A PROJECT REPORT ON

LPG Cylinders Distributor Software

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B.Tech CE Semester-VI Subject: OOSE

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CERTIFICATE

This is to certify that the practical / term work carried out in the subject of **OOSE** and recorded in. This journal is the bonafide work of

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CONTENTS

1. Abstract	t	4
2. Introduc	etion	5
2.1	Brief Introduction	5
2.2	Technology/Platform/Tools Used	5
3. Softwar	e Requirement Specifications	6-7
4. Design.		8
4.1	Use Case Diagrams	8
4.2	Class Diagrams	9
4.3	Sequence Diagrams	10
4.4	State Diagrams	10
4.5	Activity Diagrams	11
4.6	E-R Diagram	12
4.7	Data dictionary	13-14
5. Implem	entation Detail	15
5.1	Modules	15
5.2	Functional Prototypes	15
6. Testing		16-18
7. Screen-	shots	19-27
8. Conclus	sion	28
9. Limitat	ion and Future Extension	28
10. Bibliog	raphy	28

ABSTRACT

LPG cylinder has become a very essential part of today's human life culture. almost every house uses LPG for different purposes. Industrial use of LPG is also increasing day by day.

Still, LPG cylinder distributors don't have a proper system for their management. They use that pen and paper method, yet. From that problem, the idea clicks our mind about making a proper system for distributors.

Our system helps the distributor to manage the data of customers, transactions, stocks, bills and synchronization very effectively. A distributor can also book a cylinder and print the bill. Our system fulfils all requirements that a normal distributor wants nowadays.

- Developer Team (Devendrakumar & Smit)

INTODUCTION

LPG Distribution System is a windows application which developed especially for LPG Distributors. The aim of making this application is to decrease the burden of distributors who still work with data using a pen and paper system.

A distributor can manage Customer Details, Transactions, Bookings, Stocks, Reports and synchronization too. Our system provides facility to a distributor for generating bills in PDF format and making reports in Excel format. Every day at a given specific time distributor can synchronize the managed data with the global database. This process hardly completed within 2 minutes.

Tools/Technologies Used

Technologies: Entity Framework,

WCF Service, Windows Forms, ITextSharp,

MicrosoftOfficeInteropExcel,

SQL Server Database

Tools: Visual Studio 2019,

SQL Server Management Studio 2018,

Browser

Platform: Windows

- Developer Team (Devendrakumar & Smit)

SOFTWARE REQUIREMENT SPECIFICATION for

LPG CYLINDERS DISTRIBUTOR SOFTWARE

R1. User Login:

Description: User Can Login into System using correct credentials

Input: Username and Password.

Output: Home window if Credentials is correct otherwise error message.

R2. Customer Management:

Description: Using this Functionality distributor user can create new customer, remove customer, change customer details.

R2.1 Create Customer

Input: Customer Details like name, Aadhaar number, address, contact number, type of connection.

Output: Success Message "Customer created Successfully".

R2.2 Change Customer Details

Input: Customer Details for change.

Output: Success Message "Customer details updated Successfully".

R2.3 Remove Customer

Input: Customer ID or Name

Output: Success Message "Customer removed Successfully".

R2.4 Customer Details

Description: Distributor user can search customer by connection type, date, village, and view customer details.

Input: Required data to search records. *Output:* List of Customers as per Input.

R2.5 Transfer Customer

Description: Distributor user can transfer customers from his agency to another agency.

Input: Selection of records and destination agency name

Output: Success Message "Transfer of Customers is Successfully done".

R3. Stock Management:

Description: Distributor user can add, view stock and can set price for cylinders, stoves and regulators.

R3.1 Add Stock

R3.1.1 Add Cylinders

Input: Numbers of various types of cylinders

Output: Success message

R3.1.2 Add Stoves and Regulators

Input: Numbers of various types of stoves and regulators

Output: Success message

R3.2 View Stock

Input: User selection

Output: Stock details of cylinders, stoves and regulators.

R3.3 Set Price

Description: Distributor user can set prices of cylinders, stoves and regulators.

Input: Prices of cylinders, stoves and regulators.

Output: Successful message

R4. Synchronization with Central Server:

Description: Distributor user can synchronize customer transactions, changes of and stock data within given time period for a day.

Input: User selection

Output: Success message

Process: Transfer Local data like customer transactions, changes of customers' details and stock data to

central server.

R5. Customer Transaction:

Description: Distributor user can book cylinders, print bill of cylinders, stoves and regulator.

R5.1 Book Cylinder

Input: User will search customer and select "Register Booking".

Output: Successful message

Process: record of this transaction is saved in record with unique transaction number.

R5.2 Print Bill of Cylinder

Input: Single or multiple records of cylinder refilling.

Output: Bill will be printed for selected records.

R5.3 Print Bill for Stoves and Regulator

Input: Distributor user will enter details like customer name, stove and regulator

quantity.

Output: Bill will be printed.

