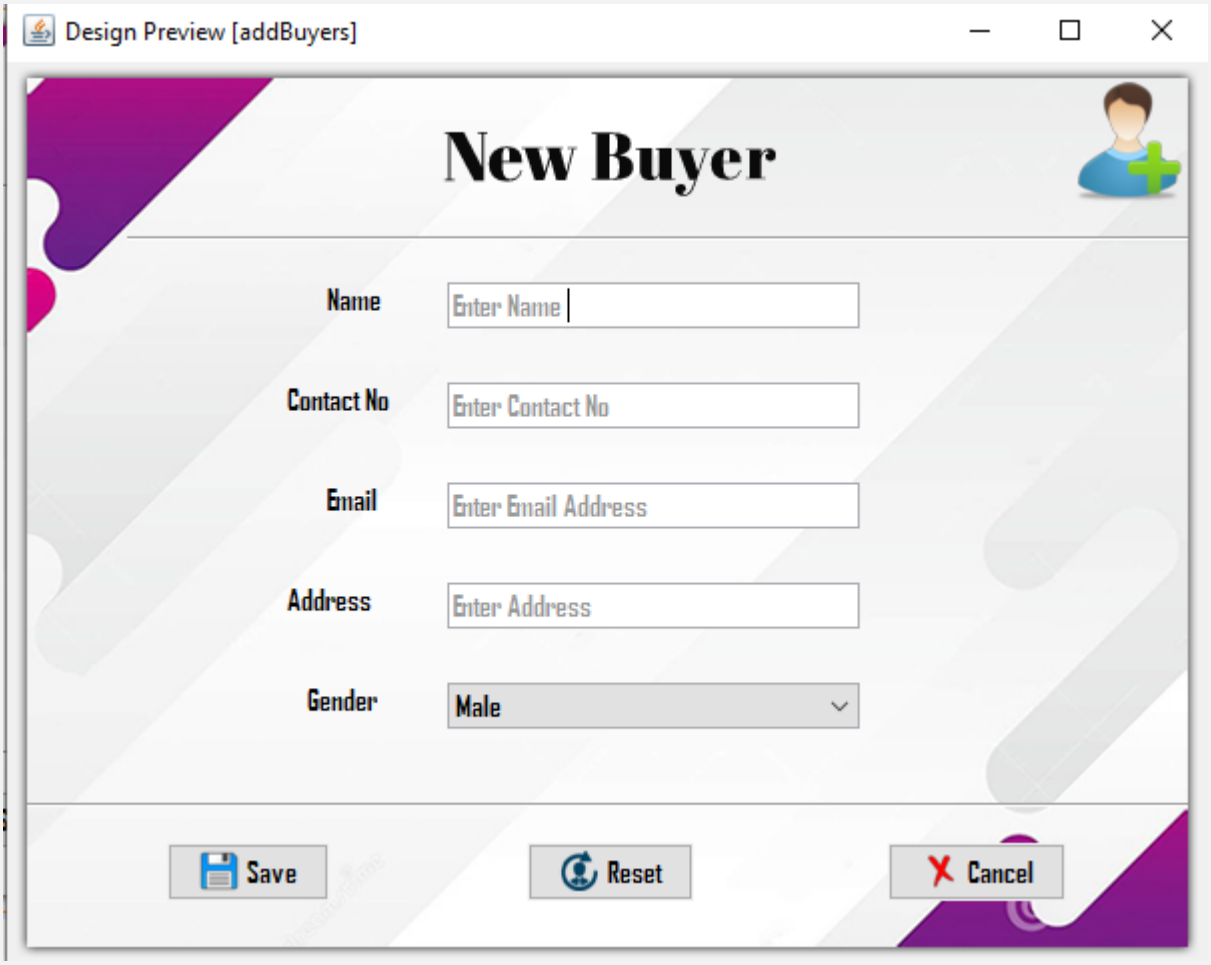
LOGIN UI



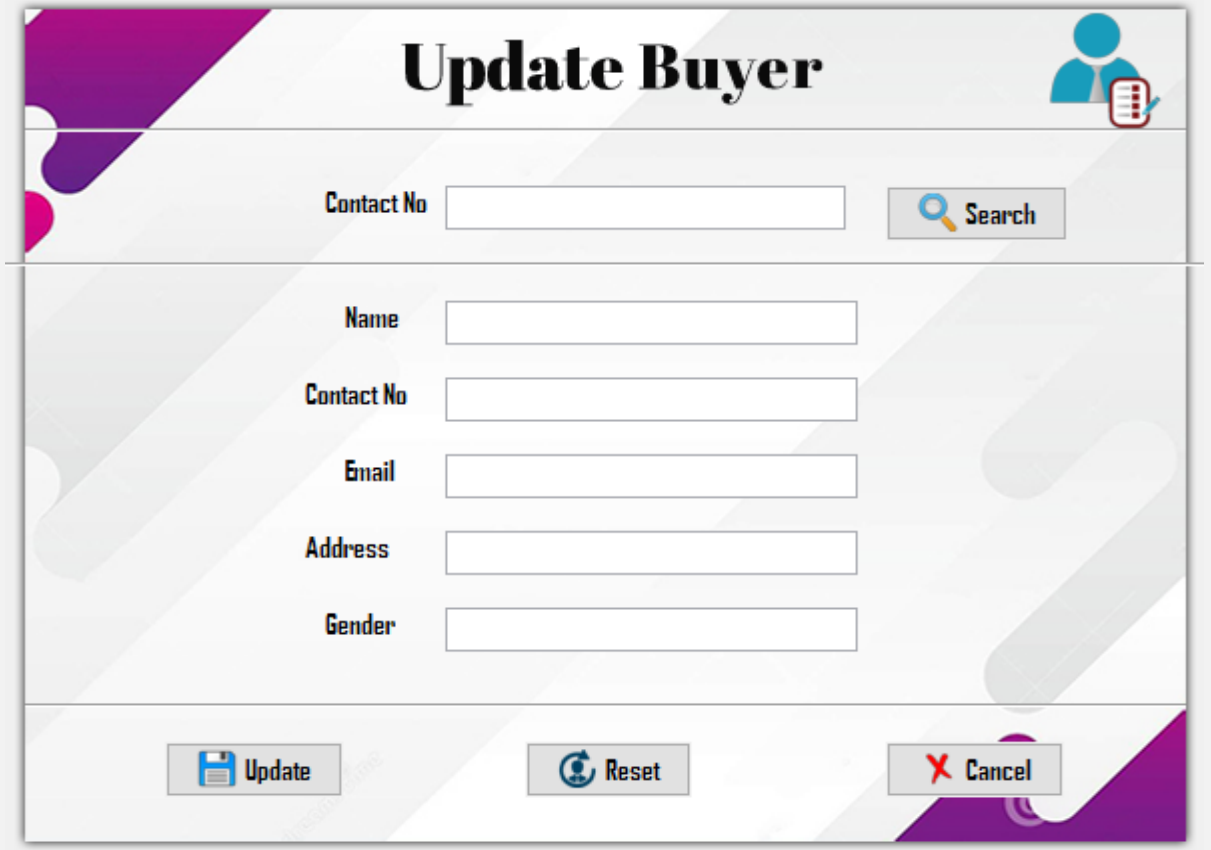
MAIN UI



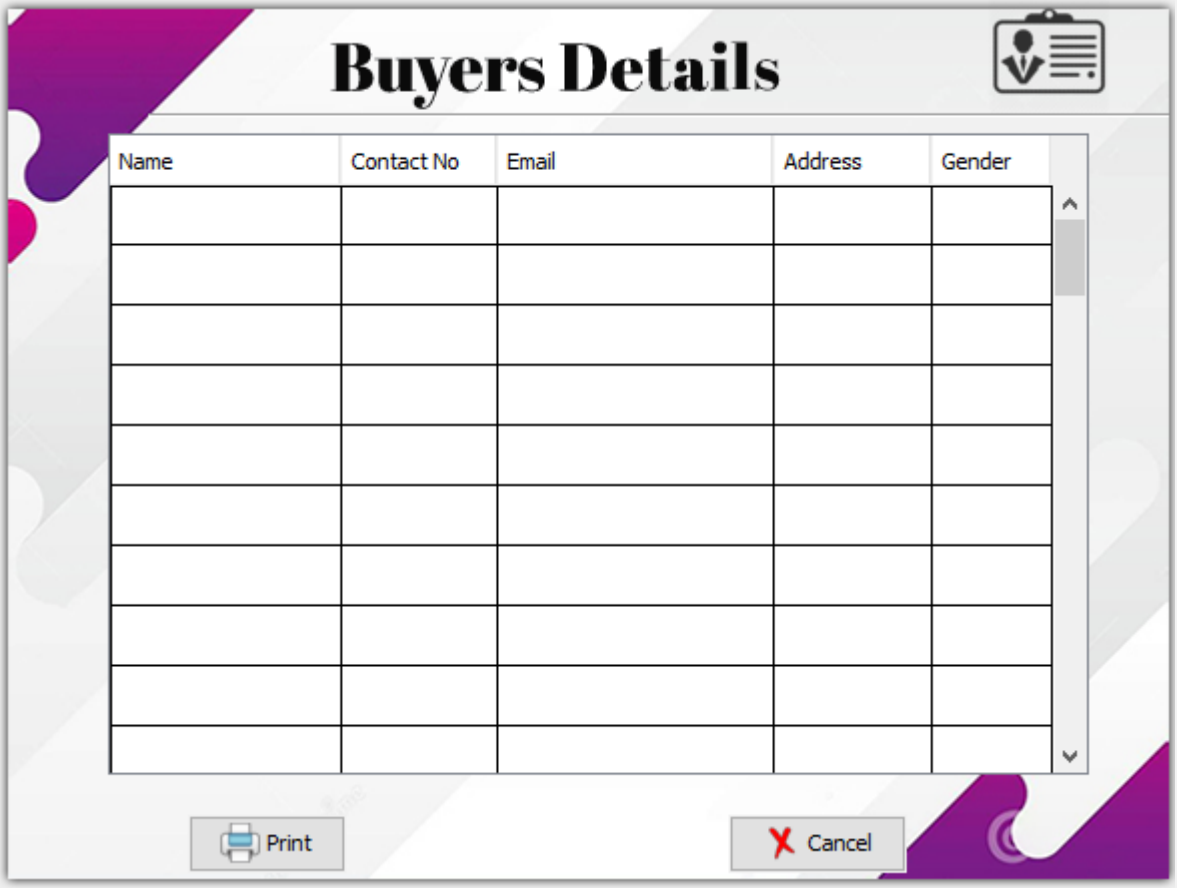
ADD BUYERS TAB



