ACCOUNTING SOFTWARE FOR SMALL BUSINESS

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1   Introduction

Start-ups, small businesses and free-lancing are few among the emerging carrier choices these days. People belonging to different sectors of the society and from different backgrounds have stepped in to this field. One of the most important aspects of running and handling a business is accounting and keeping track of monetary transactions and fund managements play a vital role in successfully running a business and also helps in perfectly planning a way to gain profit.
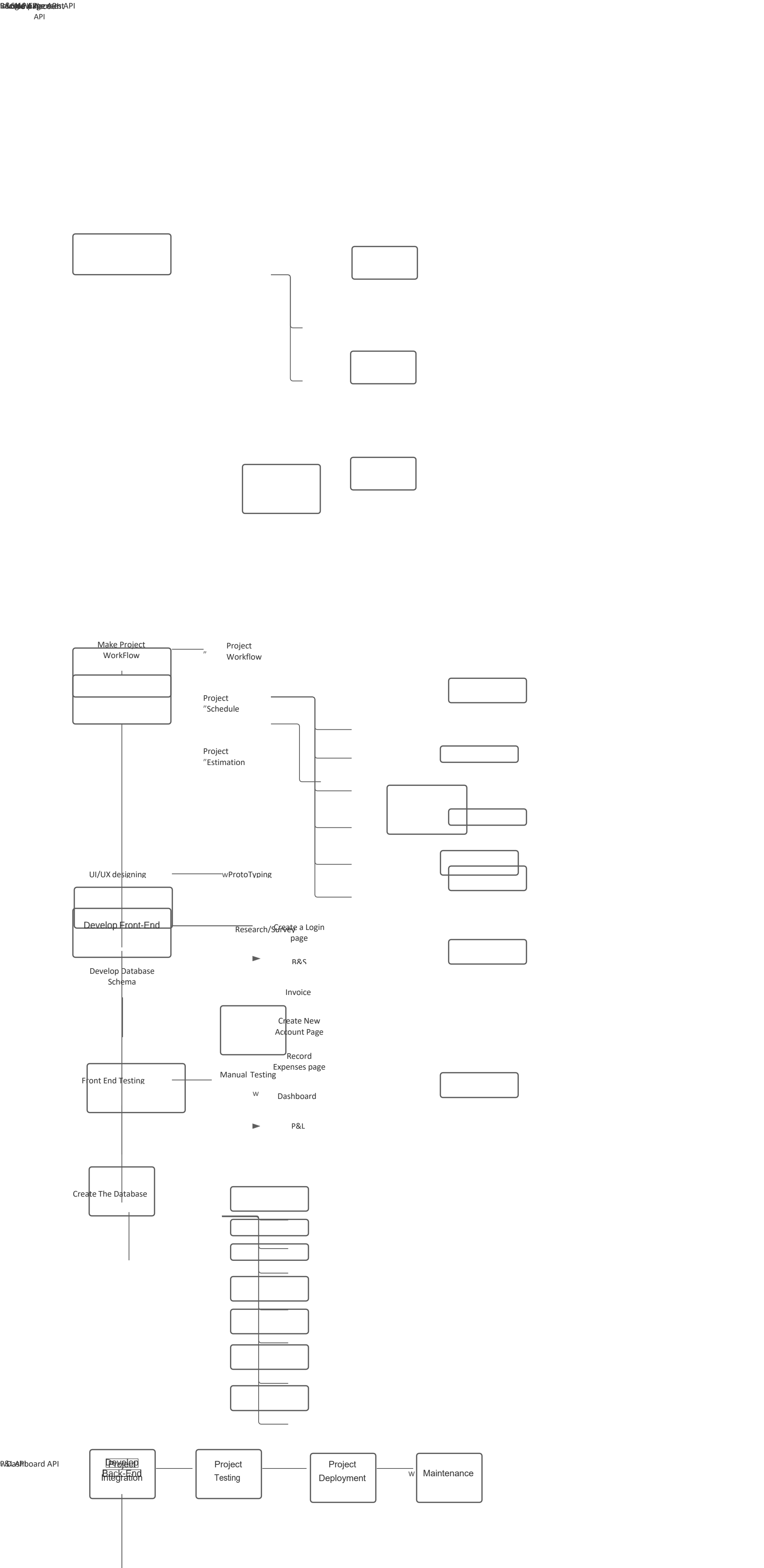
2   Problem Statement