R6. Accounting:

Description: Distributor user can get details of sold and purchased cylinders, stoves and regulators for period entered by user. User can also generate pdf of those details.

R6.1 Summary Report

Input: User Selection.

Output: Summarized Report.

R6.2 Cylinder Report

Input: User Selection.

Output: Report of Cylinders.

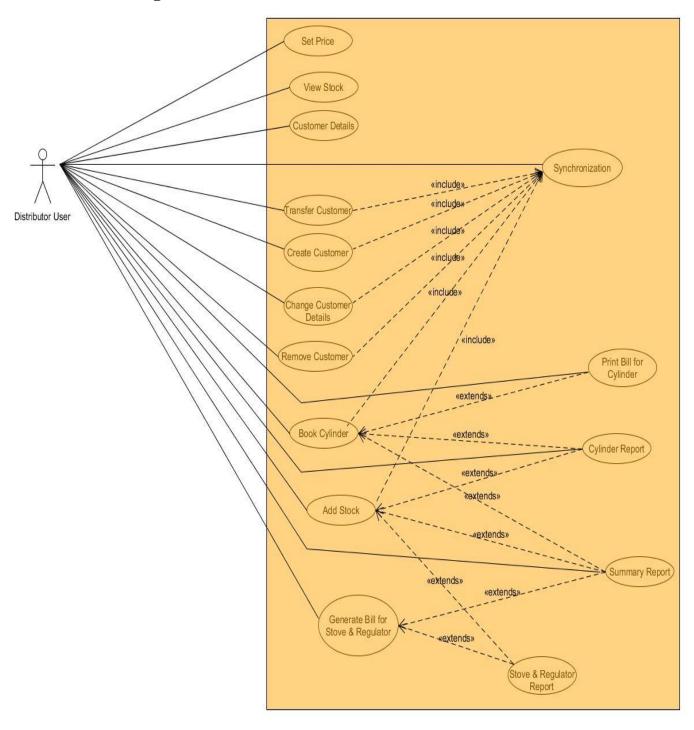
R6.3 Stove and Regulator Report

Input: User Selection.

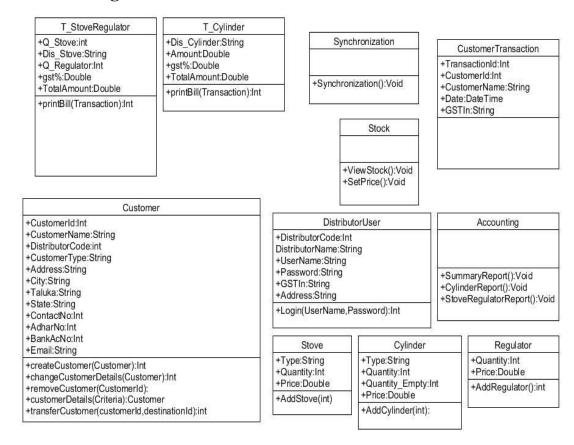
Output: Report of Stoves and Regulator.

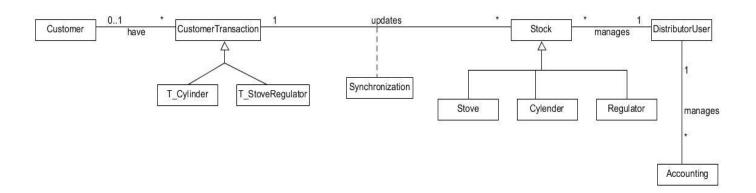
DESIGN

➤ Use Case Diagrams:

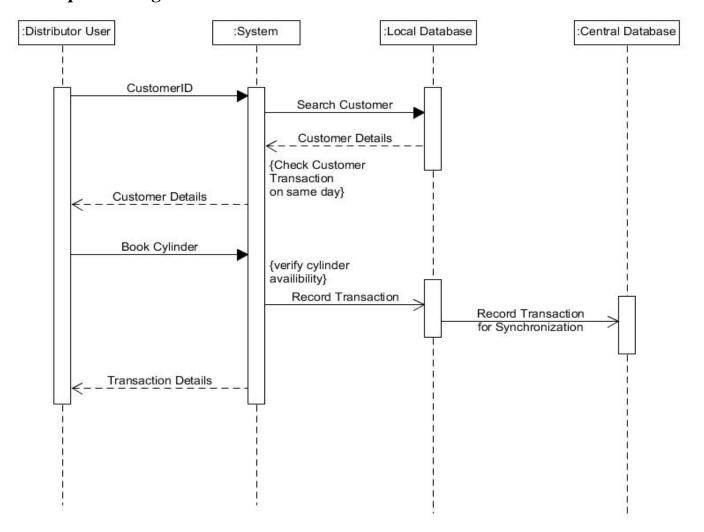


Class Diagrams:

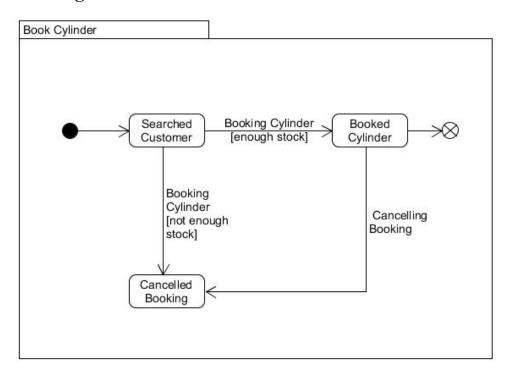




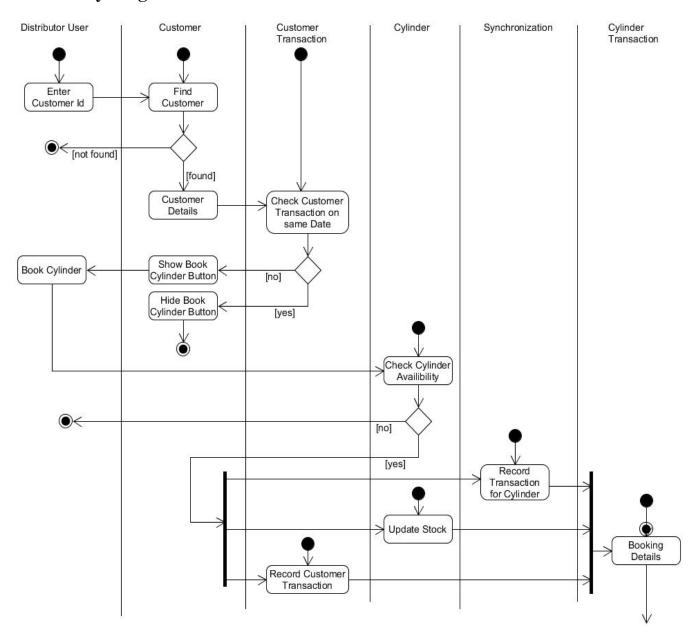
> Sequence Diagrams:



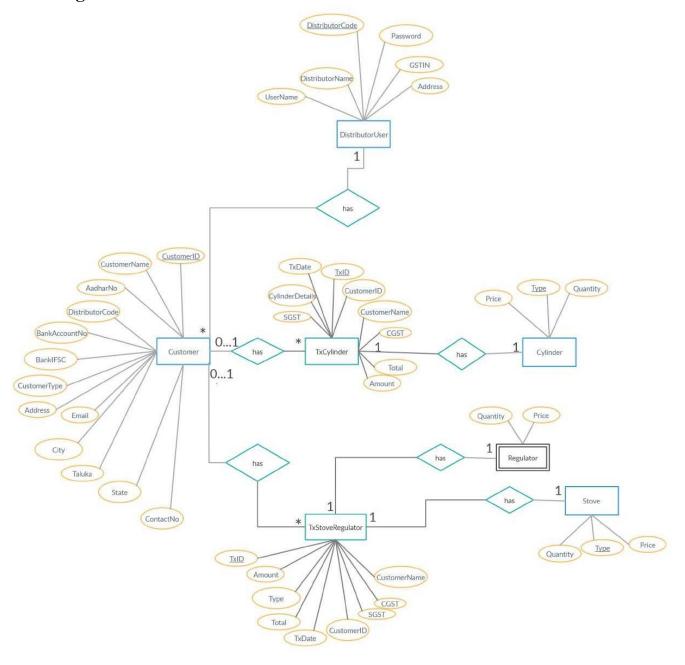
> State Diagrams:



> Activity Diagrams:



> E-R Diagram:



> Data Dictionary:

1

	Customer						
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table
1.	CustomerId	Int	10	Yes	Yes	PK	
2.	DistributorCode	Int	6	Yes		FK	DistributorUser
3.	CustomerName	Varchar2	30	Yes			
4.	CustomerType	Varchar2	10	Yes			
5.	Address	Varchar2	100	Yes			
6.	City	Varchar2	20	Yes			
7.	Taluka	Varchar2	20	Yes			
8.	State	Varchar2	20	Yes			
9.	ContactNo	Int	10				
10.	Email	Varchar2	50				
11.	AadharNo	Int	12	Yes	Yes		
12.	BankIFSC	Varchar2	15				
13.	BankAccountNo	Int	16		Yes		

2)

		D	istributo	orUser			
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table
1.	DistributorCode	Varchar2	6	Yes	Yes	PK	
2.	DistributorName	varchar2	30	Yes			
3.	Username	Varchar2	12	Yes			
4.	Password	Varchar2	12	Yes			
5.	GSTIN	Varchar2		Yes	Yes		
6.	Address	Varchar2	100	Yes			

3)

			Cylin	nder			
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table
1.	Type	Varchar2	15	Yes	Yes	PK	
2.	Quantity	Int	5	Yes			
3.	Price	Double		Yes			

4)

			Sto	ve			
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table
1.	Type	Varchar2	15	Yes	Yes	PK	
2.	Quantity	Int	5	Yes			
3.	Price	Double		Yes			

