VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

A Mini -Project Work on

"Pigmy Collection System"

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

Bachelor of Engineering
In
Information Science & Engineering

Submitted by

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Under the guidance of
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Certificate

This is to Certify that the Mini-Project work entitled **"Pigmy Collection System"** is a bonafide work carried out by **Nikhil (1AY16IS069)**, 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 **2018-19**. It is certified that all 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.

Prof. Arpitha N S Guide	**Dr. Surekha K B** HOD

Name of the Examiners	**Signature with date**
1. _____	_____
2. _____	_____

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Nikhil

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ABSTRACT

The purpose of the Pigmy Collection System is to automate the existing manual system by the help of computerized equipments and full-fledged computer software, fulfilling their requirements, so that valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required hardware and software are easily available and easy to work with.

Pigmy Collection System, as described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their activities rather than to concentrate on record keeping. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information.

The aim is to automate its existing manual system. This project assists the Pigmy agent on the usage of databases required by the office. It can be used to make and hold databases of Customers, Agents and Accounts that are being maintained by the office. Basically the project describes how to manage for good performance and better services for the customers.

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CHAPTER 1

INTRODUCTION

Pigmy Deposit Scheme is a monetary deposit scheme introduced by Syndicate Bank, India. Every office nowadays is trying to computerize its activities to provide better services to its customers. The aim is to automate its existing manual system by the help of computerized equipments and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same and paper work can be reduced.

The project, "Pigmy Collection System" is also a step towards offering more or less the similar features. Pigmy Collection System enables the Agents to provide their services in a more systematic and efficient manner, hence improving the goodwill of concerned organization. This helps the administrator to analyze upon the performance of organization.

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.

1.2 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.

1.3 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 center, each one needs a database to keep the records of ins and outs. For example distribution center should keep a track of the product units that supplied into the center as well as the products that got delivered out from the distribution center 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.

1.4 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.

1.5 Components of DBMS

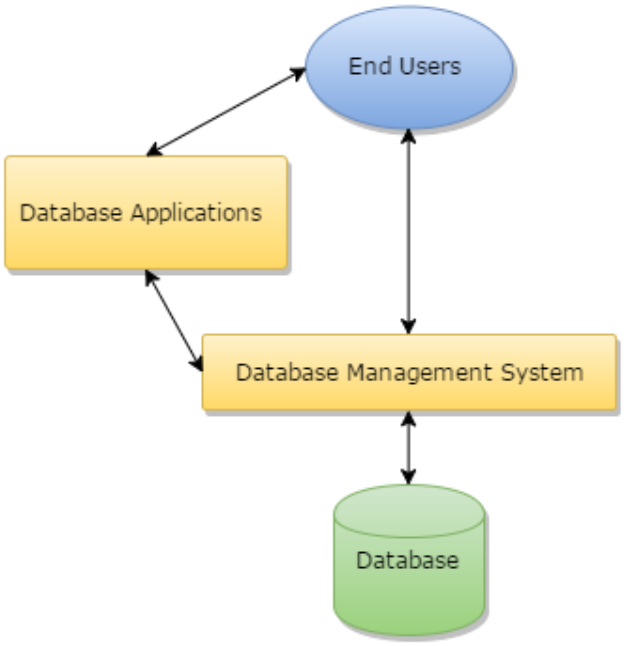

Fig-1.1: Components of a Database Management System

- **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.

1.6 Three-Schema architecture

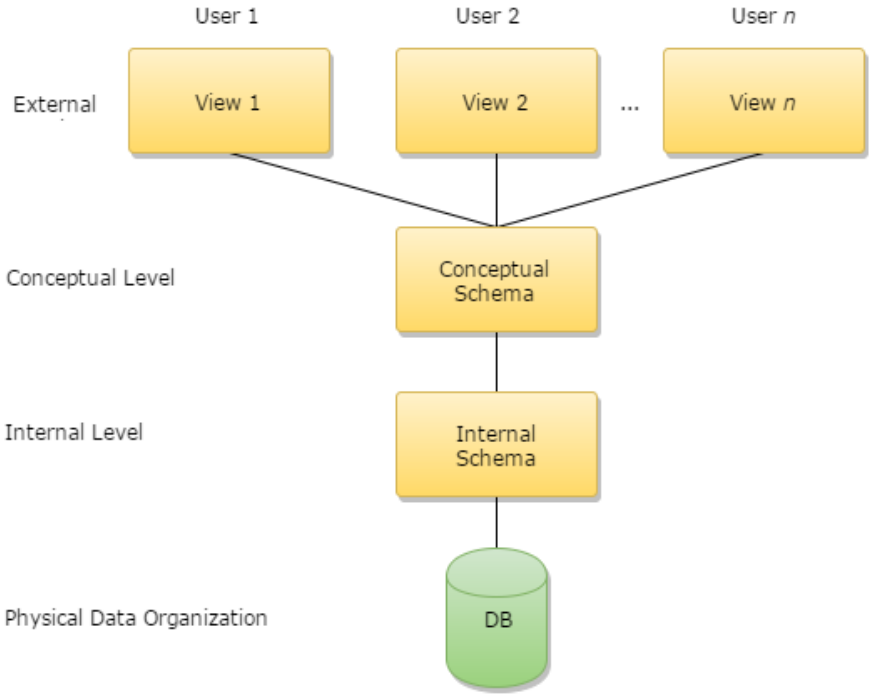

Fig-1.2: Architecture of Database System

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:** Core i5 8th Gen
- **RAM:** 2GB of RAM
- **Memory:** 256GB Hard drive

2.2 Software Requirements

- **Operating system:** Windows® 10 64-Bit
- **Front end:** HTML, CSS, JAVASCRIPT, BOOTSTRAP
- **Back end:** PHP, MYSQL