While it is easier for large businesses and companies to have their own platform to manage their funds and expenses, many small businesses and freelancers find it hard to keep track of the ex- penses,bill generation,keeping tab of payment defaulters etc

3   Project Domain

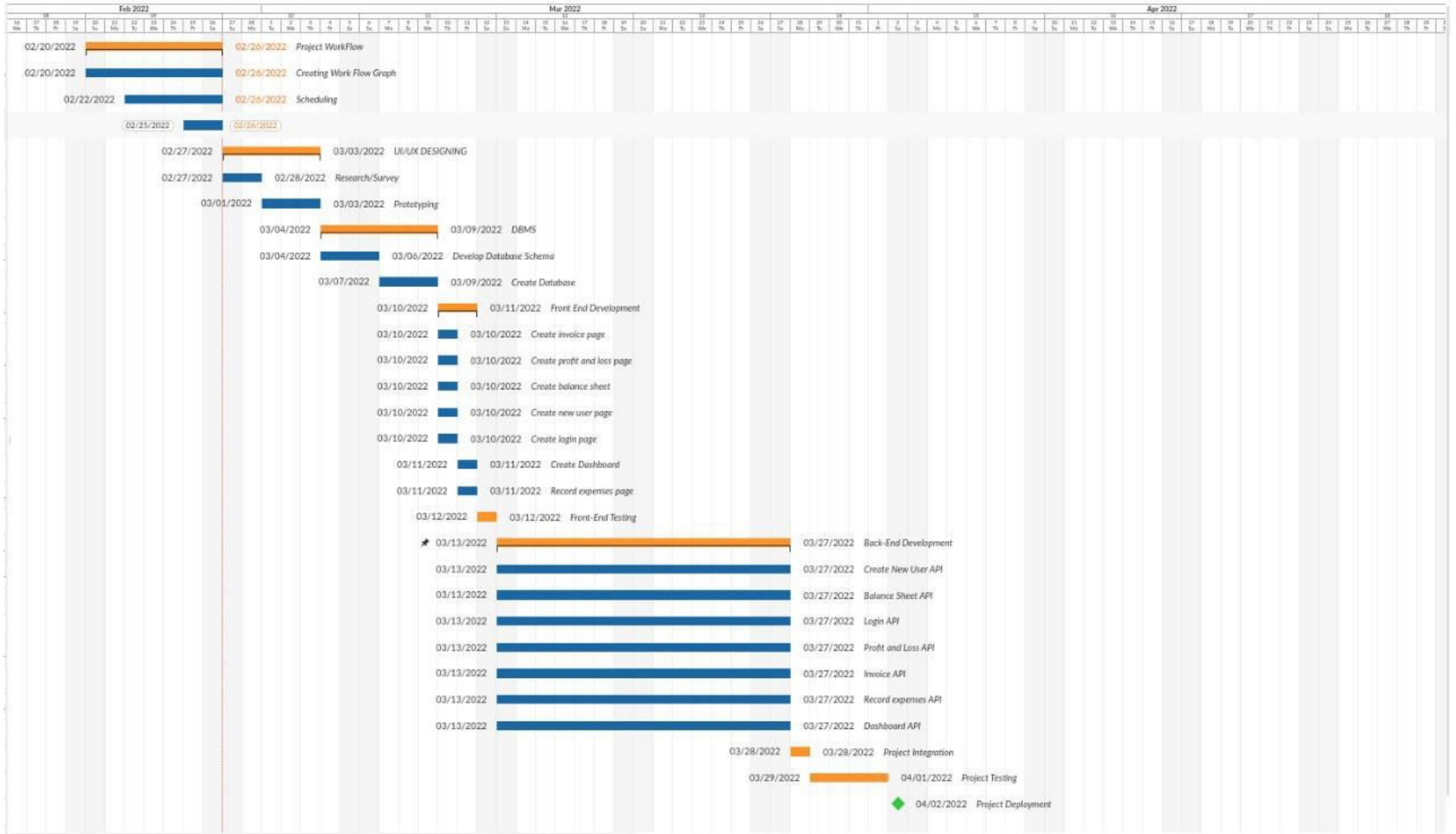Business and Accounting Domain Front End : python-tkinter Back End : Python and MySQL