<u>5)</u>

	TxCylinder						
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table
1.	TxId	Int	10	Yes	Yes	PK	
2.	CustomerId	Int	10	Yes		FK	Customer
3.	CustomerName	Varchar2	30	Yes			
4.	TxDate	DateTime		Yes	Yes		
5.	CylinderDetails	Varchar2	50	Yes		FK	Cylinder
6.	Amount	Double		Yes			
7.	CGST	Double		Yes			
8.	SGST	Double		Yes			
9.	Total	Double		Yes			

6)

	TxStoveRegulator						
Sr. No.	Field Name	Data Type	Width	Required	Unique	PK/FK	Referenced Table
1.	TxId	Int	10	Yes	Yes	PK	
2.	CustomerId	Int	10			FK	Customer
3.	CustomerName	Varchar2	30				
4.	TxDate	DateTime			Yes		
5.	Details	Varchar2	50	Yes		FK	Stove
6.	Amount	Double		Yes			
7.	CGST	Double		Yes			
8.	SGST	Double		Yes			
9.	Total	Double		Yes			

IMPLEMENTION DETAILS

> Modules:-

• Customer Management Module:

Distributor User can get list of all customers by Customer Register, add new customer, change customer details and remove customer by Close Connection.

Stock Management Module:

Distributor User can view existing stock and price, add new stock and set price of cylinder, stove and regulator.

Synchronization Module:

Distributor User can synchronize local data (stock and price of cylinders, customer details, customer transaction of cylinders) to central server.

• Customer Transaction Module:

Distributor User can book cylinder for a customer and print invoice. He/ She can generate invoice for sell of stove and cylinder.

• Accounting Module:

Distributor User can get records of transections for specific period in summary or in detail and can export in excel format.

➤ Major Functionalities:-

- Customer Register
- Add New Customer
- Change Customer Details
- Close Connection
- Set Price for Cylinder, Stove & Regulators
- View Stock
- Add Cylinder Stock
- Add Stove & Regulator Stock
- Synchronization
- Cylinder Booking
- Bill for Stove & Regulator
- Summary Report
- Cylinder Report
- Stove & Regulator Report

TESTING

EXECUTED	Passed	13	
	Failed	0	
	Total (Passed + Failed	()	13
Pending			0
In Process			0
Blocked			0
(Sub-Total) Total			13

> Black Box Testing of Individual Function :-

Function 1 :- Customer Register

Case 1: Can't connect to service or database

O|P: Error message will be displayed

Case 2: Connect to service and database

O|P: List of all existing customer

Function 2:- Add New Customer

Case 1: Can't connect to service or database

O|P: Error message will be displayed

Case 2: Connect to service and database

O|P: New customer will be added into database and customer number will be displayed.

Function 3:- Change Customer Details

Case 1: Can't connect to service or database

O|P: Error message will be displayed

Case 2: Connect to service and database

O|P: Customer details will be updated into database and successful message will be displayed.

Function 4:- Close Connection

Case 1: Can't connect to service or database

OP: Error message will be displayed

Case 2: Connect to service and database

O|P: Customer will be deleted and successful message will be displayed.

Function 5:- View Stock & Price

Case 1: Can't connect to service or database

O|P: Error message will be displayed

Case 2: Connect to service and database

O|P: Stock and price of cylinder, stoves and regulator will be displayed.

Function 6:- Set Price

Case 1: Can't connect to service or database

OP: Error message will be displayed

Case 2: Connect to service and database

O|P: Price of cylinder, stoves and regulator will be changed and successful message will be displayed.

Function 7 :- Add Stock

Case 1: Can't connect to service or database

O|P: Error message will be displayed

Case 2: Connect to service and database

O|P: Stock of cylinder, stoves and regulator will be updated and successful message will be displayed.

Function 8:- Synchronization

Case 1: Can't connect to service or database

O|P: Error message will be displayed

Case 2: Connect to service and database

O|P: Local data (stock and price of cylinders, customer details, customer transaction of cylinders) will be synchronized with central database, last synchronization date will be changed and successful message will be displayed.

Function 9 :- Cylinder Booking

Case 1: Can't connect to service or database

OP: Error message will be displayed

Case 2: Connect to service and database

O|P: Booking of cylinder for that customer will be done and invoice will be generated in pdf format.

Function 10:- Bill for Stove & Regulator

Case 1: Can't connect to service or database

OP: Error message will be displayed

Case 2: Connect to service and database

OP: Bill will be generated in pdf format and successful message will be displayed.

Function 11:- Summary Report

Case 1: Can't connect to service or database

O|P: Error message will be displayed

Case 2: Connect to service and database, if there is at least one record of given period.

OP: All record will be displayed of that period.

Case 3: Connect to service and database, if there is no record of given period.

O|P: Message will be displayed that "No Record Found".