CHAPTER 3

DESIGN

3.1 ER Diagram

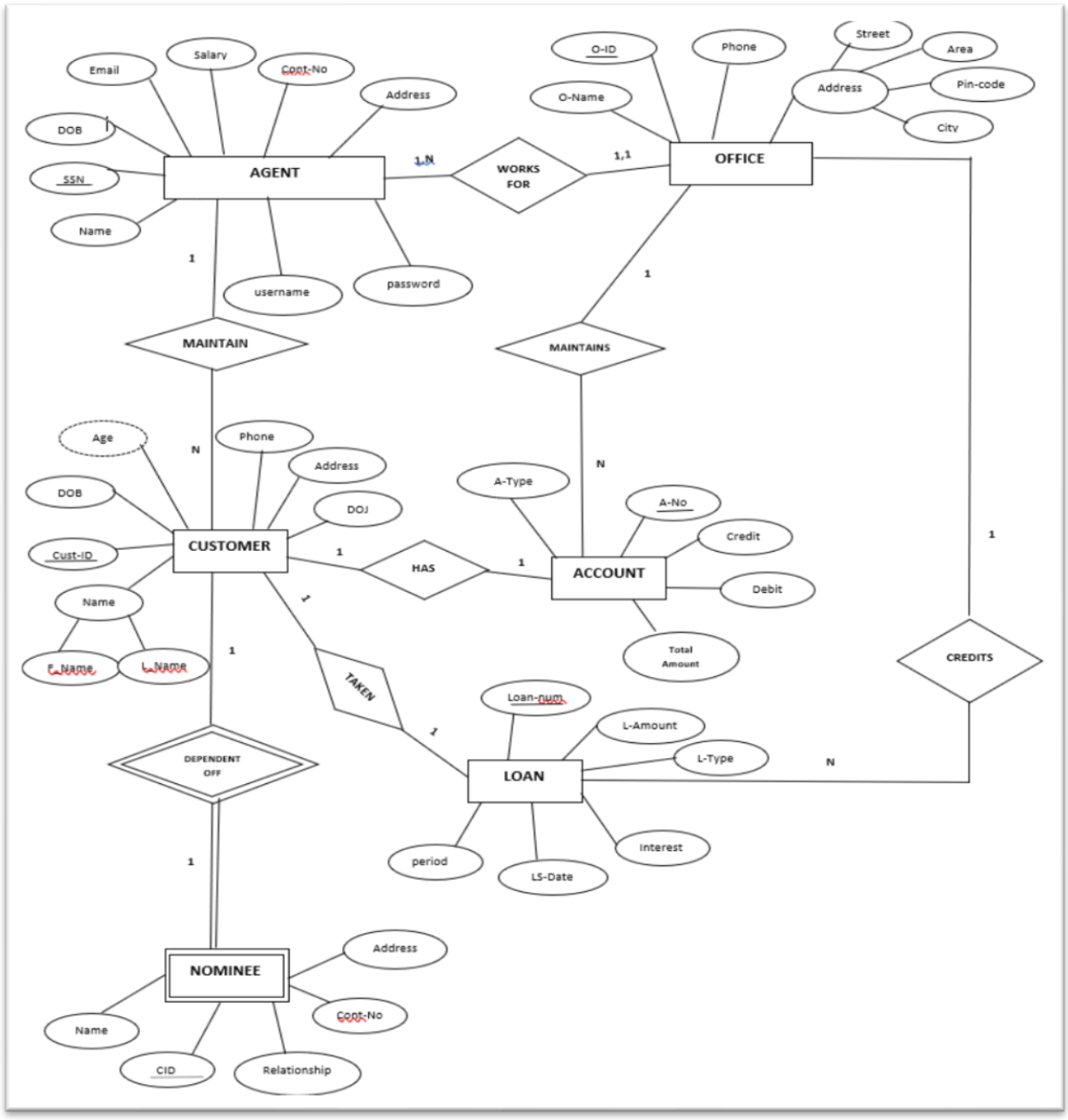

Fig-3.1: Entity Relationship Diagram

3.2 Schema Diagram

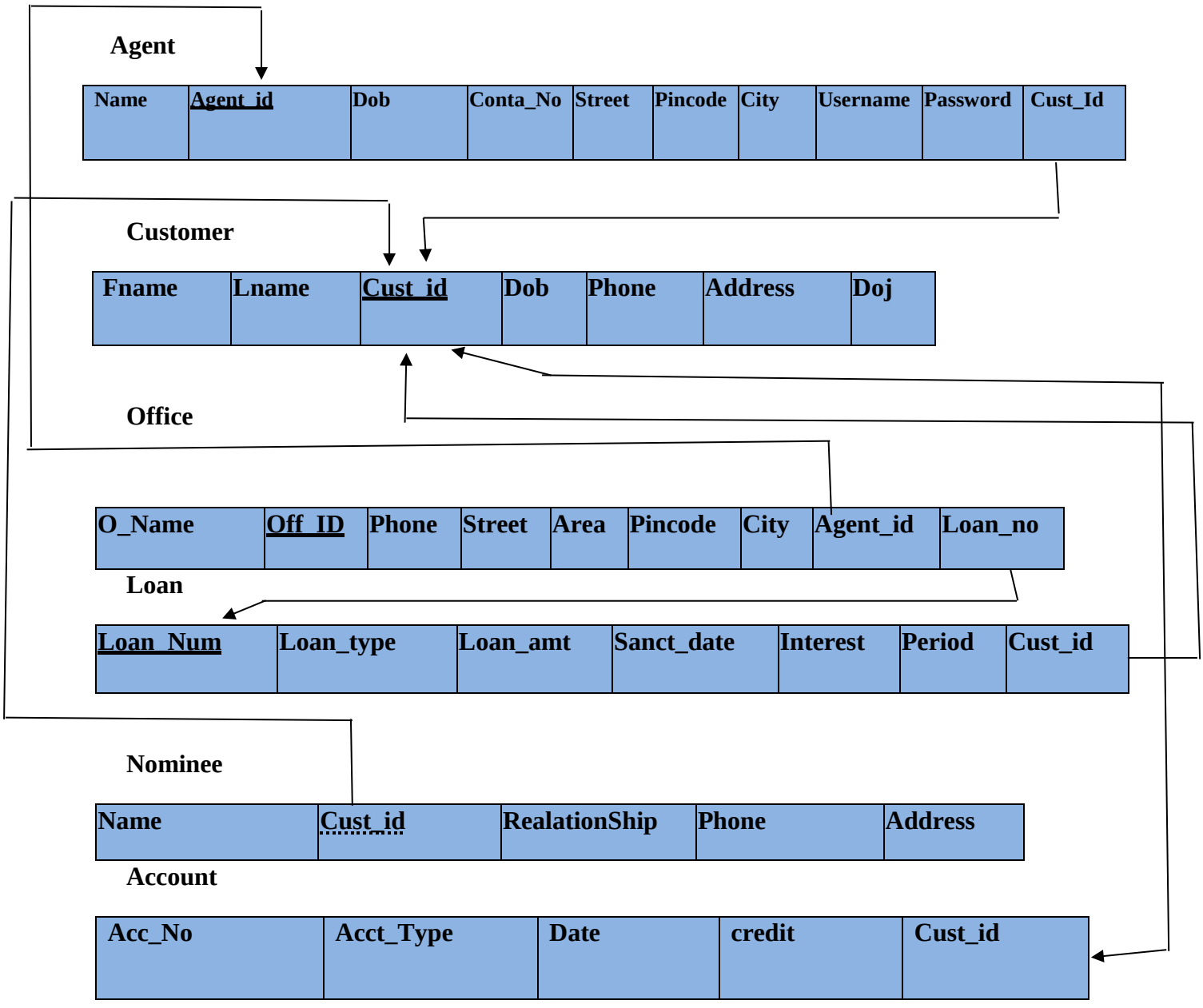

Fig-3.2: Schema Diagram

CHAPTER 4

IMPLEMENTATION

4.1 Tables

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	Name	Varchar2	To enter name
2	Agent_Id	Varchar2	Primary Key
3	Dob	Date	To enter Date of birth
4	Phone	Integer	To enter Phone number
5	Street	Varchar2	To enter Street details
6	City	Varchar2	To enter City details
7	Pincode	Integer	To enter Pincode
8	Email	Varchar2	Email address
9	Username	Varchar2	To enter Username
10	Password	Varchar2	Password
11	Confirmpsw	Varchar2	To confirm the password
12	Cust_Id	Varchar2	Foreign key to Customer

Table 4.1.1: Agent

```
CREATE TABLE AGENT
(NAME VARCHAR (25),
AGENT_ID VARCHAR (20) PRIMARY KEY,
DOB DATE,
PHONE INTEGER (15),
STREET VARCHAR (25),
CITY VARCHAR(25),
PINCODE NUMBER(10),
EMAIL VARCHAR(25),
USERNAME VARCHAR(25),
PASSWORD VARCHAR(25),
CONFIRMPSW VARCHAR(25),
```

CUST_ID VARCHAR(25) REFERENCES CUSTOMER(CUST_ID) ON DELETE SET NULL)ENGINE=InnoDB DEFAULT CHARSET=latin1;

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	F_Name	Varchar2	First Name
2	L_Name	Varchar2	Last Name
3	Cust_Id	Varchar2	Primary Key
4	Dob	Date	Date of birth
5	Phone	Integer	Phone number
6	Address	Varchar2	Address
7	Doj	Date	Date of joining
8	Agent_id	Varchar2	Foreign key to Agent

Table 4.1.2: Customer

CREATE TABLE CUSTOMER
(FNAME VARCHAR (25),
LNAME VARCHAR (25),
CUST_ID VARCHAR(25) PRIMARY KEY,
DOB DATE,
PHONE INTEGER,
ADDRESS VARCHAR (25),
