A Project Report

on

TIFFIN MANAGEMENT

by

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Under the guidance of
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Accredited by NBA
UNIVERSITY OF PUNE
2020-2021

Sinhgad Technical Education Society,
Department of Information Technology
Smt. Kashibai Navale College of Engineering, Pune-41

Date:

CERTIFICATE

This is to certify that,

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of class T.E IT; have successfully completed their project work on **''Tiffin Management''** at Smt. Kashibai Navale College of Engineering, Pune in the partial fulfilment of the Graduate Degree course in T.E at the department of **Information Technology**, in the academic Year 2020-2021 Semester – I as prescribed by the University of Pune.

Prof. N. S. More
Guide

Prof. R. H. Borhade
Head of the Department
(Department of Information Technology)

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Acronyms

NB	NetBeans Apache 12.1
DBMS	Database Management System
JDK	Java Development Kit
SQL	Structured Query Language
GUI	Graphical User Interface
IDE	Integrated Development Environment

Abstract

The purpose of **TIFFIN MANAGEMENT** system is to automate the existing manual system by the help of computerized equipment and full fledged computer software fulfilling their requirements.
As a large workforce in India moves out of their homes for the purpose of employment, managing their daily meals becomes quite challenging for most of them. It is observed that most people prefer the tiffin service as many messes are available in their residential vicinity. Traditionally these messes have relied on registers/book entry systems for management of mess tiffin services of their clients. It becomes difficult for the mess owners to manage each customer's data.

We aim to implement a fully functional **TIFFIN MANAGEMENT** System which will be able to achieve the said purpose. The system can lead to error free, secure, reliable and fast management systems. With this project we aim to maintain customers and their orders as well as for the owners to manage and keep track of their tiffin. It thus decreases the tiresomeness of the job to a great extent. This software increases the efficiency of the operations performed in Tiffin Management.

This is designed to assist in strategic planning and help to ensure data validation and sanitation. This system can be used both by the mess customers as well as the owner. It implements various functionalities like customer management, food tiffin management.

Chapter 1

Introduction

1.1 Motivation

The main vision behind developing this project was that the people in our country who depend on mess services belong to different states and have different choices of food. They need tiffin at their destinations which need to be updated in real time if they are travelling to other parts of the city for a few days. Each customer has his/her own timing at which he/she prefers to have his/her tiffin delivered. In the case of paper-based systems, it is quite possible that customers‟ tiffin gets exchanged due to incorrect entry, and there is also possibility of loss of information due to damage/theft of pen-paper based data. Currently there is a requirement for creating a software, which can address local issues in this regard so that the mess tiffin services can be managed effectively and efficiently. We aim to implement a fully functional Tiffin Management System which will be able to achieve the said purpose. In this project we have created an entire workflow for managing the range of activities of the customers and the mess owner.

1.2 Problem statement

To develop a software for managing the operations of a Tiffin Restaurant.

This system includes the following:

1. Collection of customer information which includes his personal details.
2. Information of different types of tiffin, fees, delivery status and orders in the restaurant.
3. Billing different types of fees and charges from the customer and keeping a log of the income gained by the restaurant.
4. Management of tiffin and the customers. Keeping a log of the tiffin ordered by the customers.
5. Maintenance and updating of the tiffin, price and status of delivery from time to time.

1.3 Framework of proposed work in project

Currently this has been developed as a desktop application, we have implemented a role-based mess tiffin management system which efficiently manages the entire functionality of mess owner and customer. The owner can manage customers, customer’s orders and tiffins easily whereas the customer can register and order tiffins based on his/her personal preferences.

Administrators can login to the system and can create or update various tiffins, they can also see all the orders and change status accordingly or even delete orders. They also have functionality to see all the orders of a given user along with some statistics. Users can login or sign up,see every tiffin offered by the owners, place new orders and see the status of their orders. They can even choose to cancel an order and see their history of the orders.

The GUI for both administrator and customer would be developed in NB with Java Swing. The database will be maintained in MySQL. The communication between front end and database will be through JDBC Drivers and Java.Sql Library.

Chapter 2

Literature review

2.1 Introduction

The main vision behind developing this project was that the people in our country who depend on mess services belong to different states and have different choices of food. They need tiffin at their particular destinations which need to be updated in real time if they are travelling to other parts of the city for a few days. Each customer has his/her own timing at which he/she prefers to have his/her tiffin delivered. In case of paper based systems, it is quite possible that customers‟ tiffin gets exchanged due to incorrect entry, and there is also possibility of loss of information due to damage/theft of pen-paper based data. Update to the tiffin menu and tracking of the status of tiffin is quite impossible in an offline system. To overcome all such problems this project has done surveys of multiple messes, identified the problem areas as well as requirements and has developed a system model.

2.2 Existing methodologies

Following are the existing methodologies:

- Collection of customer information.
- The customer has to call to place an order, often repeating step 1.
- The administrator has to write down orders along with customer information.
- No way for customers to pay online.
- Customers have no option to check status or see previously ordered tiffins.

