A
PROJECT ON

“Restaurant Billing System”

SUBMITTED TO
SAVITRIBAI PHULE PUNE UNIVERSITY

UNDER THE GUIDANCE OF
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SUBMITTED BY
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MAHARASHTRA EDUCATION SOCIETY’S GARWARE COLLEGE OF COMMERCE
KARVE ROAD, PUNE- 411004

2021 - 2022

Maharashtra Education Society's

GARWARE COLLEGE OF COMMERCE

Karve Road, Deccan Gymkhana, Pune - 411004

CERTIFICATE

This is to certify that **MR. Avinash Kumar** has successfully completed the Project entitled "Restaurant Billing System" and has submitted the same to the satisfaction during the academic year 2021 – 2022 towards partial fulfilment of the degree 'Bachelor of Business Administration - Computer Application' of Savitribai Phule University of Pune.

(PROJECT GUIDE) (BBA-CA IN CHARGE) (PRINCIPAL)

(INTERNAL EXAMINER) (EXTERNAL EXAMINER)

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ACKNOWLEDGEMENT

A successful project is the result of a good team-work which consists of not only the partners who put in their long and hard work but also those who guided them. Indeed, a true saying.

I would like to express my sincere and deep gratitude to my internal project guide **Mrs. Priyanka Jain** for her valuable guidance and suggestions.

I am also thankful to all the faculty members who supported me throughout the completion of my Project.

Last but not least, we express our gratitude to the almighty, without whose blessing nothing is possible.

SYNOPSIS

1. Tours Project Title :	Restaurant Billing System
2. Name of Group Member	Avinash Kumar
3. Technology	Front End: XML BackEnd: PYQT5 Database: PostgreSQL
4. Objective/Aim	• *The objective of making the resturent billing system is to make the process of ordering and billing of food orders is done easily.* • *The wastage of the food is can be reduced based on the reports from the sales system.* • *The wait time of the user for ordering and billing of the orders is can be reduced.* • *The system covers following areas :* *i) Admin login* *ii) Food stock management* *iii) User management* *iv) Orders* *v) Bill generation*

5. Introduction	*R*esturent Billing system is a PYQT5 based system whose objective is to provide a user friendly interface to admins to take orders and generate bill for the same.
6. Scope	• *By using this software, the admin at the billing counter will be able to monitor the food that is available.* • *The orders will be generated with the bill at the same time.* • *The timely reports on the sales will be generated.* • *The user interface is system native, meaning it will look like it is from the same of on which it is used on.* • *The software is cross platform ie., can be used on any desktop operating system like Linux, Windows, macOS, FreeBSD, Android etc.* • *The user interface is simple to use without any distractions.*
7. Modules	*1) Admin Login* *2) Food Management* *3) Customer management* *4) Bill generation*
8. Licensing	PYQT5 is based on GNU Public License v3 making this project to be opensource. Commercial license is can be purchased for making the source code proprietary.

ABSTRACT

The Restaurant billing system is a stand-alone based application and maintains a centralized repository of all related information. The objective of this project is to develop a system that automates the processes and activities of Restaurant billing. The purpose is to design a system using which one can perform all operations related to Billing of a Restaurant.

INTRODUCTION TO SYSTEM

- Admin enter his user id and password for login to enter master module screen.
- Admin can maintain food stocks.
- Admin can manage Customers.
- Administrator will generate order and it’s bill.
- Administrator giving information to generate various kinds of MIS reports.

EXISTING SYSTEM

- A Customer has to approach the restaurant and order food.
- Finally pay payment and collect receipt.
- Difficult to maintain the customer details of orders and payment receipt in register.
- They register billing information manually.
- Billing of the orders is time consuming and long.
- All work is done manually.

PROPOSED SYSTEM

- To create stand-alone application for our organization.
- To generate different types of report.
- To provide the food ordering facility for Customer.
- To provide bill and order details.
- Services provided by system
    - Food ordering.
    - Bill generation.

OBJECTIVE

- Main objective of this system is to provide customer with the information about the food that is available at the restaurant and getting the order from the customer.
- Providing the customer with the ordering and billing in least time as possible.
- Cross platform application that can do the restaurant billing efficiently.

SCOPE

- Restaurant management system is a software that is developed for any restaurant, that requires the software for order taking, billing and report generation.
- The information for the item should be readily available and should be manageable as needed

ANALYSIS

Fact Finding Technique:

In order to find facts about the system, we first searched online to gather up as much detail as we could on existing systems.

Feasibility Study:

An important outcome of preliminary investigation in the determination that the system requested is feasible or not.

Operational Feasibility:

The system will be developed according to the restaurant needs and will have all the specification demanded by the company.

Economic Feasibility:

Since the system is window based and developed on Visual Basic. The system configuration is also minimal. Thus the investment required is very less.