Function 12:- Cylinder Report

Case 1: Can't connect to service or database

OP: Error message will be displayed

Case 2: Connect to service and database, if there is at least one record of given period.

O|P: All record will be displayed of that period.

Case 3: Connect to service and database, if there is no record of given period.

O|P: Message will be displayed that "No Record Found".

Function 13:- Stove & Regulator Report

Case 1: Can't connect to service or database

OP: Error message will be displayed

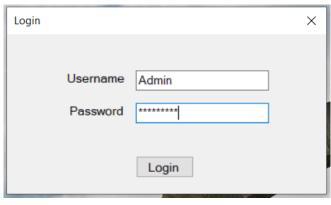
Case 2: Connect to service and database, if there is at least one record of given period.

O|P: All record will be displayed of that period.

Case 3: Connect to service and database, if there is no record of given period.

OP: Message will be displayed that "No Record Found".

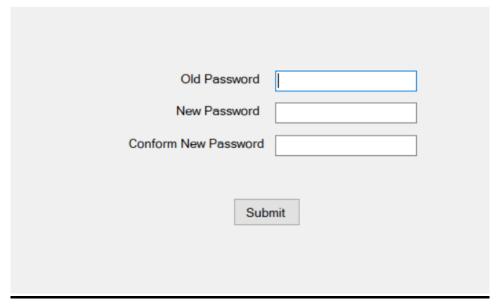
SCREEN-SHOTS

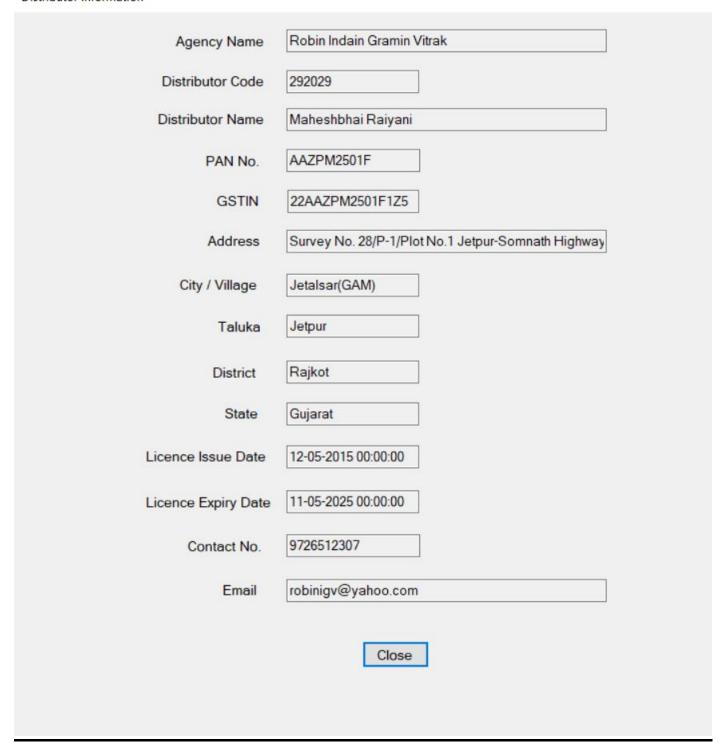


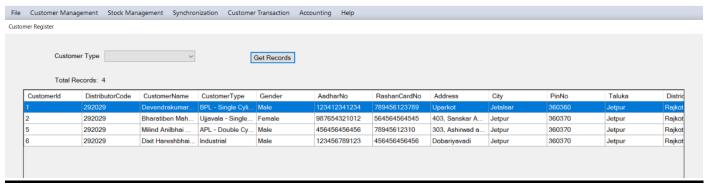




Change Password

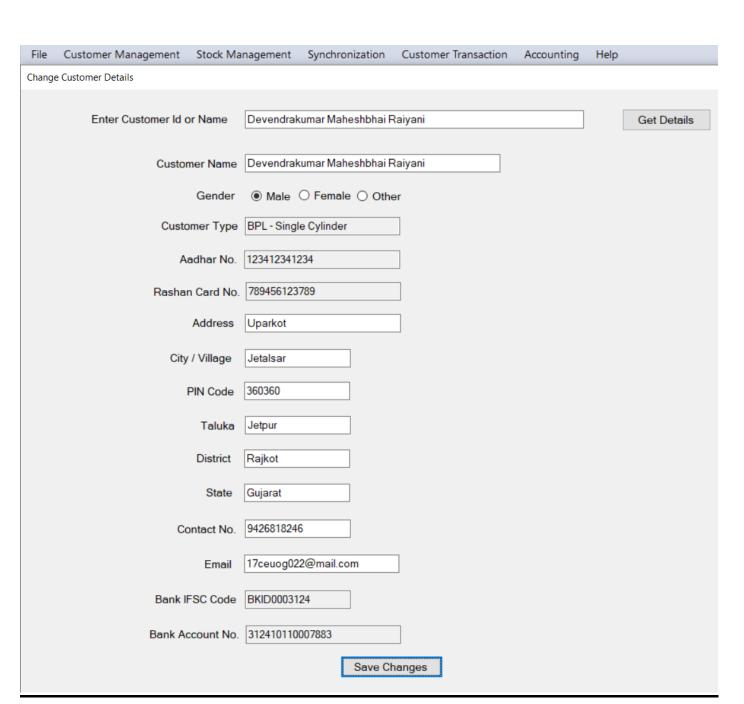


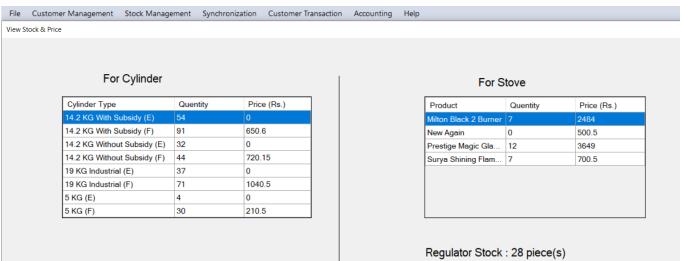




New Customer

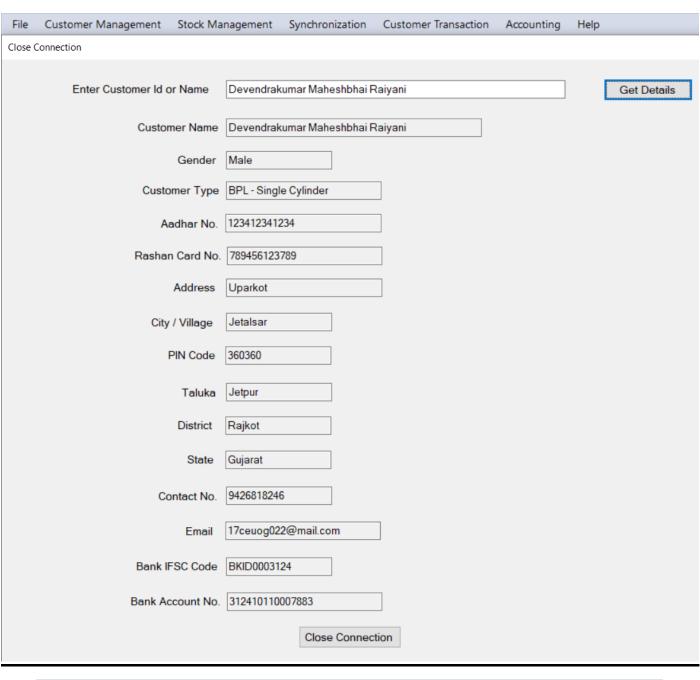
Customer Name* Middle Name* Last Name* Gender* Male Female Other Customer Type* Aadhar No.* Rashan Card No.* Address* City / Village * PIN Code* Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.	* fields are mendatory	