2.3 Proposed methodologies

Following are the proposed methodologies:

- Collection of customer information which includes his personal details and address and profile picture (optional).
- The customer needs to sign up only once, an account is created for efficient management .
- Admins are provided with a customer's information and current orders to manage and get insights to their business.
- The complex job of administrator will be reduced by automatic generation of orders, history and gain insights to customer orders and finance.

- Any modifications made by the administrator are consistently implemented throughout the application.

Chapter 3

Software requirement specifications

3.1 Software requirements

Following are the software requirements

- NetBeans Apache 12.1
- MySQL Workbench
- Microsoft® Windows® 10

3.2 Hardware requirements

Following are the hardware requirements

- Intel Pentium-based processor (Minimum 1.7GHz Pentium 4 Processor)
- Minimum 40GB HDD
- Minimum 256MB RAM
- Monitor
- Keyboard
- Mouse

Chapter 4

Assumptions

4.1 General Assumptions

Following are the general assumptions in the developed software:

- All the entries that are to be entered are less than the length which is already defined for each attribute and follow given validations
- The applications contains the following objects:
    - Tiffins
    - Orders
    - History
    - Status
- The following different types of users have been defined:
    - Administrator
    - Customers

4.2 Assumptions for Customers

The assumptions from the point of view of a visitor are as follows:

- Every customer is automatically allotted a Customer ID which is the primary key for the corresponding table. This Customer ID cannot be changed at any point by any user of the software.
- Customers can be of two types: New Customers who need to sign up and existing Customers who are already signed up.
- Customers can place orders from given tiffins and track the status.
- Customers have to pay a tax fee and tiffin price before placing orders.They can even cancel the orders after placing.

4.3 Assumptions for Admins

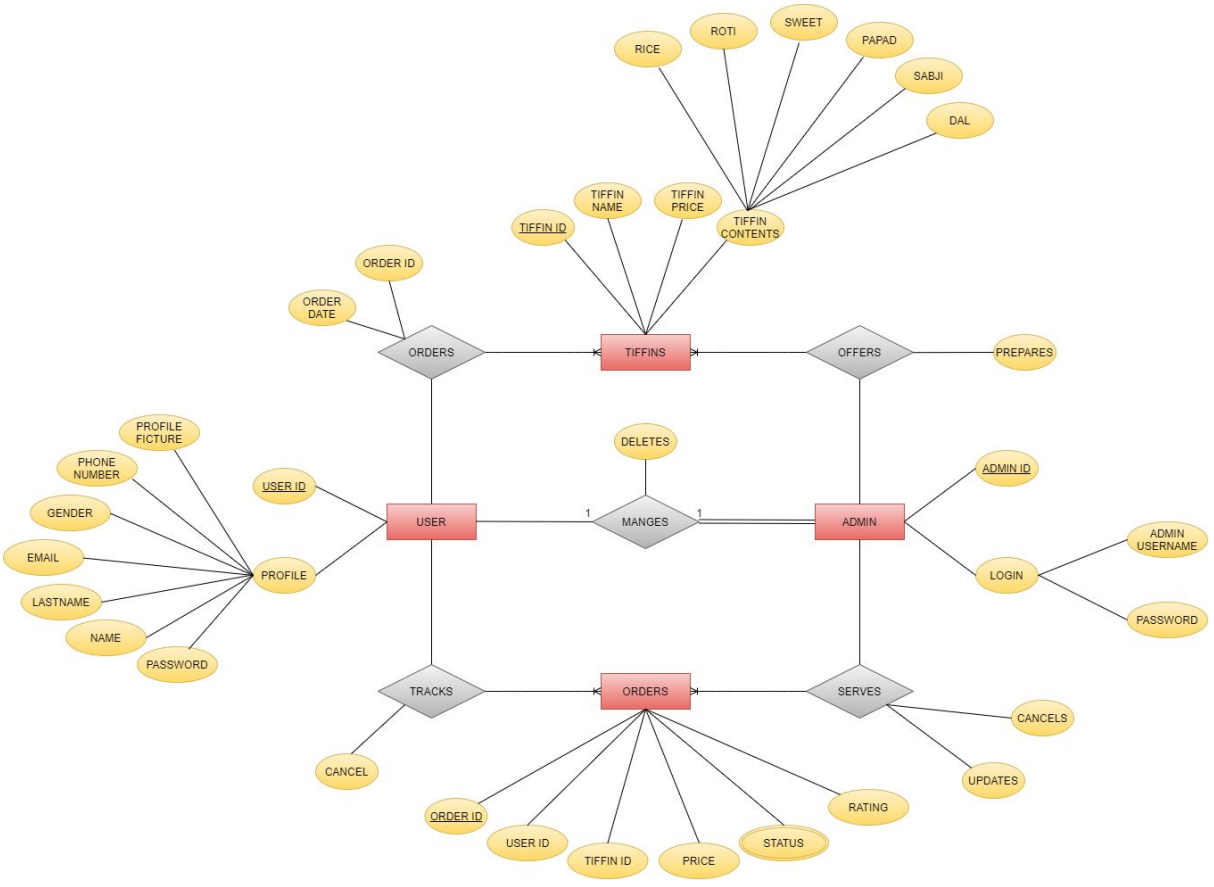
The assumptions from the point of view of a admins are as follows:

- Every admin is automatically allotted an admin ID which is the primary key for the corresponding table. This admin ID cannot be changed at any point by any user of the software .
- Every admin has a unique username and password which is used to login to the software database.
- Admins can create,update or delete the tiffins.
- Admins can see all the orders and can choose the status to update. They can reject any orders.
- Admins have the right to delete a user.

Chapter 5

E-R Diagram

E-R model i.e. Entity Relation model is based on a perception of the real world that consists of a set of basic objects called entities and relationships among these objects. In the E-R diagram shown below, there are 4 entity sets. The entity sets are related to each other and are shown related to each other by a diamond. Each entity contains some attributes which are related to it. A primary key is nothing but a key chosen by a designer as the principal means of identifying entities within an entity set. A primary key is represented in an ellipse by a line under it. Cardinality of relationships is mentioned as one-to-many by  and one to one by .



Chapter 6

Tables

Table 6.1. Attributes of Tables.

ENTITY	ATTRIBUTES	PRIMARY KEY	FOREIGN KEY
USER	User Id , Firstname , Lastname , Email , Password , Phone , Gender , Profile Picture	User Id	
ADMIN	Admin Id , Admin Username,Password	Admin Id	
ORDERS	Order Id , User Id , Tiffin Id , Price , Status , Rating	Order Id	User Id , Tiffin Id
TIFFINS	Tiffin Id , Tiffin Name , Tiffin Price , Roti , Sabji , Sweet , Dal , Papad , Rice	Tiffin Id	

Table 6.2. User.

User Id	Name	LName	Email	Phone
1	Atharva	Kulkarni	ak@gmail.com	7020037195
2	Sumit	Kolpekwar	sk@gmail.com	7418529630

Profile Picture	Password(Hashed)
https://res.cloudinary.com/dpwspeuft/image/upload/v1606415239/qtphzzwsmb3q0xje6ghj.jpg	23b23be9da2519c88f11c084310bcc0bf14417f8
https://res.cloudinary.com/dpwspeuft/image/upload/v1606503392/m09zrpk2bubvkj3kcqco.jpg	fc1200c7a7aa52109d762a9f005b149abef01479

This table gives the detailed information about Users subscribed to Homeffins.

Table 6.3. Admin.

Admin Id	Admin Username	Admin Password(Hashed)
1	admin	40bd001563085fc35165329ea1ff5c5ecbdbbeef
2	admin2	40bd001563085fc35165329ea1ff5c5ecbdbbeef

This table gives the detailed information about the Admin of restaurants working in the Homeffins.

Table 6.4. Tiffins.

Tiffin Id	Tiffin Name	Tiffin Roti	Tiffin Sabji	Tiffin Rice	Tiffin Dal	Tiffin Papad	Tiffin Sweet	Tiffin Price
1	Veg Delight	3	Panner	1	Hot	5	Kheer	100₹
2	Veg Mix	5	Channa	1	Tadka	5	Jamun	100₹
3	Veg Premium	5	Panner Bhurji	1	Hot	3	Gajar Halwa	150₹
4	Nov Veg Delight	3	Chicken	1	Hot	3	Kheer	120₹
5	Non Veg Mix	3	Chicken Tandoori	1	Tadka	3	Jamun	150₹

This table gives the information about different Tiffins available at Homeffins and makes them available to Users.