DOJ DATE,
AGENT_ID VARCHAR(20) REFERENCES AGENT(AGENT_ID),
ACCT_NUM VARCHAR(20) REFERENCES ACCOUNT(ACCT_NUM) ON DELETE CASCADE
)ENGINE=InnoDB DEFAULT CHARSET=latin1;

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	Off_ID	Varchar2	Primary Key
2	Off_name	Varchar2	Office Name
3	Contact	Integer	Contact Details
4	Street	Varchar2	Street Details
5	Area	Varchar2	Area Details
6	City	Varchar2	City Details
7	Pincode	Integer	Pincode
8	Agent_id	Varchar2	Foreign key to Agent
9	Loan_num	Varchar2	Foreign key to Loan

Table 4.1.3: Office

```
CREATE TABLE OFFICE
(
OFF_ID VARCHAR (20) PRIMARY KEY,
OFF_NAME VARCHAR(20),
CONTACT INTEGER,
STREET VARCHAR(20),
AREA VARCHAR(20),
CITY VARCHAR(20),
PINCODE INTEGER,
AGENT_ID VARCHAR(25) REFERENCES AGENT(AGENT_ID) ON DELETE SET NULL ,
ACCT_NUM VARCHAR(20) REFERENCES ACCOUNT(ACCT_NUM) ON DELETE SET NULL,
LOAN_NUM VARCHAR(12) REFERENCES LOAN(LOAN_NUM)ON DELETE SET NULL)ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	Acct_Num	Varchar2	Primary Key
2	Acct_type	Varchar2	Type of account
3	Date	Date	To enter date
4	Credit	Integer	Credited amount
5	Cust_Id	Varchar2	Foreign key to customer

Table 4.1.4: Account

```
CREATE TABLE ACCOUNT
(
ACCT_NUM VARCHAR(20),
ACCT_TYPE VARCHAR(20),
DATE DATE,
CREDIT INTEGER,
CUST_ID VARCHAR(25) REFERENCES CUSTOMER(CUST_ID) ON DELETE SET NULL
)ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	Name	Varchar2	Name of nominee
2	Cust_Id	Varchar2	Foreign Key to Customer
3	Relationship	Varchar2	Relationship with customer
4	Contact_No	Integer	Contact Number
5	Address	Varchar2	Address Details