Customer Type* Aadhar No.* Rashan Card No.* Address* City / Village * PIN Code* Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.	Customer Name*	First Name*
Gender*		Middle Name*
Customer Type* Aadhar No.* Rashan Card No.* Address* City / Village * PIN Code* Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.		Last Name*
Aadhar No.* Rashan Card No.* Address* City / Village * PIN Code* Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.	Gender*	○ Male ○ Female ○ Other
Rashan Card No.* Address* City / Village * PIN Code* Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.	Customer Type*	V
Address* City / Village * PIN Code* Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.	Aadhar No.*	
City / Village * PIN Code* Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.	Rashan Card No.*	
PIN Code* Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.	Address*	
Taluka* District* State* Contact No. Email Bank IFSC Code Bank Account No.	City / Village *	
District* State* Contact No. Email Bank IFSC Code Bank Account No.	PIN Code*	
State* Contact No. Email Bank IFSC Code Bank Account No.	Taluka*	
Contact No. Email Bank IFSC Code Bank Account No.	District*	
Email Bank IFSC Code Bank Account No.	State*	
Bank IFSC Code Bank Account No.	Contact No.	
Bank Account No.	Email	
	Bank IFSC Code	
Submit Reset	Bank Account No.	
Tiooti Tiooti		Submit Reset
		Submit