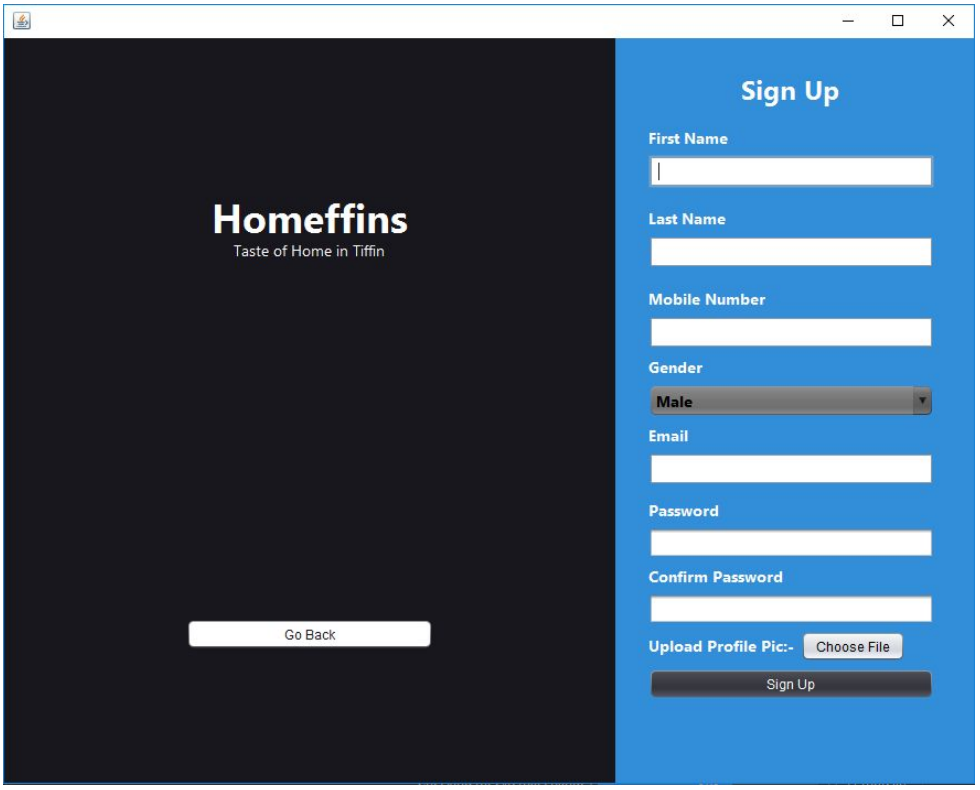
Table 6.5 Orders.

Order Id	User Id	Tiffin Id	Tiffin Status	Tiffin Price	Tiffin Rating(User)
2	1	2	Order Placed	100₹	4.0
3	2	1	Order Delivered	100₹	5.0
4	2	3	Cooking	150₹	3.8

This table gives the information about different orders and their respective statues.

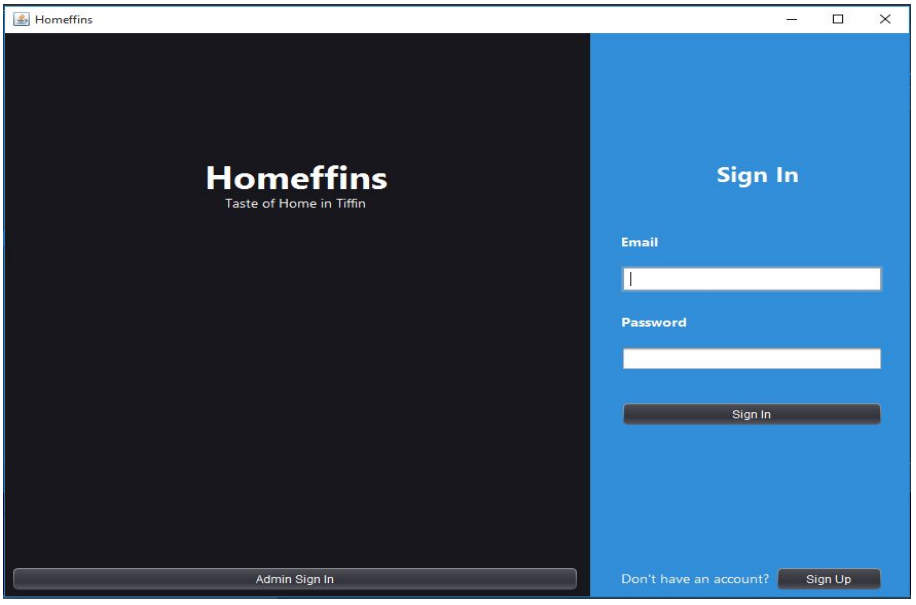
Chapter 7

Forms



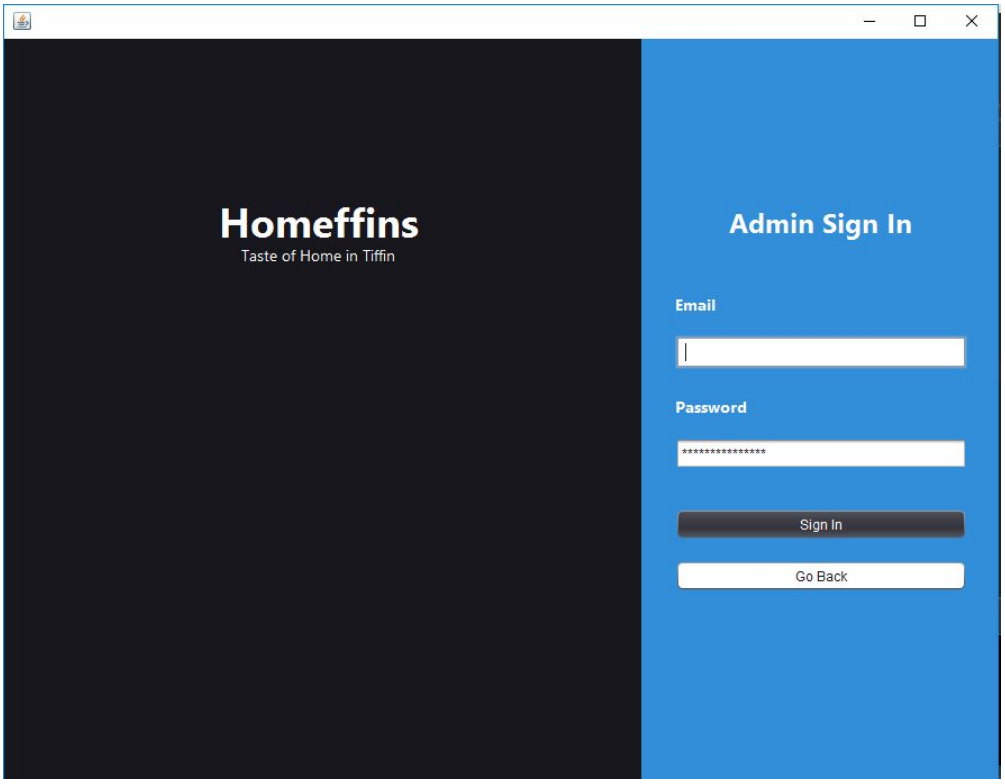
Form 7.1. SignUp Form.