Technical Feasibility Study:

The software is developed Intel processor which is commonly available in the market that can be used to implement the system. The hardware and software requirement are minimal and no specification or special training is required as the user is already familiar with the system. The memory requirements of the system are in kilobytes and the system can be kept on Pendrive. The size of the database can be depending on the use of the user.

HARDWARE AND SOFTWARE REQUIREMENT

▪ Minimum Hardware Requirements:-

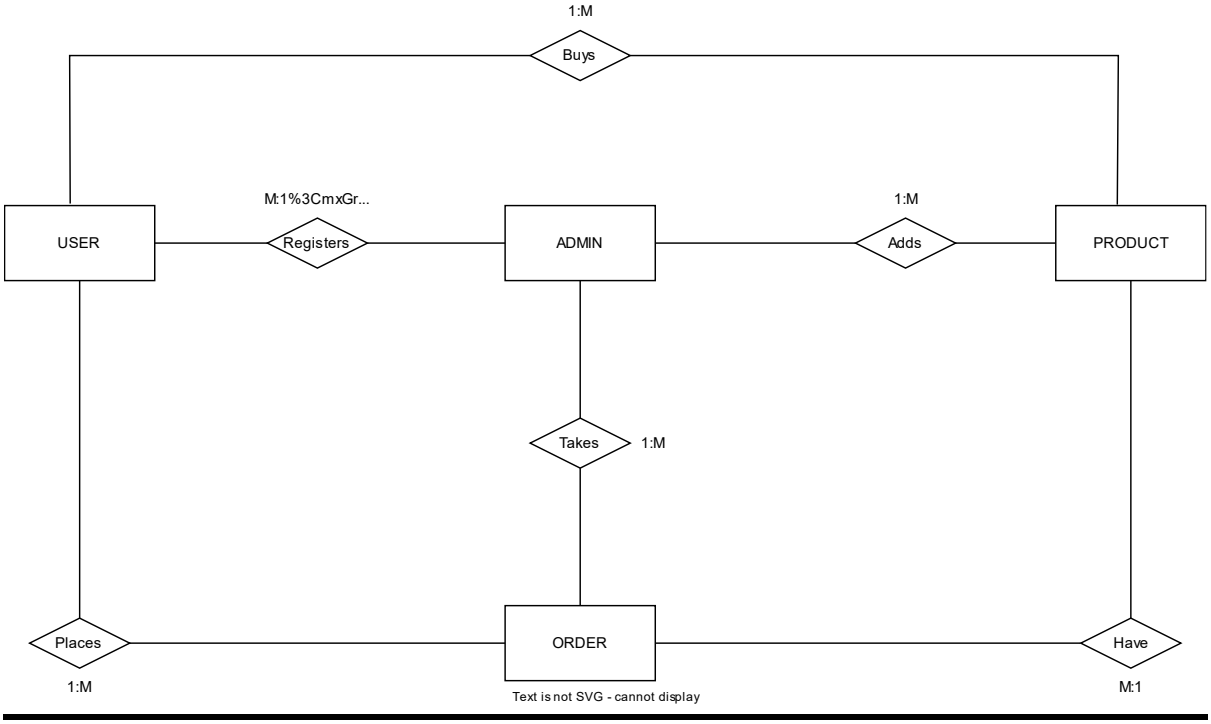
1. Processor – Pentium 4 1ghz
2. Memory- 512mb RAM Or More
3. HDD- 10 GB Or More
4. Additional Devices- Printer

▪ Minimum Software Requirements:-

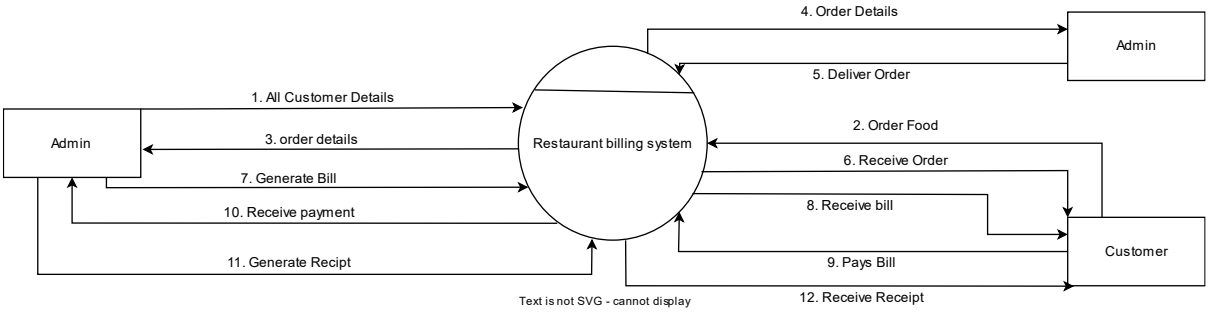
1. OS- Any of (Windows, GNU/Linux, FreeBSD, macOS)
2. Front End- Python and Web Browser.
3. Back End- PYQT5 based on Python and Qt framework
4. Database- PostgreSQL