4   Objectives

- Login page - To login to a new account or to create a new account if the account doesn't exist.
- Record monthly/weekly/yearly expenses and income and filter it based on the date.
- Calculate profit or loss based on the income and expenses.
- Maintain a costumers databse and get an overview of each costumer

Make Project
WorkFlow

Project
WorkFlow

Project
"Schedule

Project
"Estimation

UI/UX designing

wProtoTyping

Develop Front-End

Research/Survey

Create a Login
page

R&S

Invoice

Create New
Account Page

Develop Database
Schema

Record
Expenses page

Front End Testing

Manual Testing

Dashboard

P&L

Create The Database

Develop
Back-End
Integration

Project
Testing

Project
Deployment

Maintenance

P&L API

Sr.No.	Subject	Type	Start date	Finish date	Estimated time
1	Research	Task	01/25/2022	01/29/2022	5
2	Statement Formation	Task	01/25/2022	01/29/2022	3
	Project WorkFlow	Phase	02/20/2022	02/26/2022	
3	Creating Work Flow Graph	Task	02/20/2022	02/26/2022	2
4	Scheduling	Task	02/22/2022	02/26/2022	3
5	Cost Estimation	Task	02/25/2022	02/26/2022	2
	UI/UX DESIGNING	Phase	02/27/2022	03/03/2022	
6	Research/Survey	Task	02/27/2022	02/28/2022	4
7	Prototyping	Task	03/01/2022	03/03/2022	4
	DBMS	Phase	03/04/2022	03/09/2022	
8	Develop Database Schema	Task	03/04/2022	03/06/2022	6
9	Create Database	Task	03/07/2022	03/09/2022	5
	Front End Development	Phase	03/10/2022	03/11/2022	
10	Create login page	Task	03/10/2022	03/10/2022	1
11	Create new user page	Task	03/10/2022	03/10/2022	1
12	Create balance sheet	Task	03/10/2022	03/10/2022	1
13	Create profit and loss page	Task	03/10/2022	03/10/2022	1
14	Create invoice page	Task	03/10/2022	03/10/2022	1
15	Record expenses page	Task	03/11/2022	03/11/2022	1
16	Create Dashboard	Task	03/11/2022	03/11/2022	1
	Front-End Testing	Phase	03/12/2022	03/12/2022	3
	Back-End Development	Phase	03/13/2022	03/27/2022	
17	Dashboard API	Task	03/13/2022	03/27/2022	4
18	Record expenses API	Task	03/13/2022	03/27/2022	3
19	Invoice API	Task	03/13/2022	03/27/2022	4
20	Profit and Loss API	Task	03/13/2022	03/27/2022	4
21	Login API	Task	03/13/2022	03/27/2022	3
22	Balance Sheet API	Task	03/13/2022	03/27/2022	4
23	Create New User API	Task	03/13/2022	03/27/2022	4
	Project Integration	Phase	03/28/2022	03/28/2022	3
	Project Testing	Phase	03/29/2022	04/01/2022	4
	Project Deployment	Milestone	04/02/2022	04/02/2022	2

Type of Work	Number of Hours	Cost Per Hour	Tota Cost
UI/UX Designer	8	600	4800
Front End Developer	10	418	4180
Back End Developer	35	566	19810
Database Administartor	11	455	5005