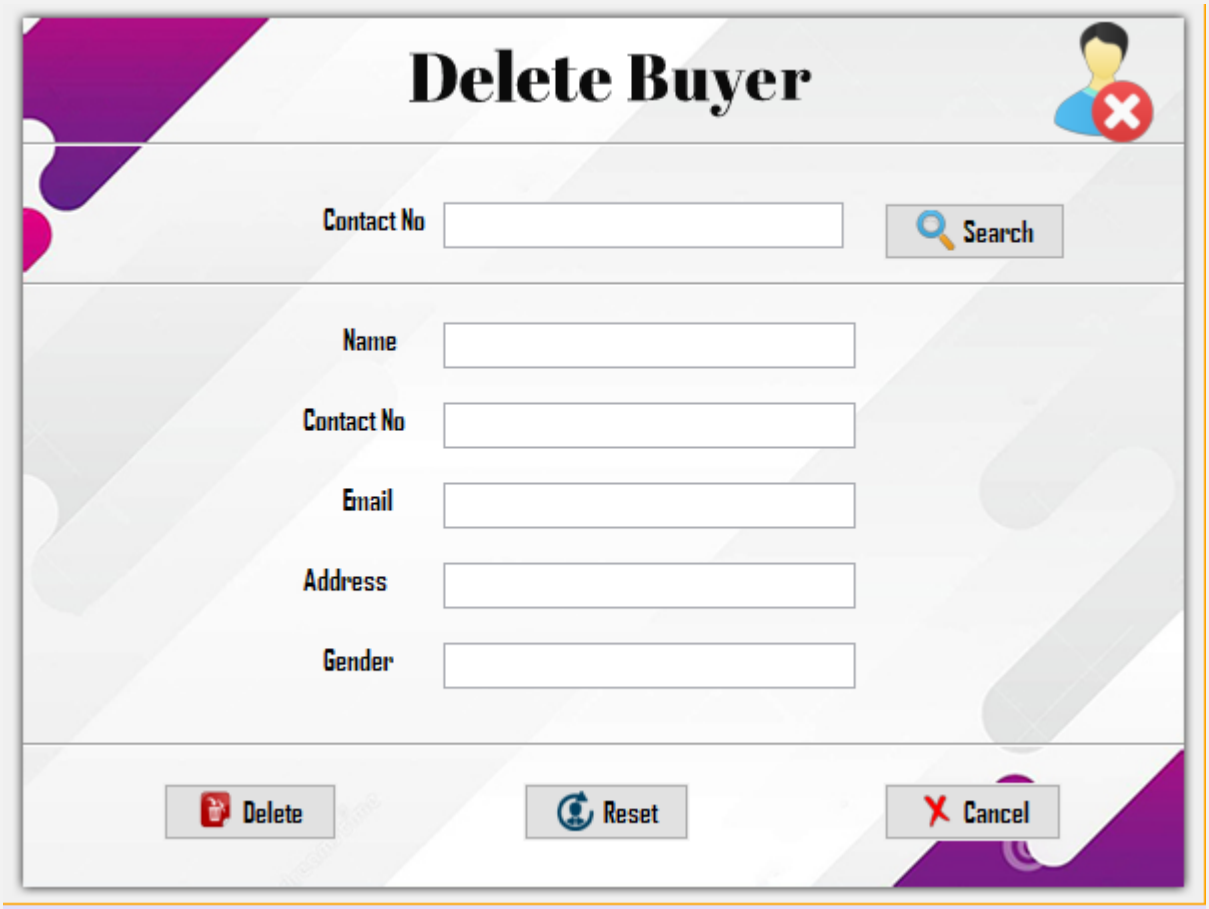
UPDATE BUYERS TAB



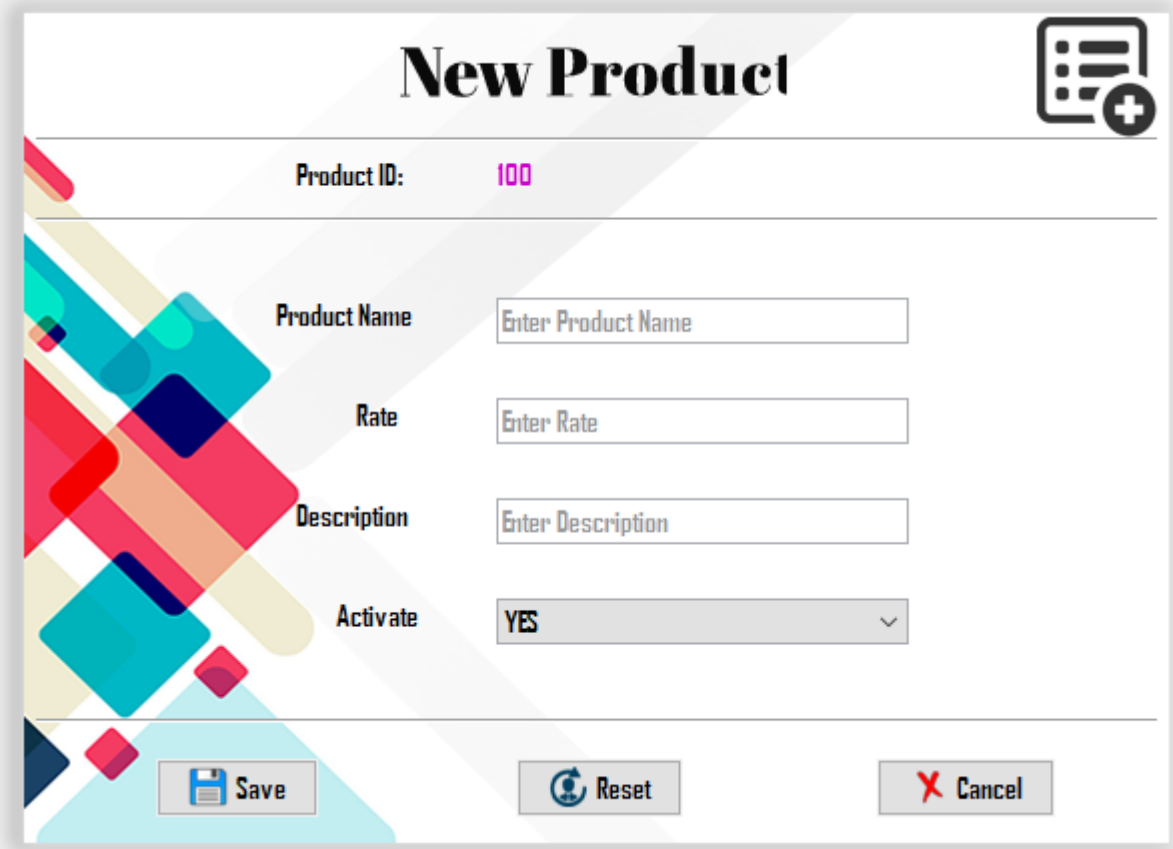
DETAILS BUYERS TAB



DELETE BUYERS TAB