(Entry form for Users)

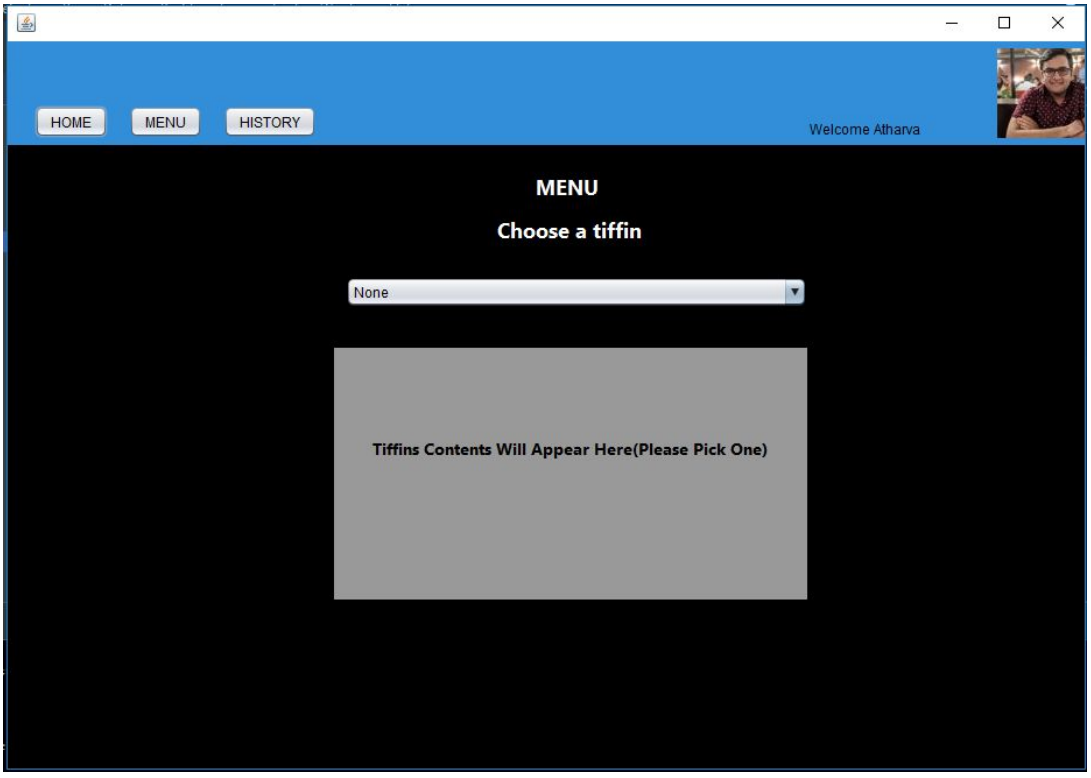


Form 7.2. Login Form

(Gets user onto main screen)