SYSTEM DESIGEN

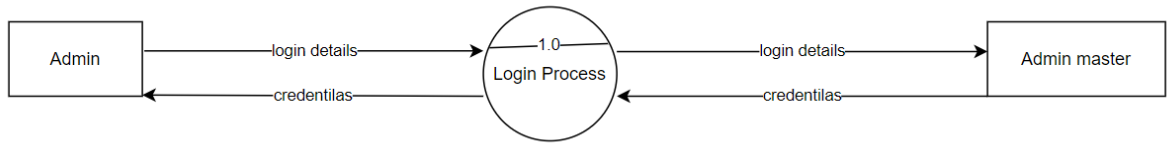
ENTITY RELATIONSHIP DIAGRAM

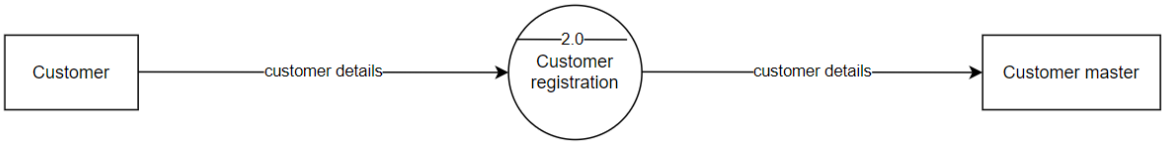


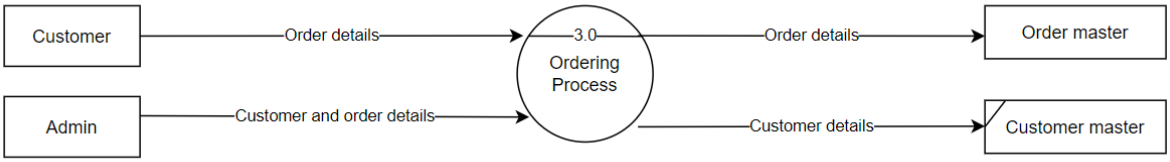
CONTEXT LEVEL DIAGRAM

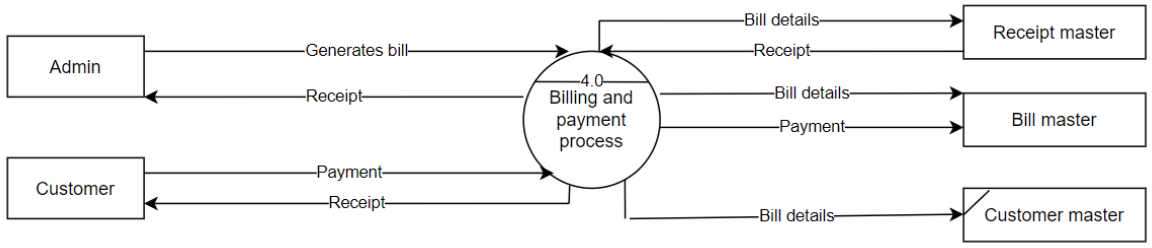


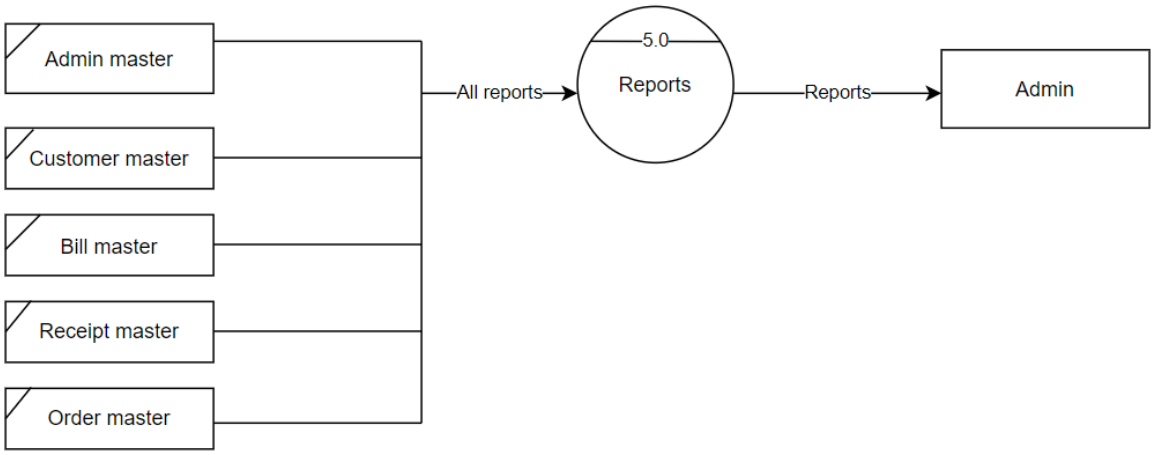
FIRST LEVEL DFD








Admin
Generates bill
Receipt
Customer
Payment
Receipt
4.0
Billing and payment process
Bill details
Receipt
Bill details
Payment
Bill details
Receipt master
Bill master
Customer master