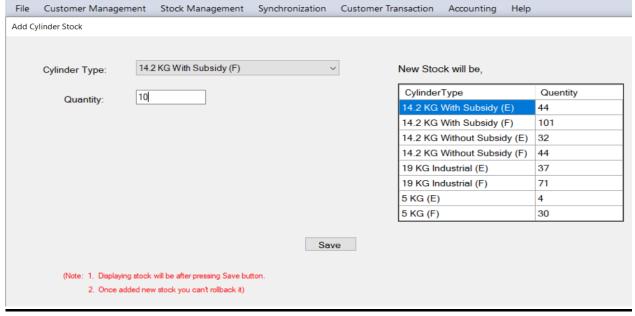


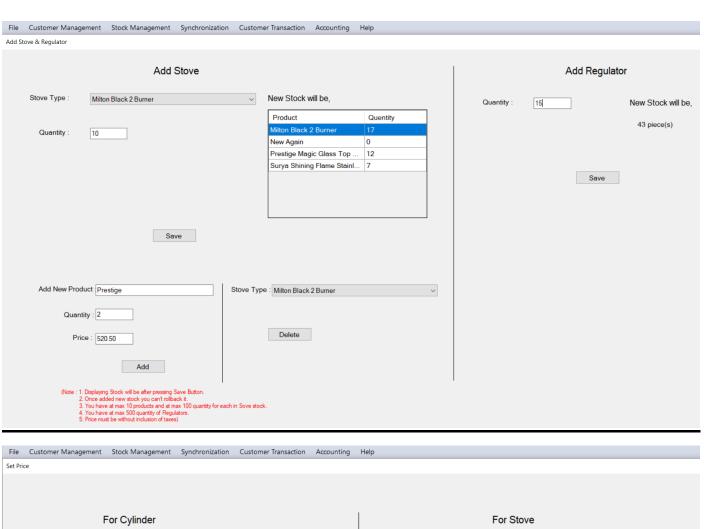


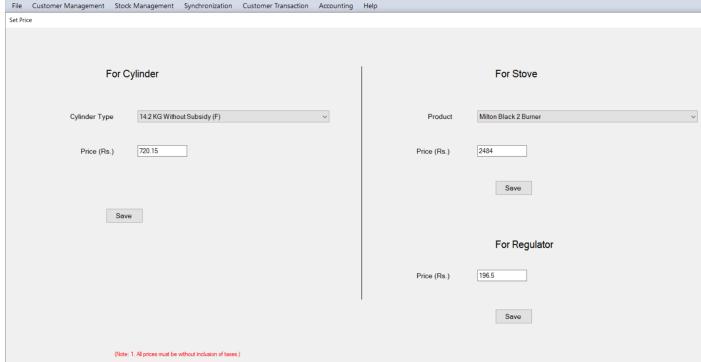
(Note: 1. All prices are without inclusion of taxes.)

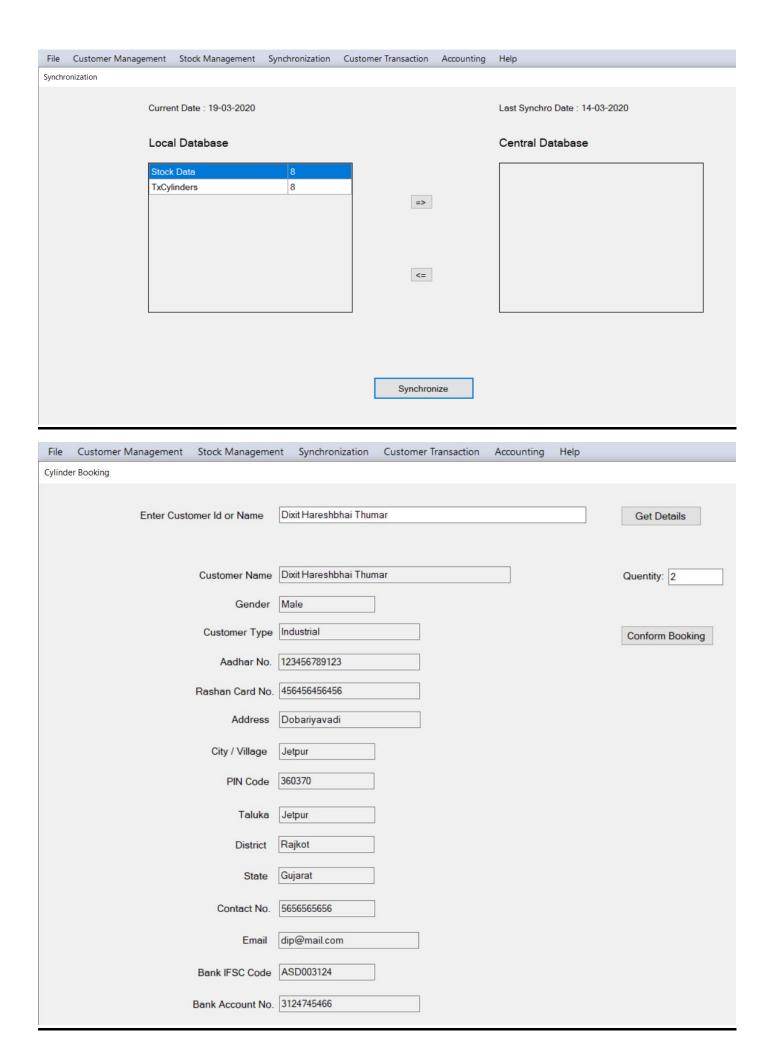
Regulator Price (Rs.): 196.5 Rs.