TOTAL COST	33795

Date		Task
02/20/2022	02/26/2022	Project WorkFlow
02/20/2022	02/26/2022	Creating Work Flow Graph
02/22/2022	02/26/2022	Scheduling
02/25/2022	02/26/2022	
02/27/2022	03/03/2022	UI/UX DESIGNING
02/27/2022	02/28/2022	Research/Survey
03/01/2022	03/03/2022	Prototyping
03/04/2022	03/09/2022	DBMS
03/04/2022	03/06/2022	Develop Database Schema
03/07/2022	03/09/2022	Create Database
03/10/2022	03/11/2022	Front End Development
03/10/2022	03/10/2022	Create invoice page
03/10/2022	03/10/2022	Create profit and loss page
03/10/2022	03/10/2022	Create balance sheet
03/10/2022	03/10/2022	Create new user page
03/10/2022	03/10/2022	Create login page
03/11/2022	03/11/2022	Create Dashboard
03/11/2022	03/11/2022	Record expenses page
03/12/2022	03/12/2022	Front-End Testing
03/13/2022	03/27/2022	Back-End Development
03/13/2022	03/27/2022	Create New User API
03/13/2022	03/27/2022	Balance Sheet API
03/13/2022	03/27/2022	Login API
03/13/2022	03/27/2022	Profit and Loss API
03/13/2022	03/27/2022	Invoice API
03/13/2022	03/27/2022	Record expenses API
03/13/2022	03/27/2022	Dashboard API
03/28/2022	03/28/2022	Project Integration
03/29/2022	04/01/2022	Project Testing
	04/02/2022	Project Deployment

Software Requirements Specification

for

Accounting Software

Version 1.0 approved

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College of Engineering Pune

6th March 2022

Table of Contents

Revision History

Name	Date	Reason For Changes	Version

1.   **Introduction**

1.1   **Purpose**

Start-ups, small businesses, and free-lancing are few among the emerging career choices these days. One of the most important aspects of running and handling a business is accounting and keeping track of monetary transactions.

1.2   **Document Conventions**

- Convention for Main title
    - Font face: Times New Roman
    - Font style: Bold
    - Font Size: 16
- Convention for Subtitle
    - Font face: Times New Roman
    - Font style: Bold
    - Font Size: 14
- Convention for body
    - Font face: Times New Roman
    - Font Size: 12

1.3   **Intended Audience and Reading Suggestions**

This Project is intended for developers, project managers, users, testers, and documentation writedrs. Read the document in the sequential order.

1.4   **Product Scope**

Fund management plays a vital role in successfully running a business and also helps in perfectly planning a way to gain profit. While it is easier for large businesses and companies to have their own platform to manage their funds and expenses, many small businesses and freelancers find it hard to keep track of the expenses, bill generation, keeping tab of payment defaulters, etc. There is a need for a platform that can help them with the above-mentioned tasks.
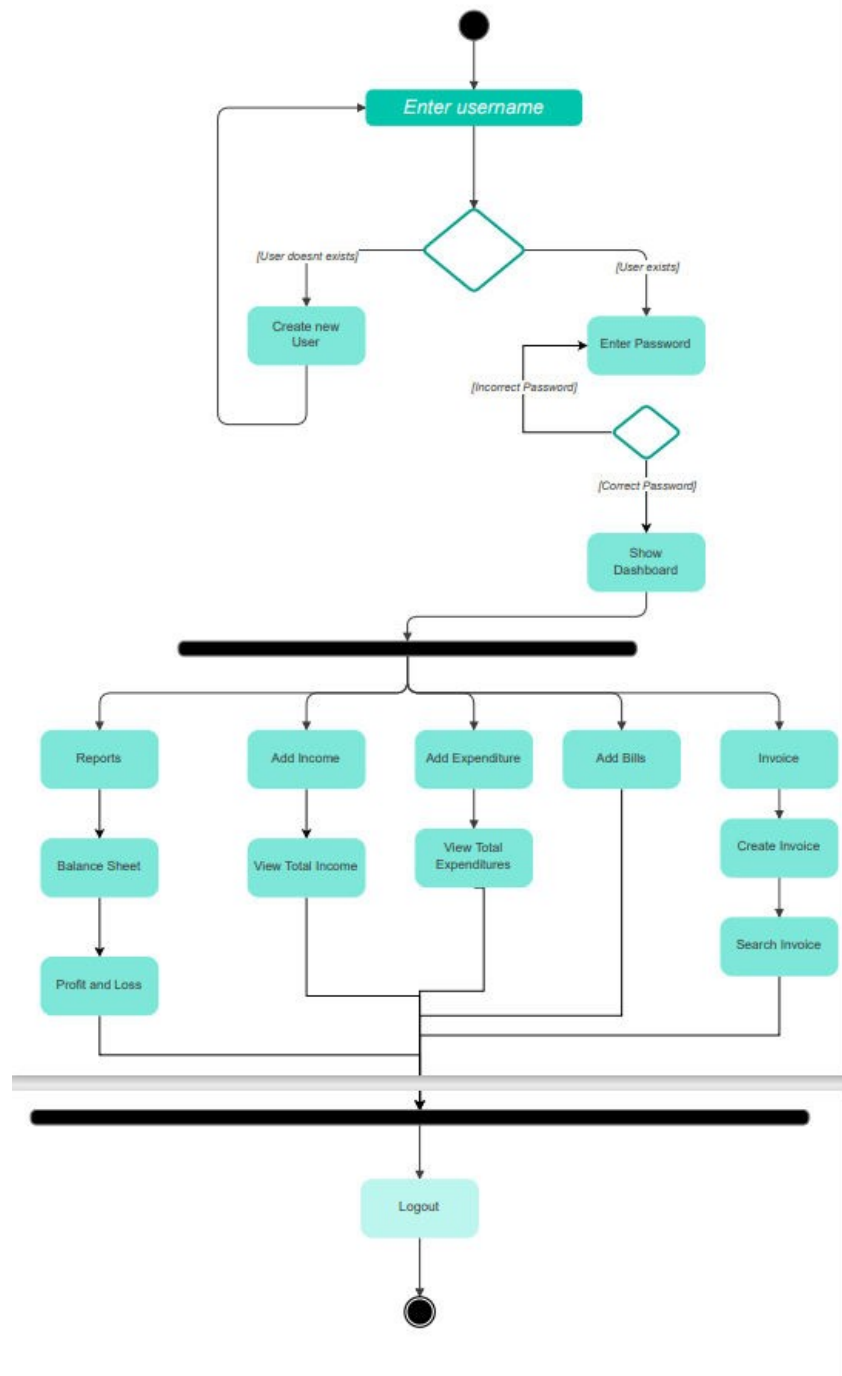
1.5   **References**