Table 4.1.5: Nominee

```
CREATE TABLE NOMINEE
(NAME VARCHAR (25),
CUST_ID VARCHAR (25) REFERENCES CUSTOMER(CUST_ID),
RELATIONSHIP VARCHAR (15),
CONTACT_NO INTEGER,
ADDRESS VARCHAR (30)) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

SNO	COLUMN_NAME	DATA_TYPE	DESCRIPTION
1	Loan_num	Varchar2	Primary Key
2	Loan_Type	Varchar2	Type of loan
3	Loan_Amount	Decimal	Loan amount
4	Interest	Varchar2	Interest on loan
5	Sanct_date	Date	Loan sanctioned date
6	Period	Integer	Total time
7	Cust_id	Varchar2	Foreign Key to Customer

Table4.1.6:Loan

```
CREATE TABLE LOAN
(LOAN_NUM VARCHAR(12) PRIMARY KEY,
LOAN_TYPE VARCHAR(25),
LOAN_AMOUNT DECIMAL,
INTEREST VARCHAR(10),
SANCT_DATE DATE,
PERIOD INTEGER,
CUST_ID VARCHAR(25) REFERENCES CUSTOMER(CUST_ID) ON DELETE SET NULL
)ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

4.2 Trigger

```
CREATE TABLE TRIG
{
 EXE_TIME DATETIME NOT NULL
}

CREATE TRIGGER USER_TRIG AFTER INSERT
ON CUSTOMER FOR EACH ROW
INSERT INTO TRIG VALUES (NOW ());
```

4.3 Stored Procedure

1)

```
DELIMITER $$
CREATE PROCEDURE TOTAL_CUST (OUT TOTAL_CUST DECIMAL)
BEGIN
SELECT COUNT(CUST_ID)
INTO TOTAL_CUST
FROM CUSTOMER;
END
```

2)

```
DELIMITER $$
CREATE PROCEDURE GetCustomers()
BEGIN
SELECT CUST_ID, PHONE
FROM CUSTOMER;
END$$.
```

CHAPTER 5

SNAPSHOTS

The following snapshot contains the homepage of the application where the user can login as either admin or agent.

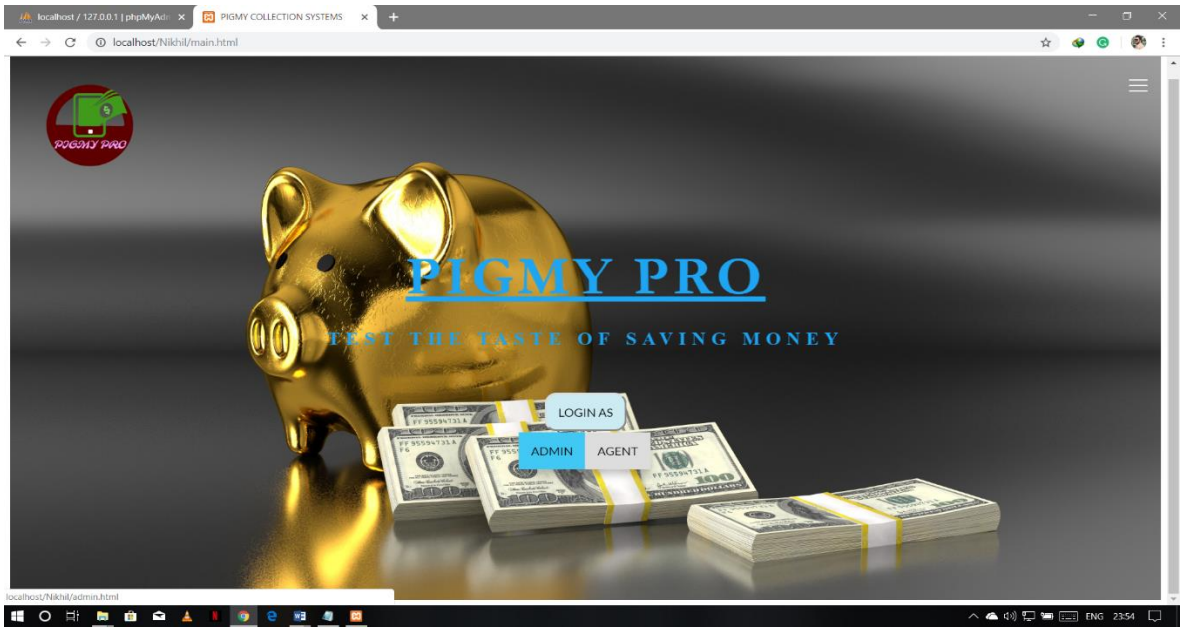

Fig-5.1: Snapshot of Homepage.

The following snapshot contains the admin login page.