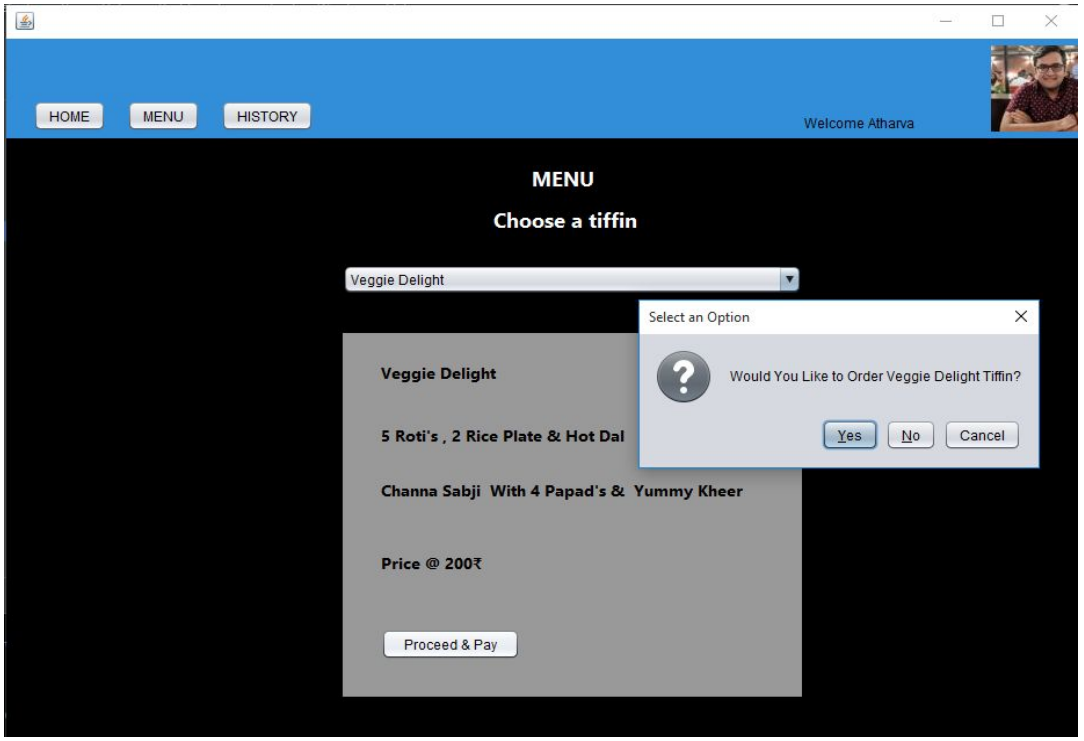


Form 7.3. Admin Login.



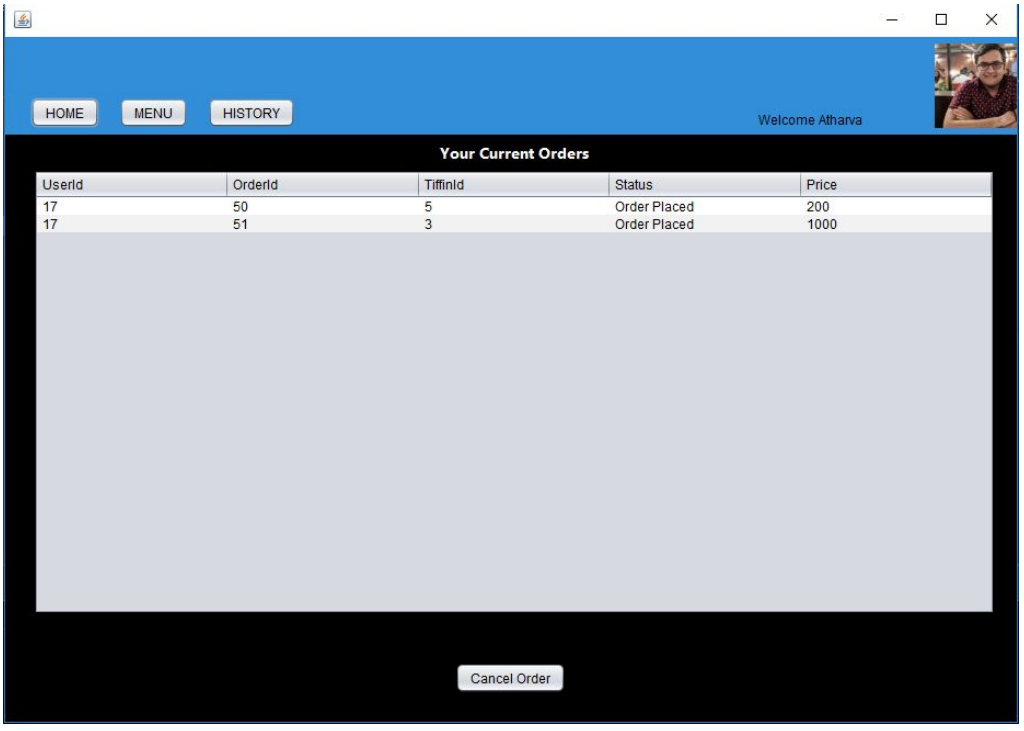
Form 7.4. User Menu.