https://www.codeinwp.com/blog/best-accounting-software-for-small-business/
https://zyro.com/blog/best-accounting-software/

2. **Overall Description**

2.1 **Product Perspective**

This project helps small business owners to record monthly, weekly, and yearly expenses and incomes and filter them based on the date. The user can calculate profit or loss based on this.
The project maintains a customer database to get an overview of each customer .

2.2

Product Functions

Project has the following functions-
• Login page - To login to an existing account or to create a new account if the account doesn't exist.
• Record monthly/weekly/yearly expenses.and income and filter it based on the date
• Calculate profit or loss based on the income and expenses.
• Maintain a customers database and get an overview of each customer

2.3   User Classes and Characteristics

User Classes:- Small Business owners, Free-lancers, accountants, Individuals for personal use.

Characteristics:-

Small Business Owners: Record expenses and incomes, profit-loss calculations

Free-lancers: Record expenses and incomes, profit-loss calculations

Accountants: Record expenses and incomes, profit-loss calculations

Individuals: Record Expenses and incomes.

Most Important User Classes: Small Business owners and Free-lancers

2.4   Operating Environment

Any Operating Environment which can run Python files and has python tkinter module installed and has a MySql Server running.

2.5   User Documentation

The following documentation will be available for a reference regarding the use of the product: Problem Identification and Literature Survey, Workflow Graph, SRS file, Appropriate UML Diagrams, and Test case program.

3.   External Interface Requirements

3.1   User Interfaces

The system provides a sophisticated platform for the user to enter their account information as to log in to their account. If a user enters wrong account information i.e. wrong username or wrong password, an error will pop up showing that they entered the wrong information. If there is a new user who needs to register into the library and wishes to become a member, they can simply sign up. If a user does not remember their password, they can retrieve their password after answering a security question.

3.2   Hardware Interfaces

1. Monitor
2. Keypad
3. Mouse
4. A connection to the database

3.3   Software Interfaces

- A medium to run Python Code, eg. VisualStudio Code , PyCharm etc : To run the code and by linking libraries and connecting mysql database to python
- Python Tkinter library
- Mysql-server
- mysql.connector-python library

3.4   Communications Interfaces

TCP/IP connection for the mysql-server on localhost port 3306.
This connection was set up using MySQL Workbench.

4.   System Features

4.1   Add Income

4.1.1   Description and Priority

Let's the user add income. High Priority as it plays a crucial role in calculating the Profit and loss and in balance sheet.