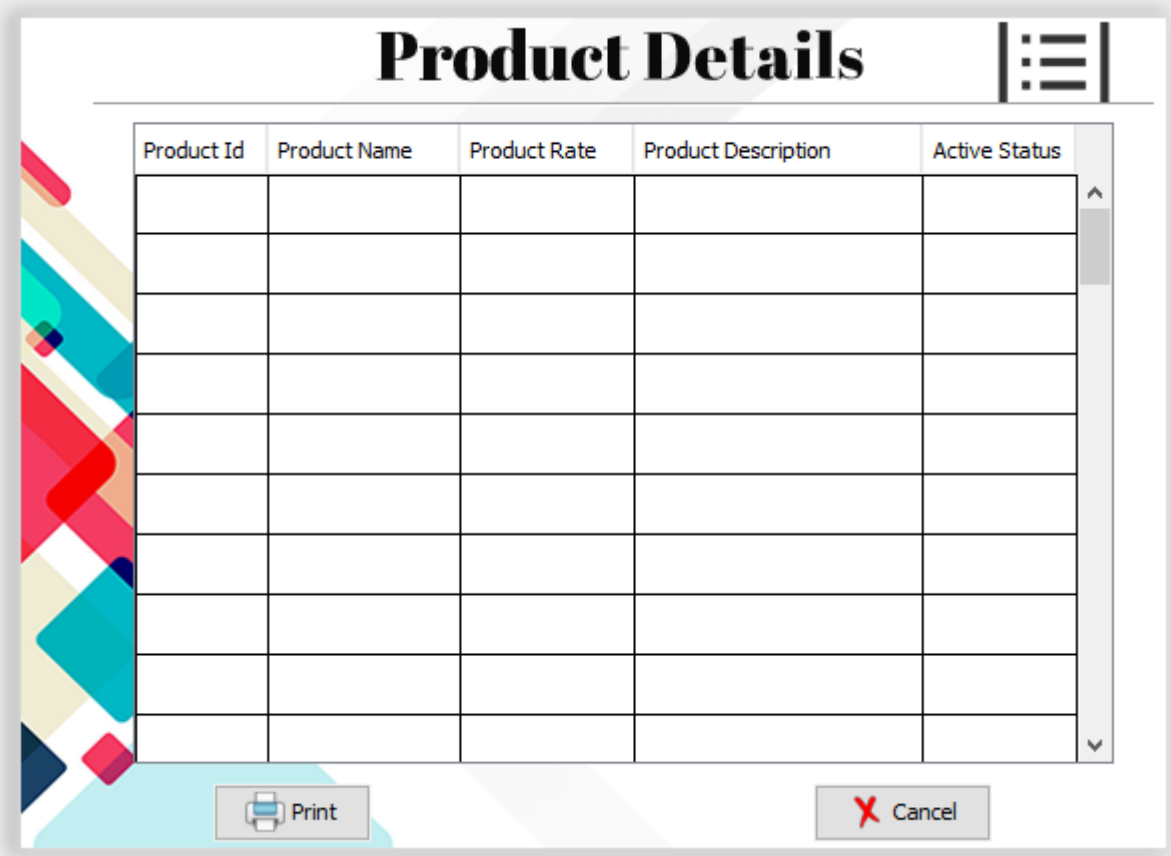


ADD PRODUCTS TAB

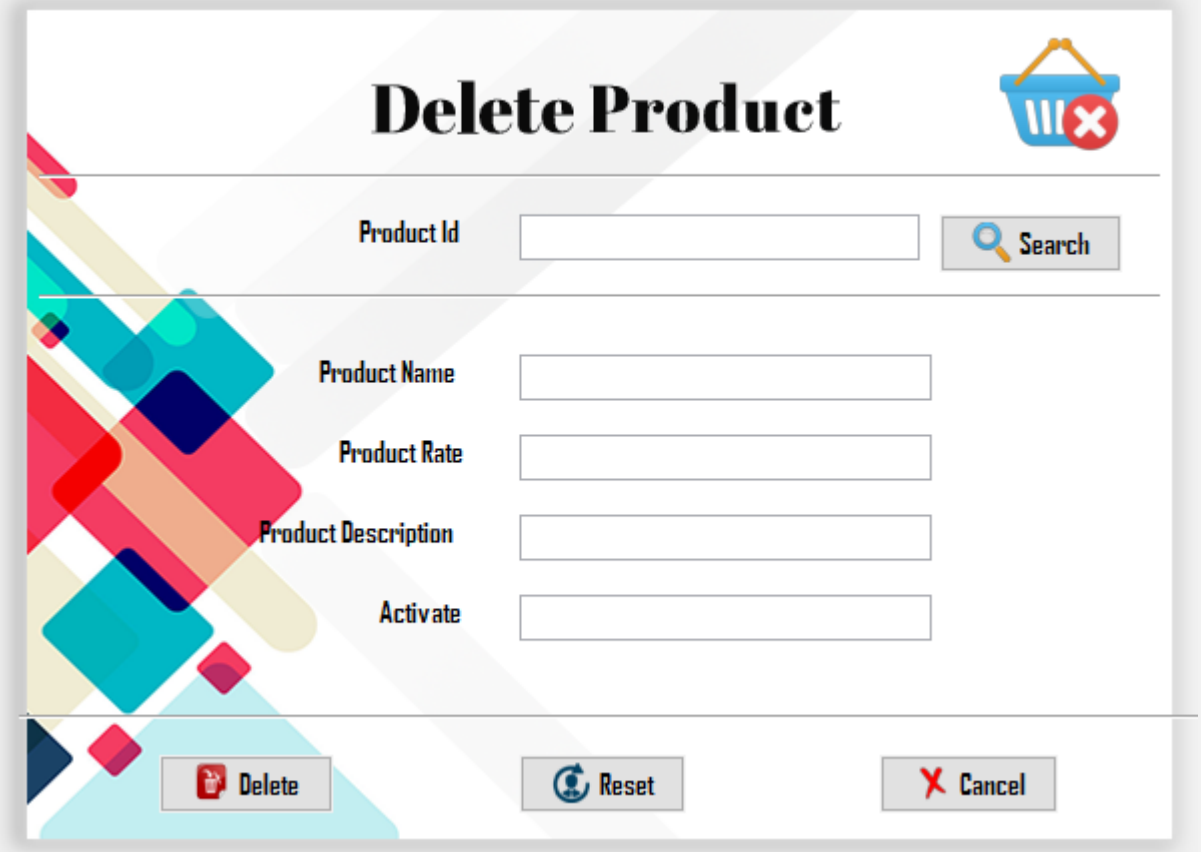


UPDATE PRODUCTS TAB

DETAILS PRODUCTS TAB

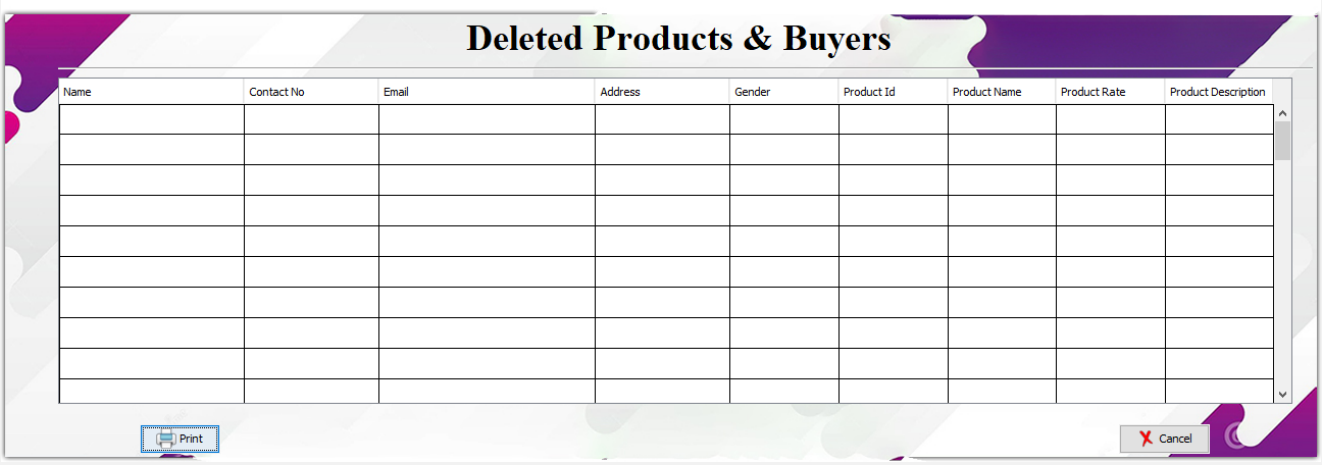


DELETE PRODUCTS TAB



BILLING TAB

DELETED RECORDS TAB



Conclusion

We apply SELECT, INSERT, UPDATE, DELETE, QUARING and FILTERING, WHERE, NATURAL JOIN, TRIGGER etc Query That we learn From our Course.

This was our project of Database System Lab about “Billing Management System”. Development of this System takes a lot of efforts from us. We think this system gave a lot of satisfaction to all of us. Though every task is never said to be perfect in this development field even more improvement may be possible in this system. We learned so many things and gained a lot of knowledge about development field. We hope this will prove fruitful to us.