Admin master
Customer master
Bill master
Receipt master
Order master
All reports
5.0
Reports
Reports
Admin

DATA DICTIONARY

1)Table List

```
PYQT=> \dt
        List of relations
 Schema | Name  | Type  | Owner
--------+-------+-------+-------
 public | admin | table | pyqt
 public | cust  | table | pyqt
 public | food  | table | pyqt
 public | ord   | table | pyqt
(4 rows)
```

2)Admin Table

```
PYQT=> \d admin
                    Table "public.admin"
  Column  |          Type          | Collation | Nullable | Default
----------+------------------------+-----------+----------+---------
 id       | integer                |           | not null |
 name     | character varying(15)  |           |          |
 l_name   | character varying(15)  |           |          |
 username | character varying(20)  |           |          |
 password | character varying(20)  |           |          |
Indexes:
    "admin_pkey" PRIMARY KEY, btree (id)
```

3)Customer Table

```
PYQT=> \d cust
                     Table "public.cust"
 Column |          Type          | Collation | Nullable | Default
--------+------------------------+-----------+----------+---------
 id     | integer                |           | not null |
 phone  | bigint                 |           |          |
 f_name | character varying(20)  |           |          |
 l_name | character varying(20)  |           |          |
Indexes:
    "cust_pkey" PRIMARY KEY, btree (id)
    "cust_phone_key" UNIQUE CONSTRAINT, btree (phone)
```

4)Food Item Table

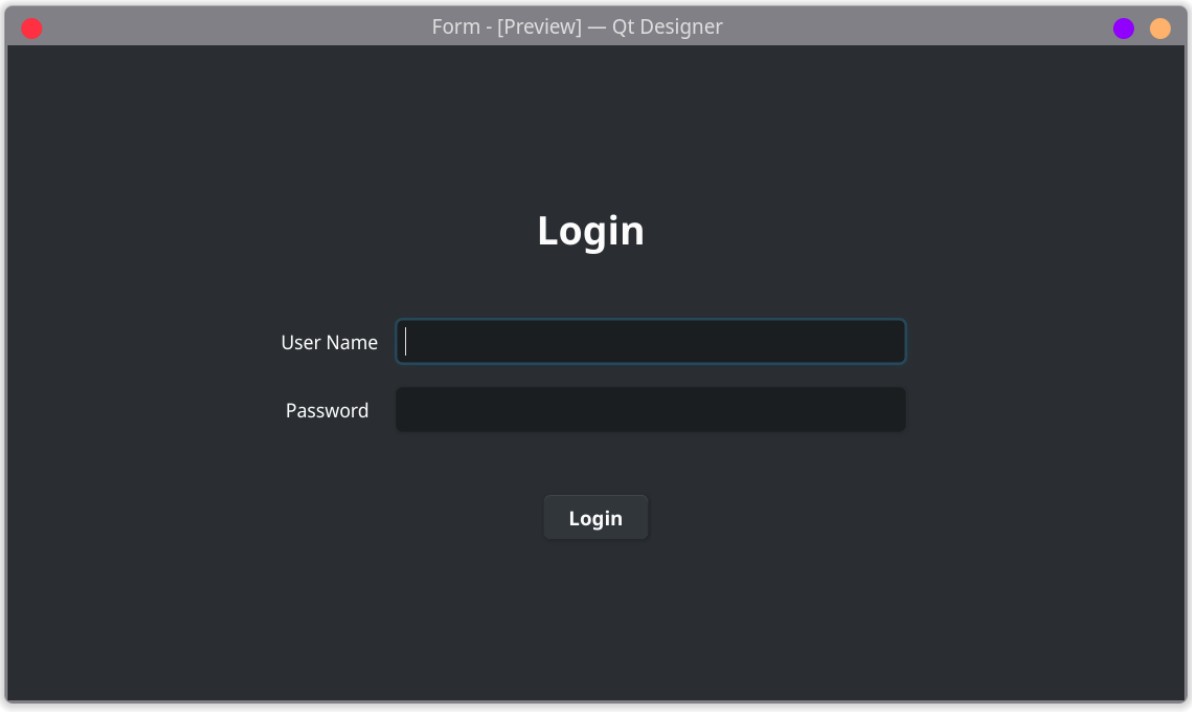
```
PYQT=> \d food
                    Table "public.food"
 Column |          Type          | Collation | Nullable | Default
--------+------------------------+-----------+----------+---------
 id     | integer                |           | not null |
 name   | character varying(40)  |           |          |
 about  | character varying(500) |           |          |
 price  | integer                |           |          |
Indexes:
    "food_pkey" PRIMARY KEY, btree (id)
```