4.1.2   Stimulus/Response Sequences

The user needs to click on the add income button to add income at the current timestamp. This is later used to calculate profit and loss.

4.1.3   Functional Requirements

REQ-1:   Amount incurred should be accepted from the user and stored in the database

REQ-2:   Description of the income should be stored

4.2   Add Expenses

4.2.1   Description and Priority

Let's the user add expenses. High Priority as it plays a crucial role in calculating the Profit and loss and in balance sheet.

4.2.2   Stimulus/Response Sequences

The user needs to click on the add expenses button to add the expense at the current timestamp. This is later used to calculate profit and loss.

4.2.3   Functional Requirements

REQ-1:   Amount incurred should be accepted from the user and stored in the database

REQ-2:   Description of the expense should be stored

4.3   Profit and Loss

4.2.1   Description and Priority

Calculates the Profit and Loss from the income and expense the user has added.

High Priority as it is one of the most important function in an accounting software.

4.2.2   Stimulus/Response Sequences

The user needs to enter the year of which he/she has to Calculate the PnL.

4.2.3   Functional Requirements

REQ-1:   Income of that Particular year has to be recorded (Add income feature)

REQ-2:   Expenses of that Particular year should be recorded (Add expense feature)

4.4   Balance Sheet

4.2.1   Description and Priority

Shows the current financial state of the organisation.

High Priority

4.2.2   Stimulus/Response Sequences

The user has to click on the Balance Sheet Button and It prints the assets, liabilities and Balance.

5.   Other Nonfunctional Requirements

5.1   Performance Requirements

- Increase customer Satisfaction
- Data backup so that if any of the data is deleted , recovery is possible
- Reduce Overall Cost

5.2   Safety Requirements

- Backup, recovery, and business continuity library should ensure adequate backup of data as it may be required by their operations.
- Both data and software should be backed up periodically.

5.3   Security Requirements

- The user will enter his information and can change it and the admin can check the author's profile he can make changes to the system.
- Authentication of the user before accessing the records.

5.4   Software Quality Attributes

The system shall be available to the user every day having some extended time and on-time response

5.5   Business Rules

The software is built for small businesses. All data input/output to/from the application belongs to the business itself.
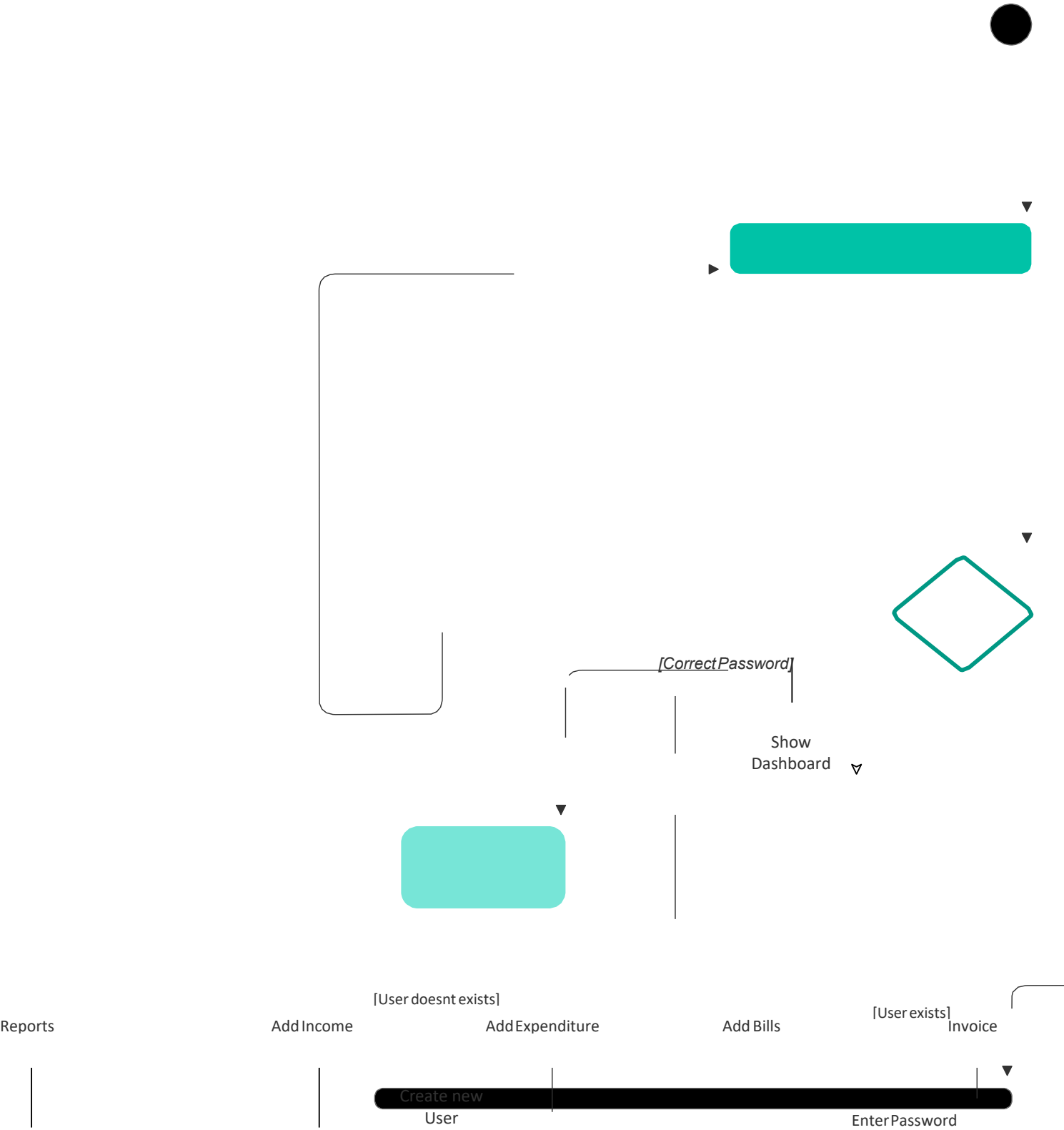
6.   Other Requirements