(Interface of Menu where users can order tiffins)



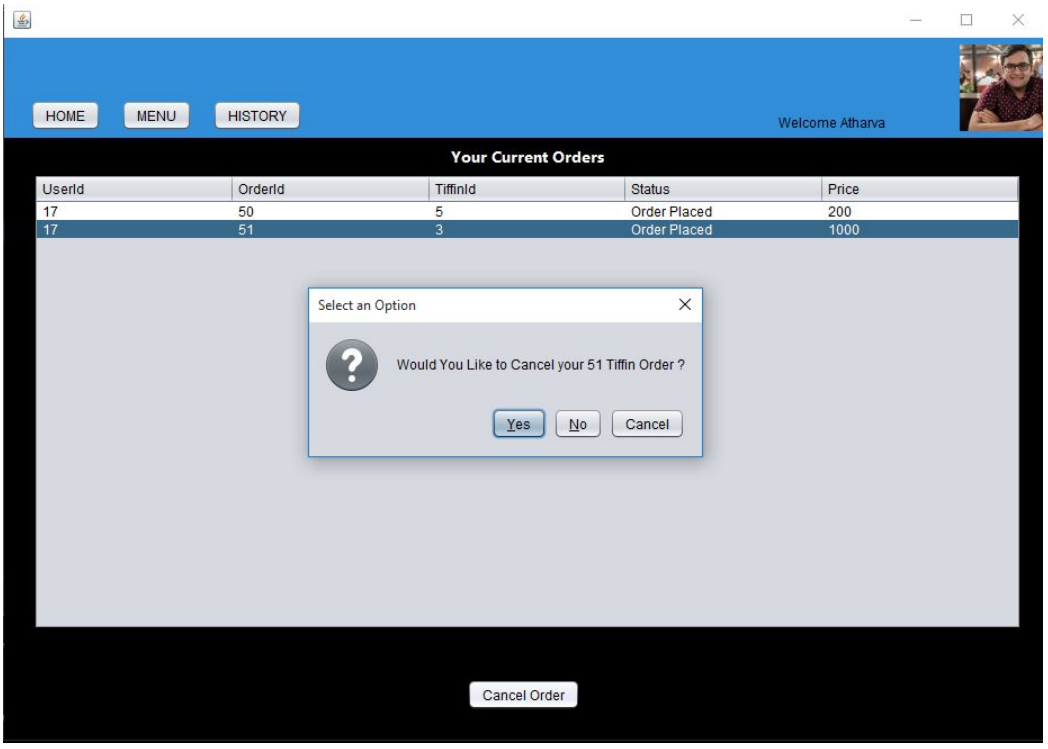
Form 7.5. Placing Orders.

(User Placing order for tiffin of choice)



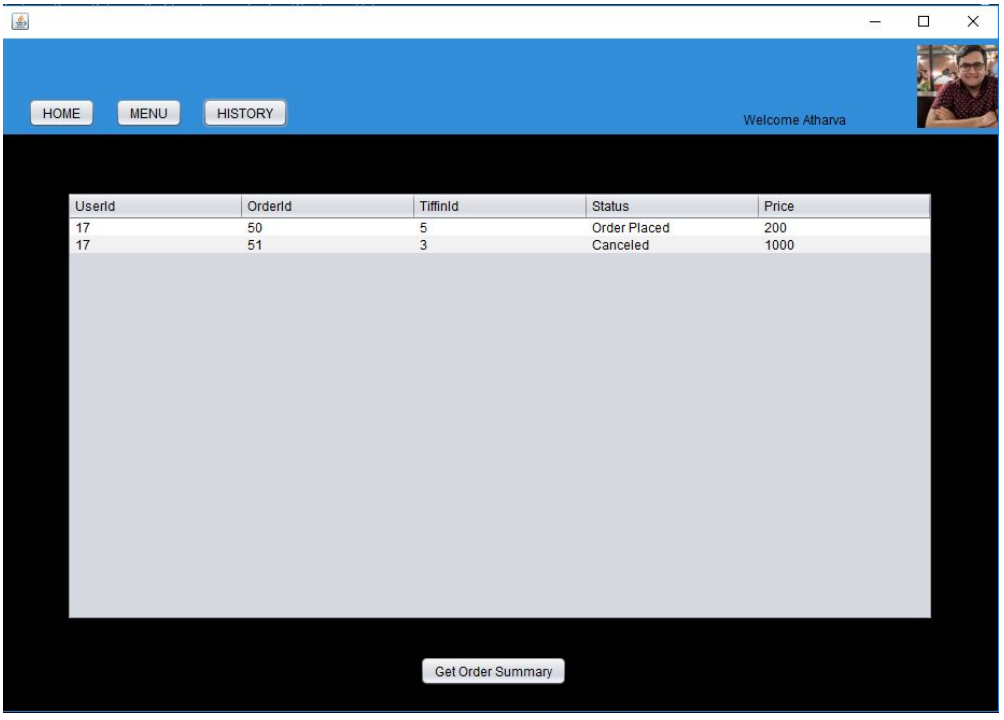
Form 7.6. Home.