5)Order Table

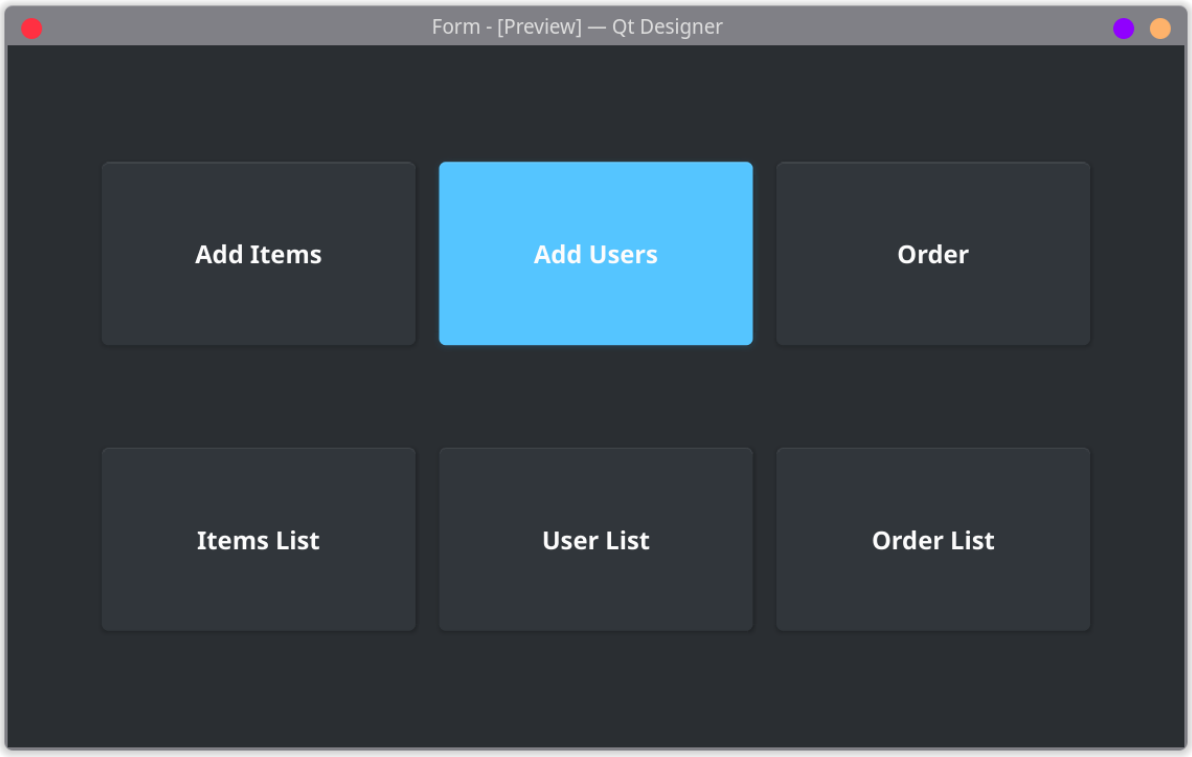
```
PYQT=> \d ord
                     Table "public.ord"
 Column |         Type          | Collation | Nullable | Default
--------+-----------------------+-----------+----------+---------
 id     | integer               |           | not null |
 total  | integer               |           |          |
 dt     | character varying(20) |           |          |
 ucust  | integer               |           | not null |
Indexes:
    "ord_pkey" PRIMARY KEY, btree (id)
```