Appendix A: Glossary

- Accounting: the process of recording financial transactions pertaining to a business

- Software: a set of instructions, data or programs used to operate computers and execute specific tasks
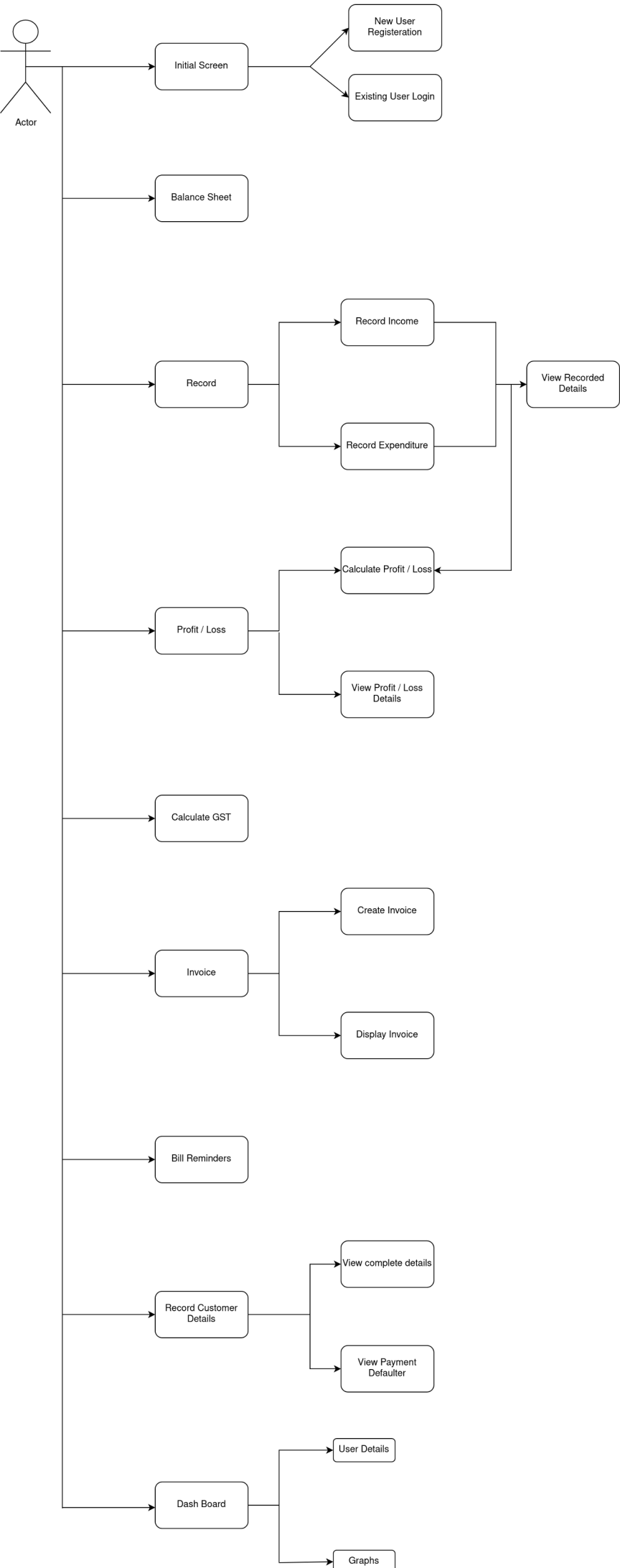- Transaction: an instance of buying or selling something