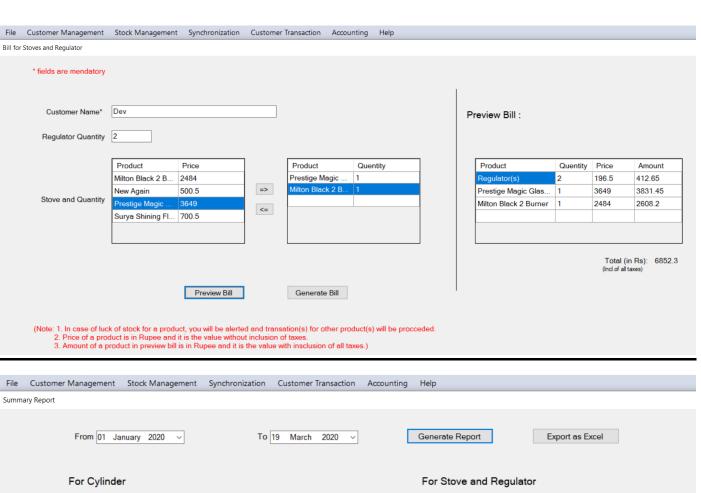


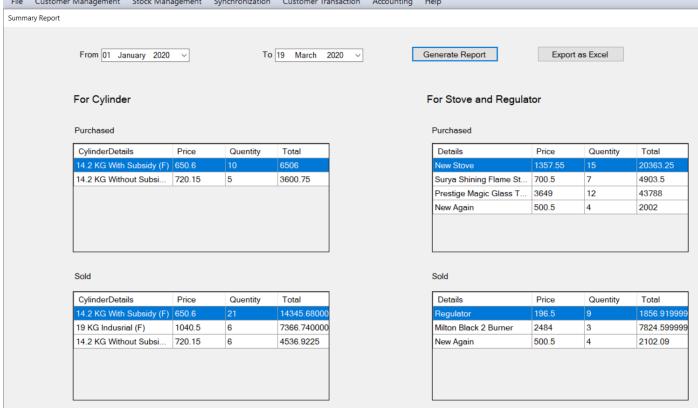


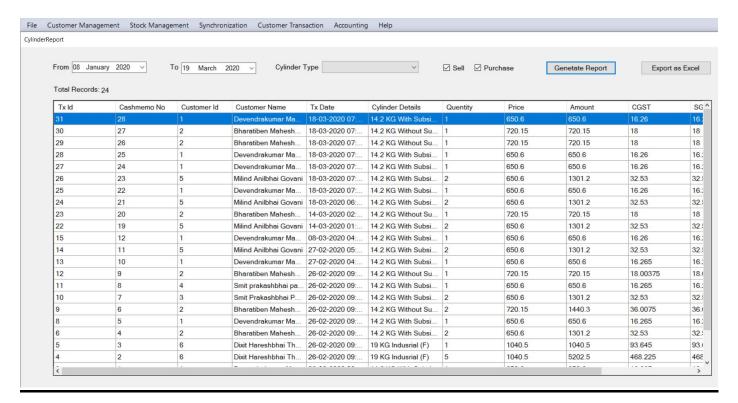


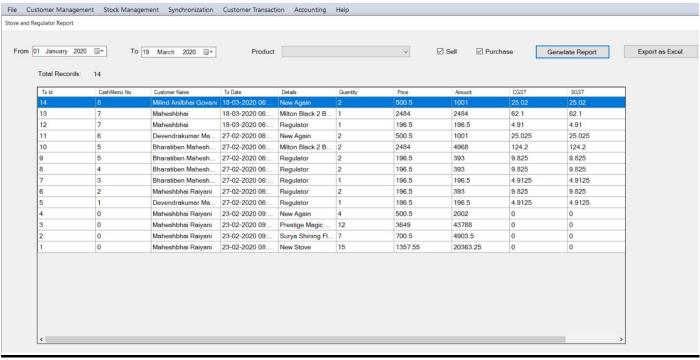












CONCLUSION

In this software, there is only one user that is Distributor User. Distributor User can add new customers, change existing customers' details, close connection, get list of all existing customers as a Customer Management. He/ She can add and view stock and set prices of cylinders, stoves and regulators as a Stock Management. He/ She can book cylinder and generate invoice for existing customers and generate invoice of stove and regulator for any customer as a Customer Transactions. He/ She can get summary report, cylinder report, stove and regulator report for a given specific period. He/ She can synchronize local database with central database to send day to day work to the higher officer.

LIMITATIONS

&

FUTURE EXTENSION

- Limitations:
 - Distributor can't generate bulk invoice
- Not Implemented Functionalities:
 - Customers of one agency can be transferred to another agency
- Future Extension:
 - Distributor can generate bulk invoice
 - Customers of one agency can be transferred to another agency

BIBLIOGRAPHY

To develop this project we have taken reference from following websites,

- StackOverflow https://stackoverflow.com/
- Microsoft Documentation https://docs.microsoft.com/
- C# Corner https://www.c-sharpcorner.com/
- YouTube playlist of kudvenkat- https://www.youtube.com/user/kudvenkat