FORM DESIGN

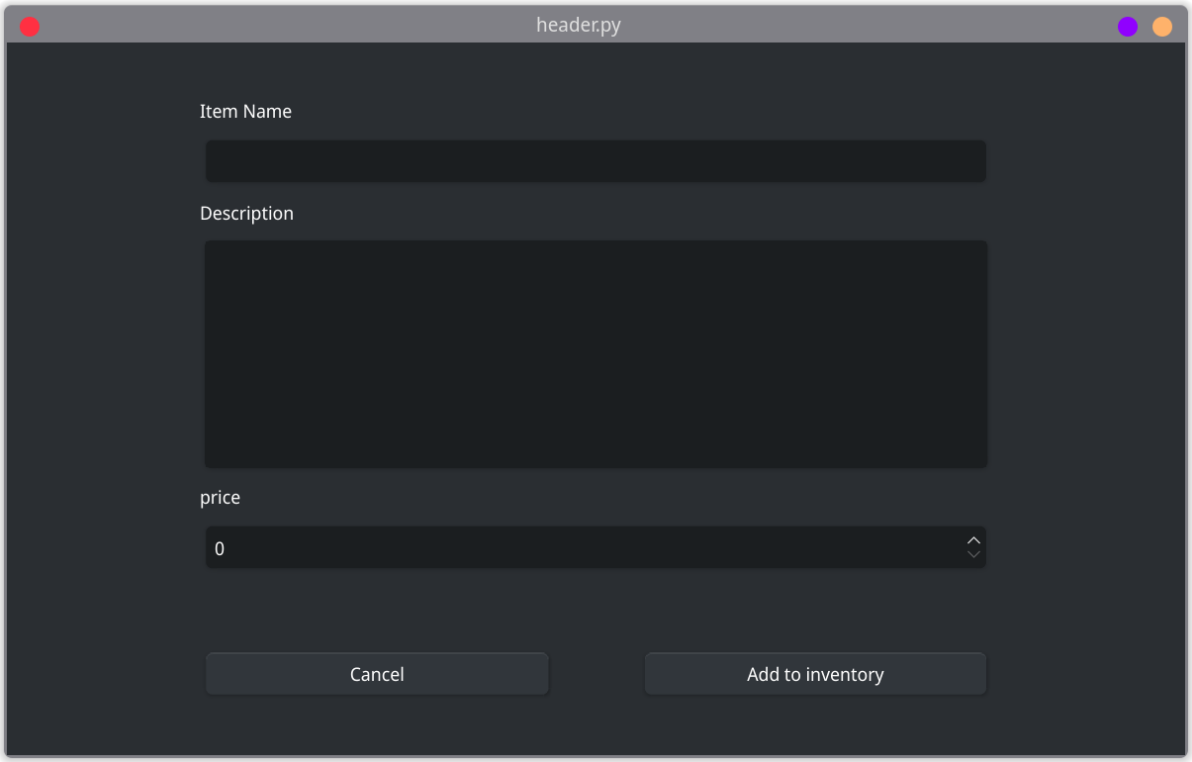
1)Login Form



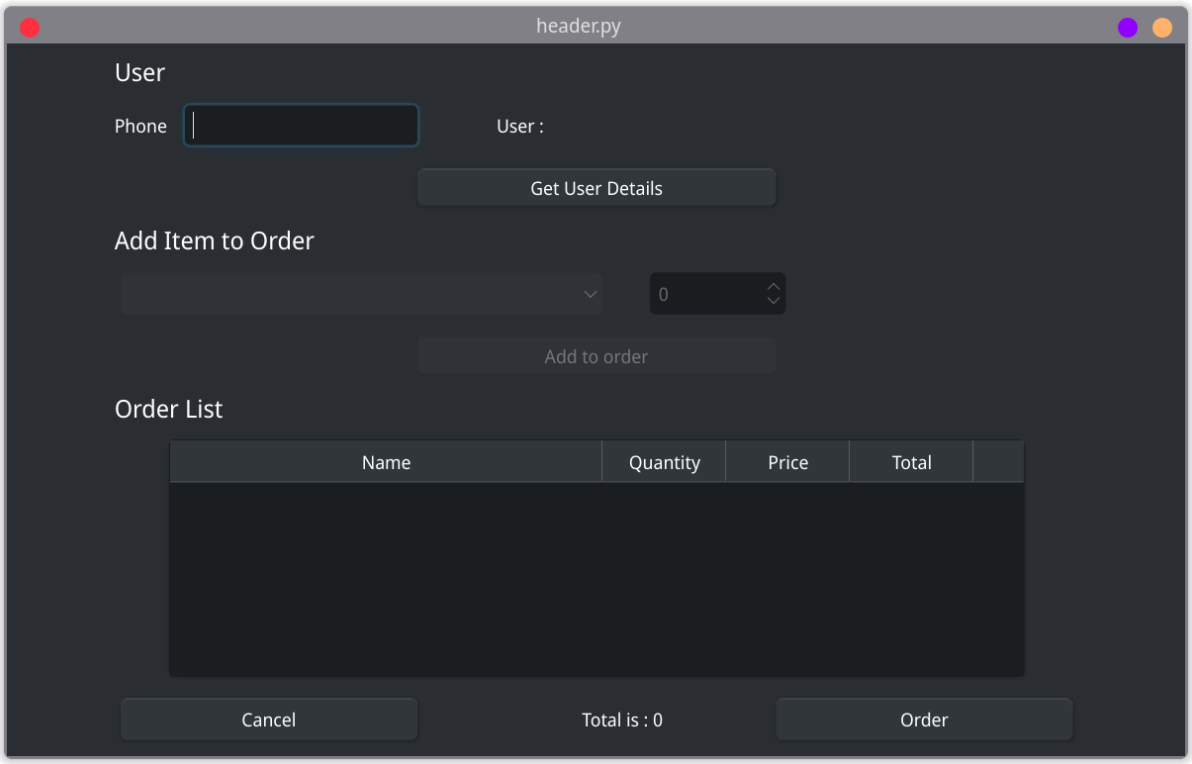
2) Home Page



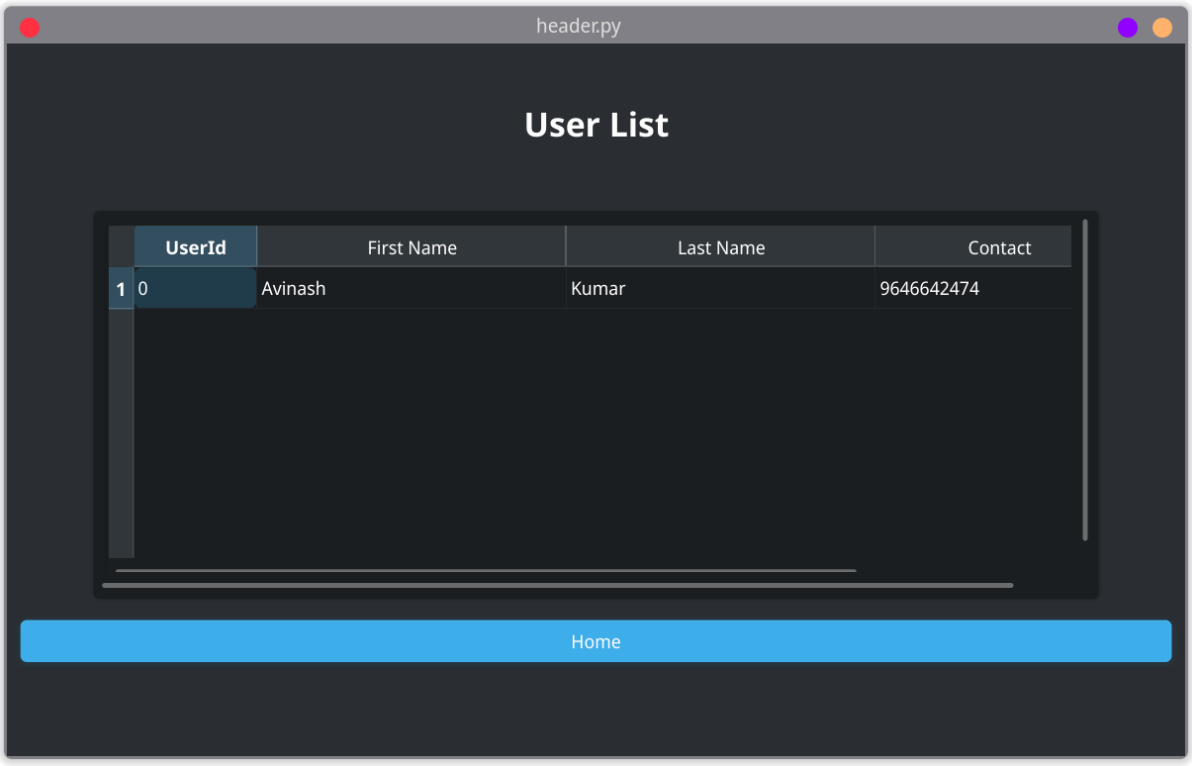
3)Add Item



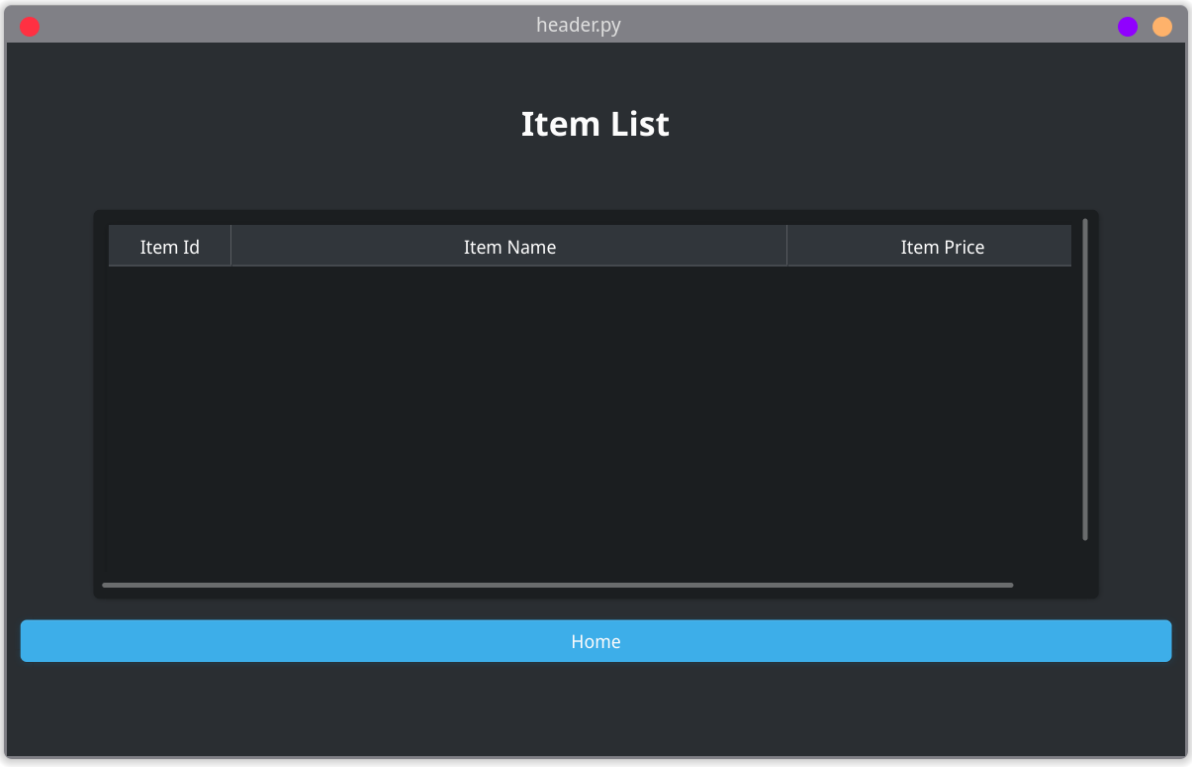
4)Order Page



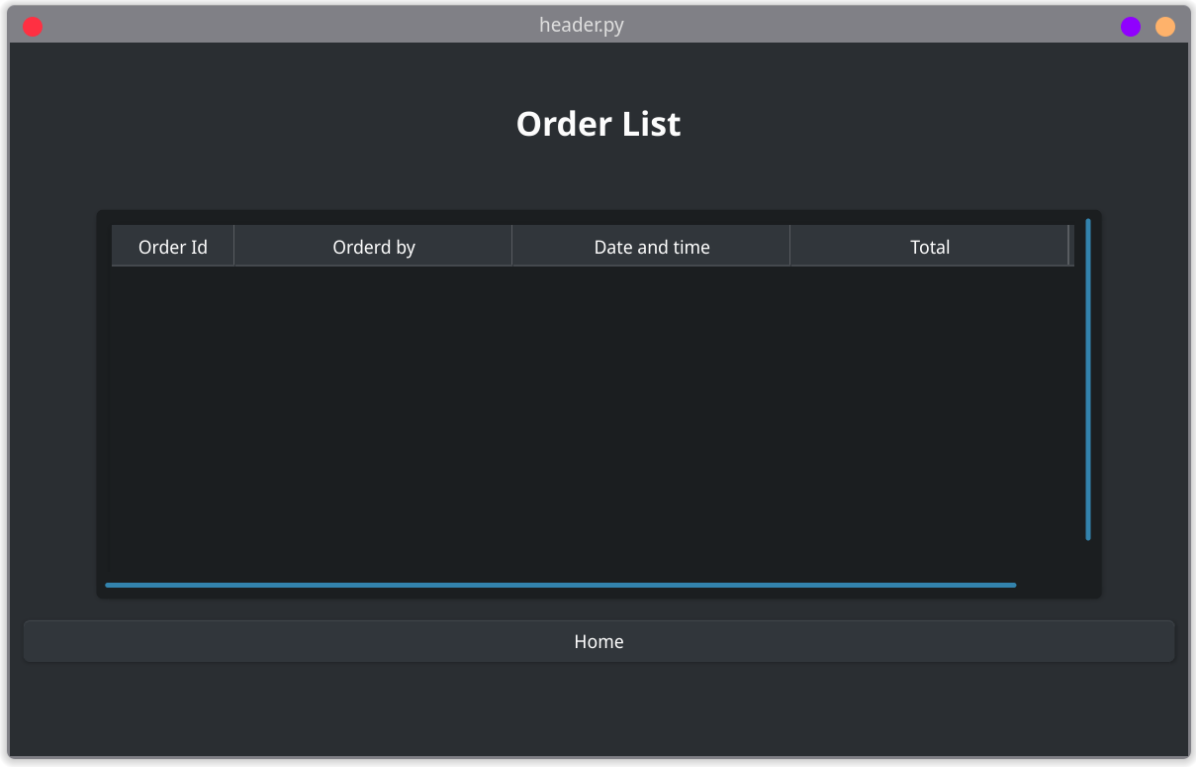
5)User List



6)Item List



7)Order List


header.py
Order List
Order Id
Orderd by
Date and time
Total
Home

REPORTS

1)Order Bill

Culture Pune

Ordered by : avinash Kumar

name	quant	price	total
Munchurial	8	60	480
Pizza	5	100	500
Pizza	2	100	200

The total of the bill is : 1180

Thank you visit again

LIMITATIONS

List of Limitations Which Is Available In Airport Management System:

- Deletion of the Food items, User and order is not possible
- Limited use of the system.
- Requires Login each time opening software.

FUTURE ENHANCEMENT

- Any agency can make use of it for saving customer details in database.
- This application can easily be implemented under various situation.
- We can add new features as and when we require.
- Reusability of this application is also possible.
- Token based Login system for password less login once logging in to the system.

CONCLUSION

After making this software we end up at a conclusion that this way of managing renting details of different modules is much easier...

Data access became simple. Speed increased, decrease in manpower, storage volume increased and more user-friendly…

No possibilities of data loss there…

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