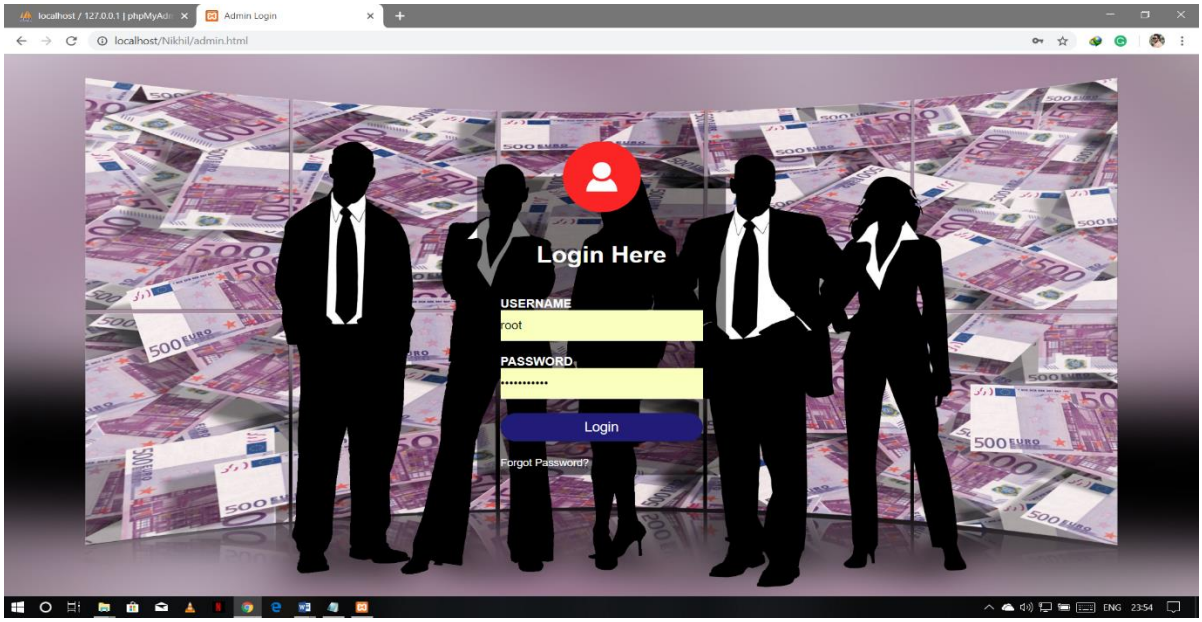

Fig-5.2: Snapshot of Admin Login Screen.

The following Snapshot contains admin dashboard. Where he can add, view, edit, or delete the database.

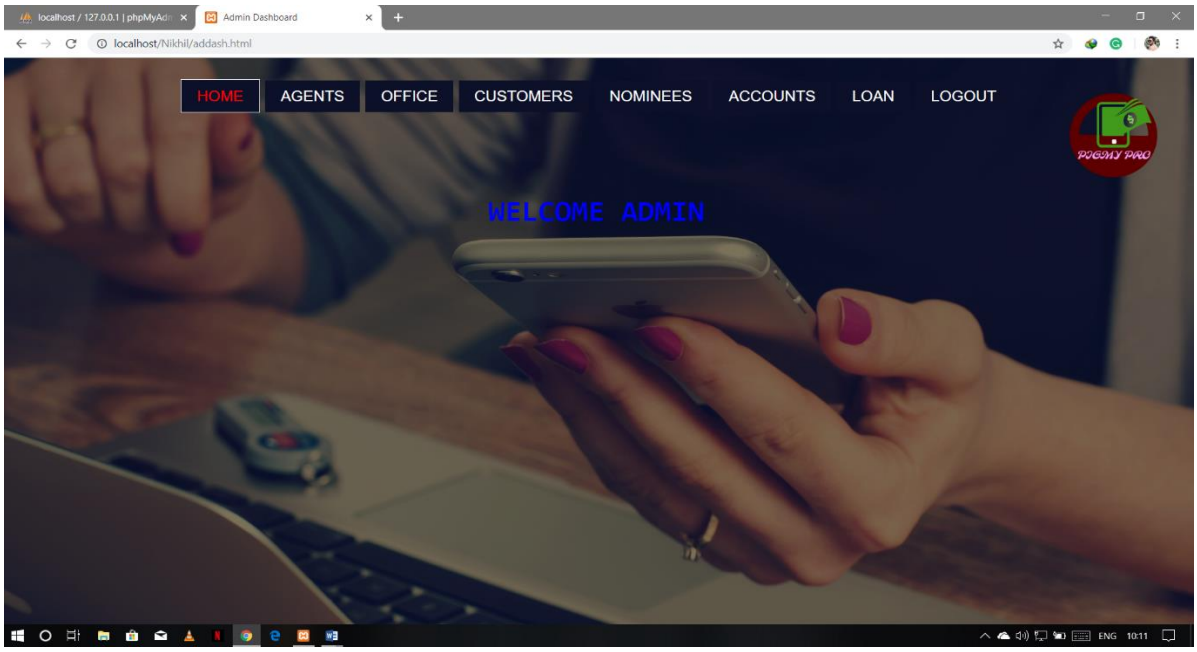

Fig-5.3: Snapshot of Admin Dashboard Screen

The following snapshot contains options to view, update or delete the agent details.