APPENDIX – B ANALYSIS MODELS

[Correct Password]

Show
Dashboard

[User doesnt exists]

| Reports | Add Income | Add Expenditure | Add Bills | [User exists] Invoice |

Create new
User

Enter Password

COMMUNICATION DIAGRAM

ankita

Login

1   *

1   *

user
user_id
userr_name

new_registration
ner user id

A   e rt

Test ID	Test Case	Expected Result
1	Empty Fields	No Field should be empty
2	Length of contact number	Length of contact number should be equal to ten
3	Password	New password and Confirm Password should be sam
4	Username	Username should be unique
5	Login Username	Login Username should be found in the Database
6	Login Password	Login Password should be found in the Database

ADVANTAGES :

- Less late payments
- More accurate calculations

  Calculations are much faster and more accurate as they are done by the system.
- More efficient

  Less Paperwork, Fewer Tax Frauds, Fewer Discrepancies in data, faster operations.

DISADVANTAGES :

- Manual invoice generation can lead to discrepancies
- Cybercrimes like hacking etc.

  Since the operations take place online, there are high chances of cybercrimes like hacking, etc can take place
- Data Security issues

  You can lose your data if there's an accident. And Data stored is not completely secured as the software development company might have access to the database.

CONSTRAINTS :

- Cost-benefit principle

  According to this principle, the cost of applying an accounting principle should not be more than its benefits. If the cost is more, this principle should be modified.

- Materiality Princiiple

  According to the materiality principle, all relatively relevant items, the knowledge of which might influence the decision of the users of the financial statements, should be disclosed in the financial statements.

- Consistency Principle

  According to this principle, whatever accounting practices (whether logical or not) are selected for a given category of transactions, they should be followed on a horizontal, basis from one accounting period to another to achieve compatibility

- Conservatism Principle

The principle of conservatism requires that in the situation of uncertainty and doubt, the business transactions should be recorded in such a manner that the profits and assets are not overstated.

- Timeliness Principle

According to this principle, timely information (though less reliable) should be made available to the decision-makers.

FUTURE SCOPE OF ACCOUNTING SOFTWARE:

For small businesses, accounting software is the best way to gain a competitive edge against large business organizations. Both large and small businesses stand to benefit from the use of accounting software as it precisely captures every transaction. It provides better oversight over how the businesses run.

- High Demand for security might lead to the possibility of Cloud Accounting Software. This makes it possible to handle and manage data from anywhere, at any time using any device.
- Accounting Software could be integrated with other software to provide flexibility and include more functionalities
- Artificial Intelligence-based features could be added to enhance the efficiency and reduce redundancy in accounting software

USER MANUAL :

This Software Allows the user to Login/Create Account and Record Income, Expenses , and Calculate Profit/ losses and view Balance Sheet .

- Prerequisites :

1. Download the accounts.sql file and run it on MySQL Workbench
2. Open the main.py file on any of the IDEs and make sure the mysql.connector-python installed in your system along with matplotlib
3. Run the main.py file