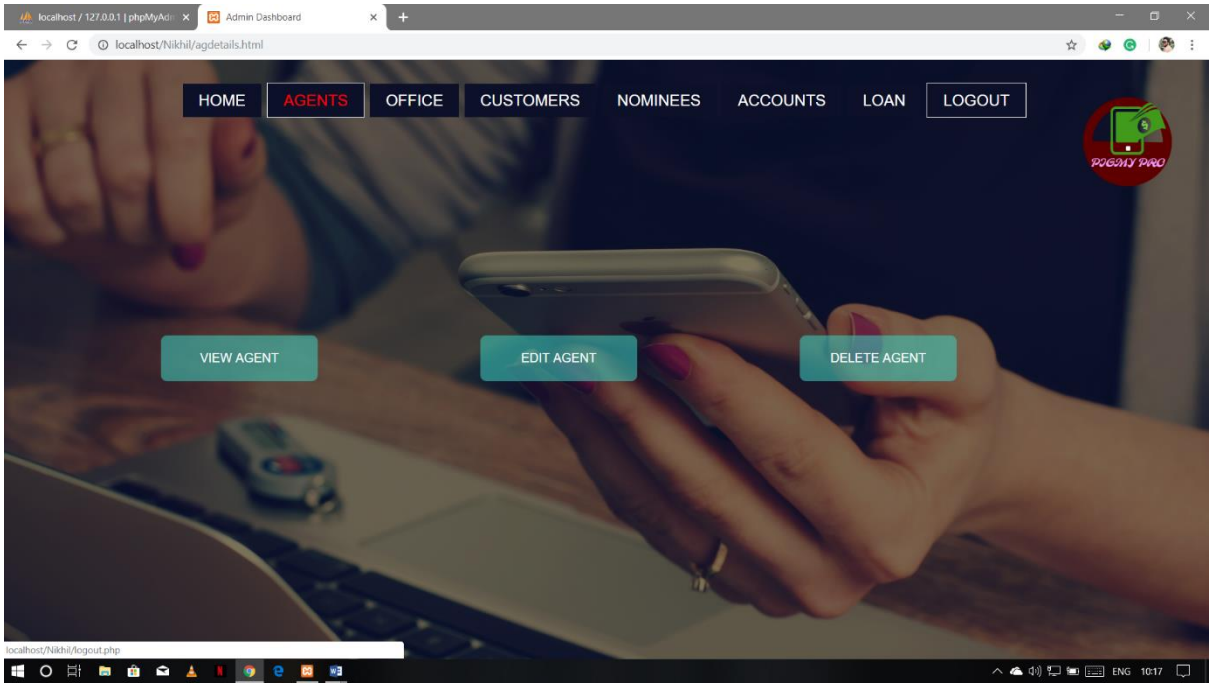

Fig-5.4: Snapshot of Agent Details Screen

The following snapshot contains the from where new customer is added and also there is 3 buttons which is used to view, edit and delete data stored in the database.

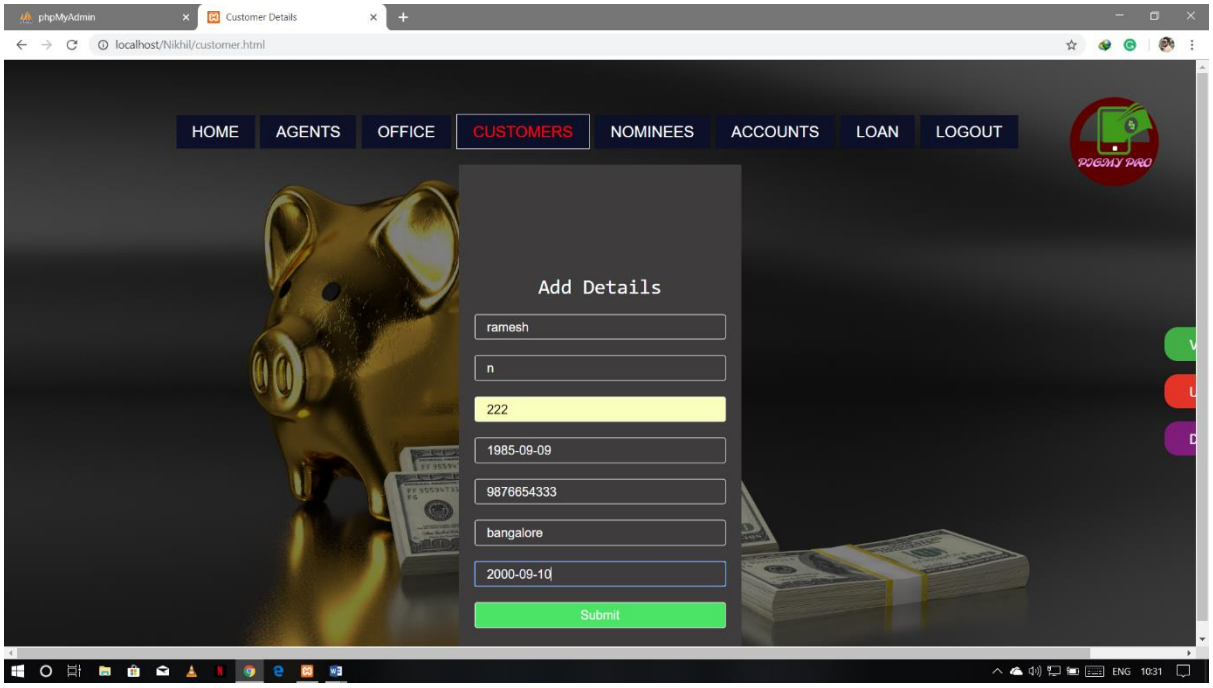

Fig-5.5: Snapshot of Adding Customer Details.

The following snap shot contains view of stored customer details. and here we can edit and delete.

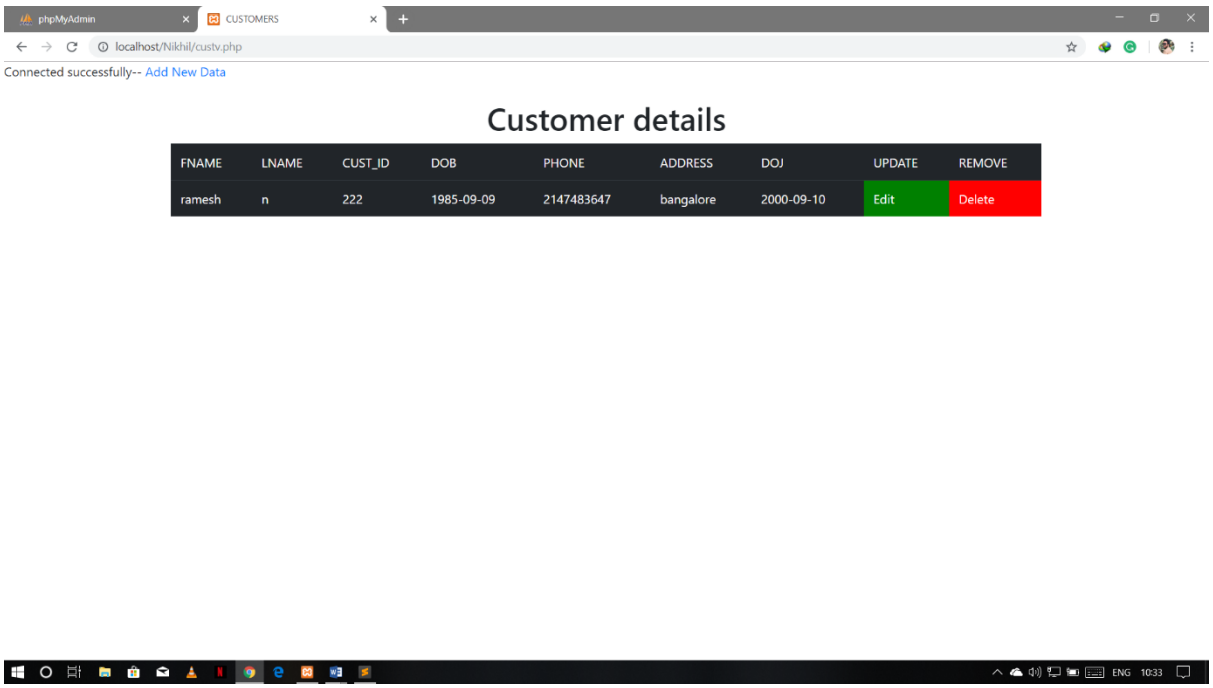

Fig-5.6: Snapshot of Customer Details Screen

The following snapshot contains the agent signup page.

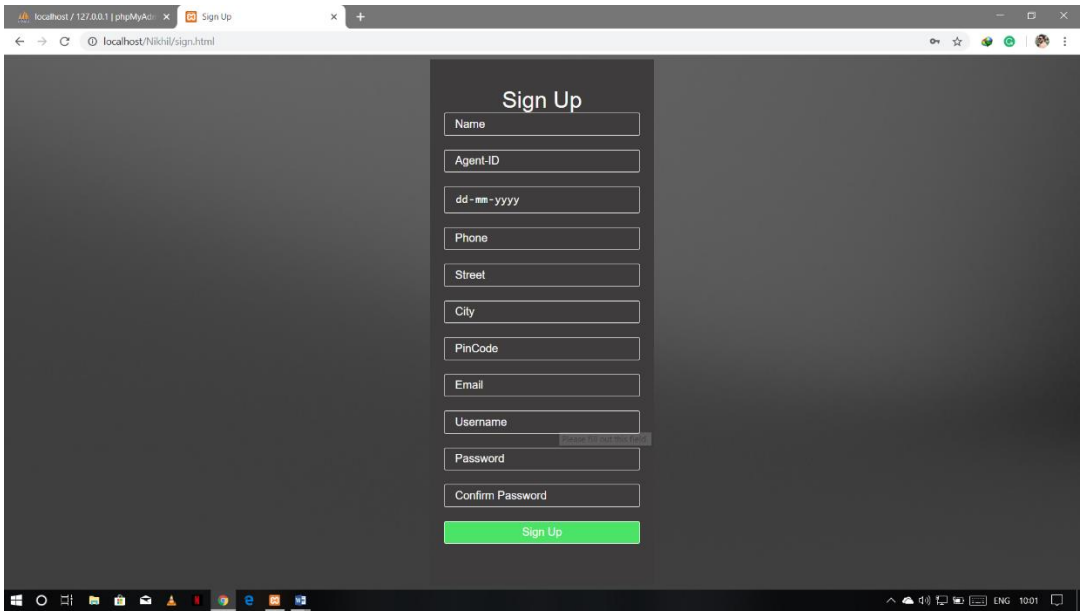

Fig-5.7: Snapshot of Agent Sign Up Page

The following snapshot contains the agent login page.

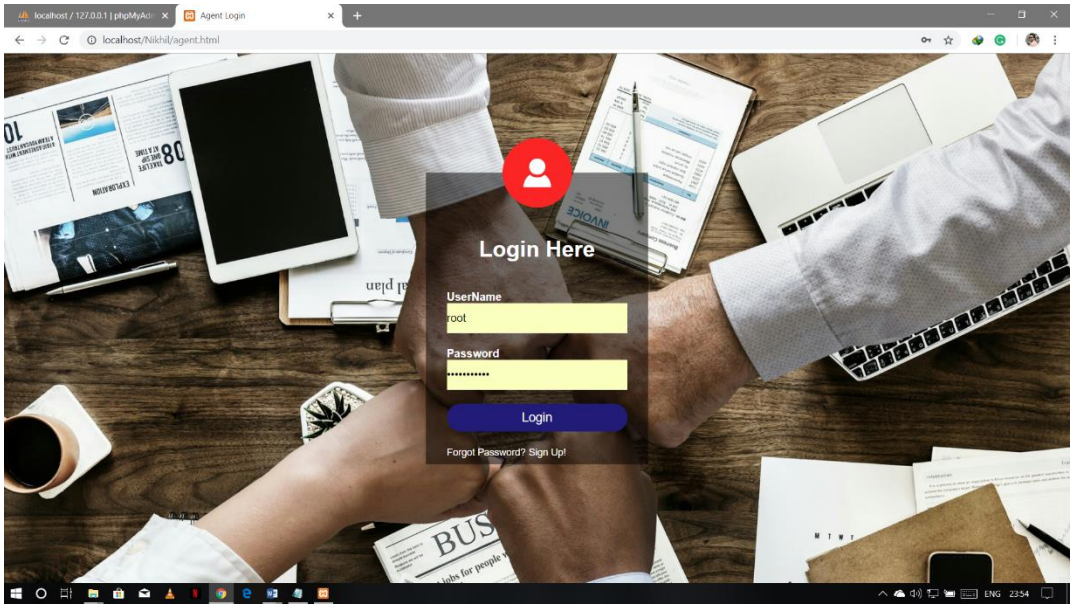

Fig-5.8: Snapshot of Agent Login Page.

The following snapshot contains the agent dashboard screen which include menus like customer, nominees, accounts.

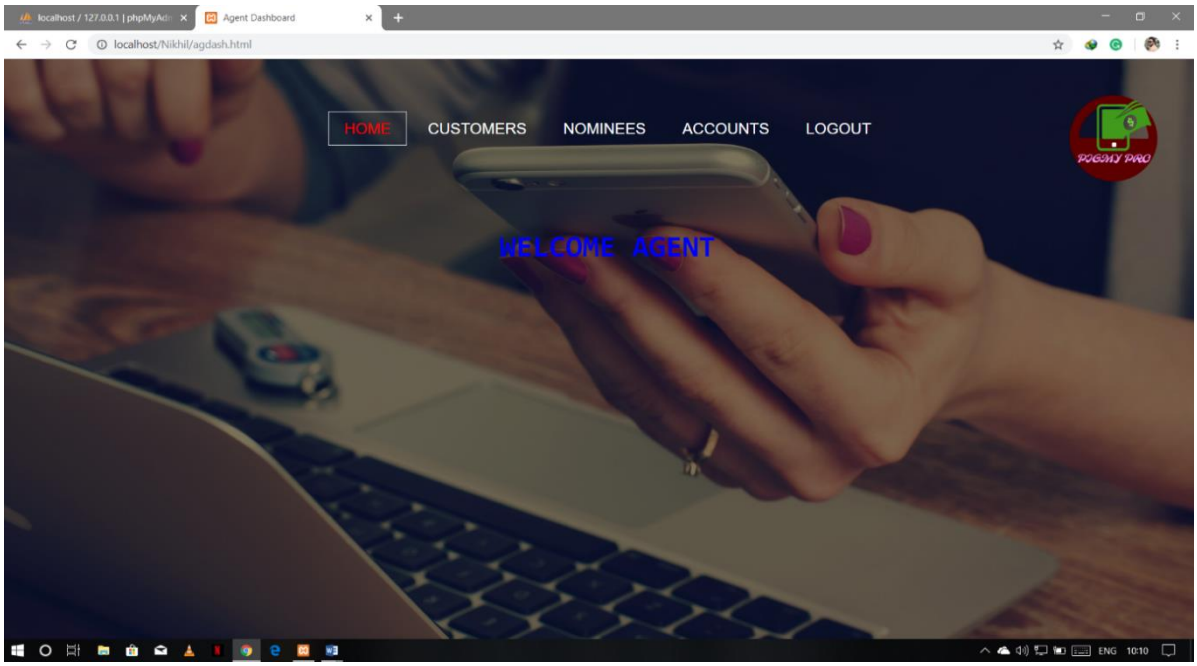

Fig-5.9: Snapshot of Agent Dashboard Page.

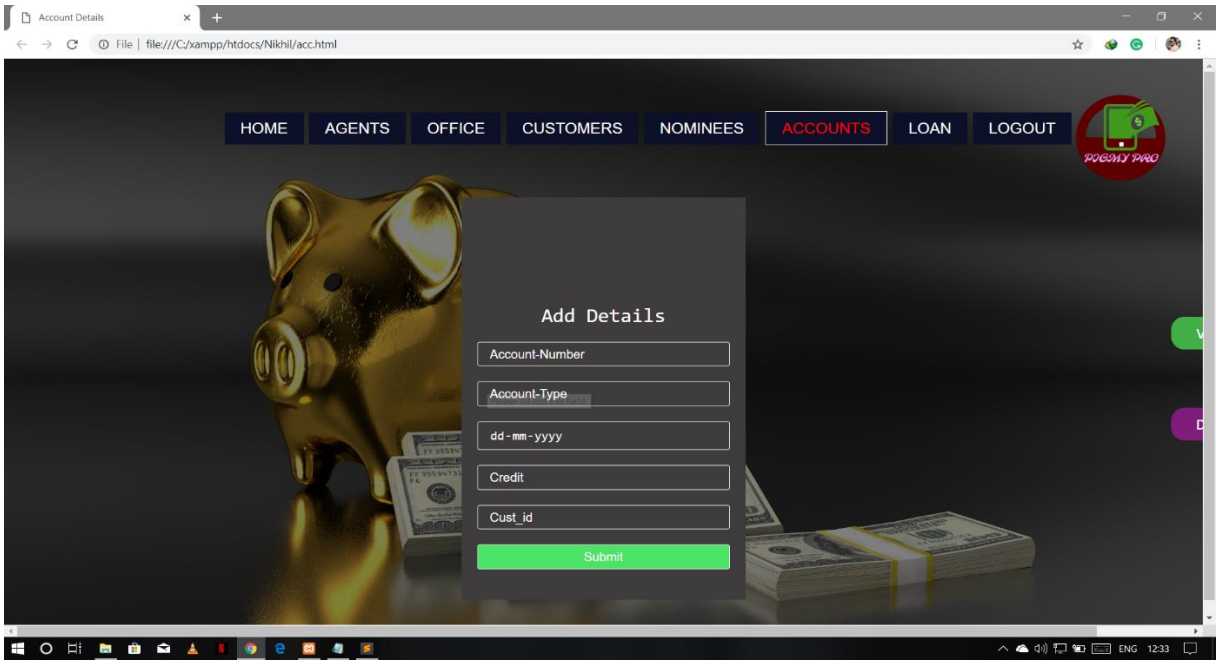

Fig-6.0: Snapshot of Daily Collection Data.

CONCLUSION & FUTURE ENHANCEMENT

Conclusion

Pigmy is one of the various investment options available in the market. The amount may be as small as rupees five. It can be called a recurring deposit scheme, as the money is deposited daily. This package shall prove to be a powerful package in satisfying all the requirements of the agency. The objective of software planning is to provide a framework that enables the manager to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses. This application can be used by any organization whether big or small that has challenges to overcome and managing the information of the agents, customers, daily collection, loans and office.

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 mini statement.
- More advance software can be given for office including more facilities.
- 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.
- Implement backup mechanism for taking backup of database on regular basis on different servers.
- A message has to be sent to the customer mobile regarding the account details.

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 customer and their account. Enhancements can be done to maintain all the pigmy agencies, customers, agents, and account. 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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