(User can track his/her current placed orders or orders which are **NOT** Canceled or Delivered)



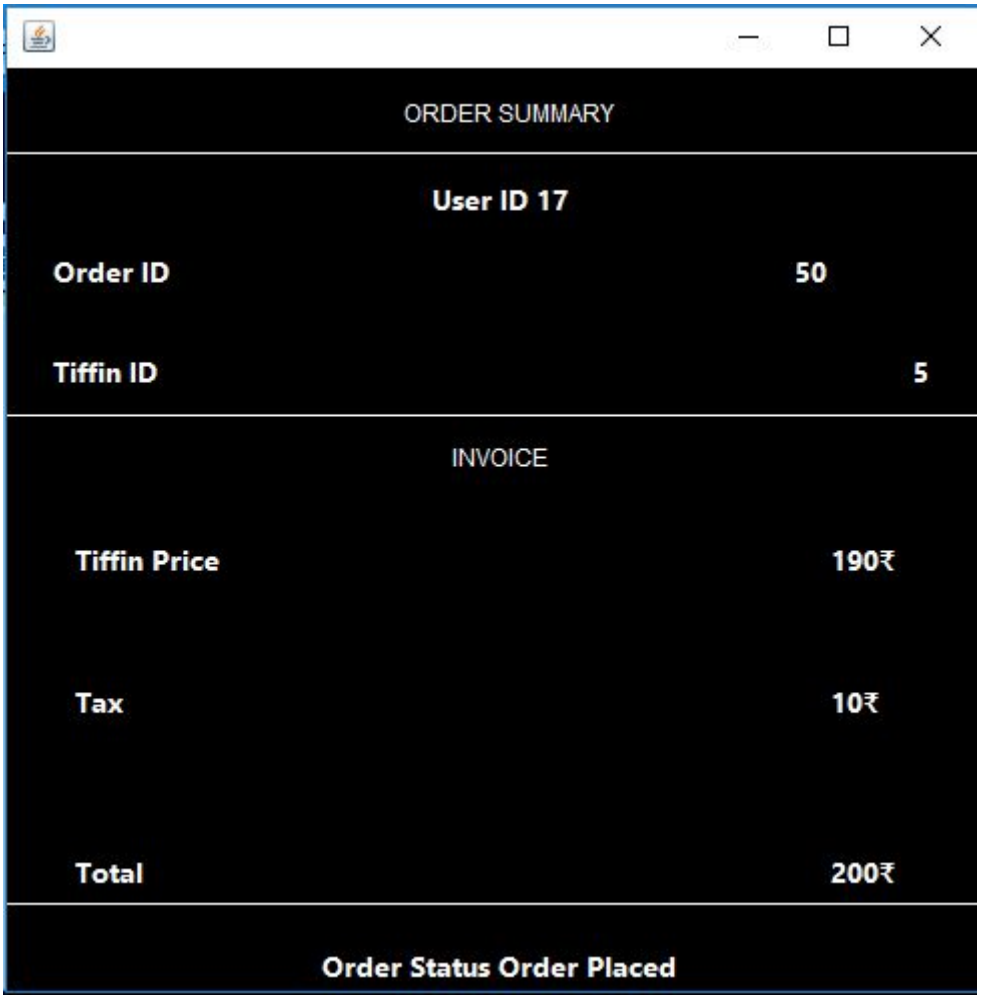
Form 7.7. Cancellation of orders.

(User can Cancel Orders)



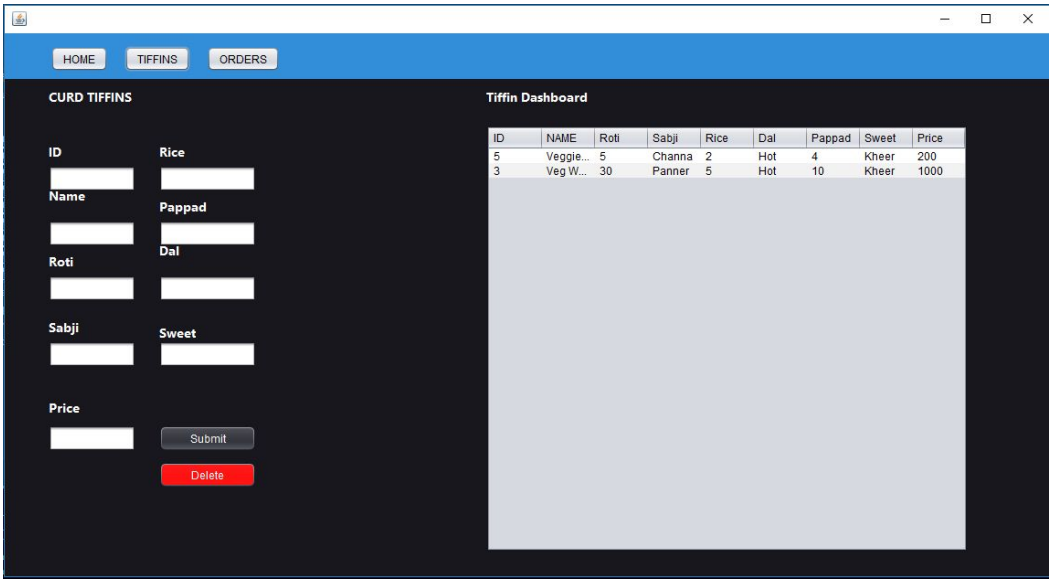
Form 7.8. History of Orders.

(Users can see their old orders)



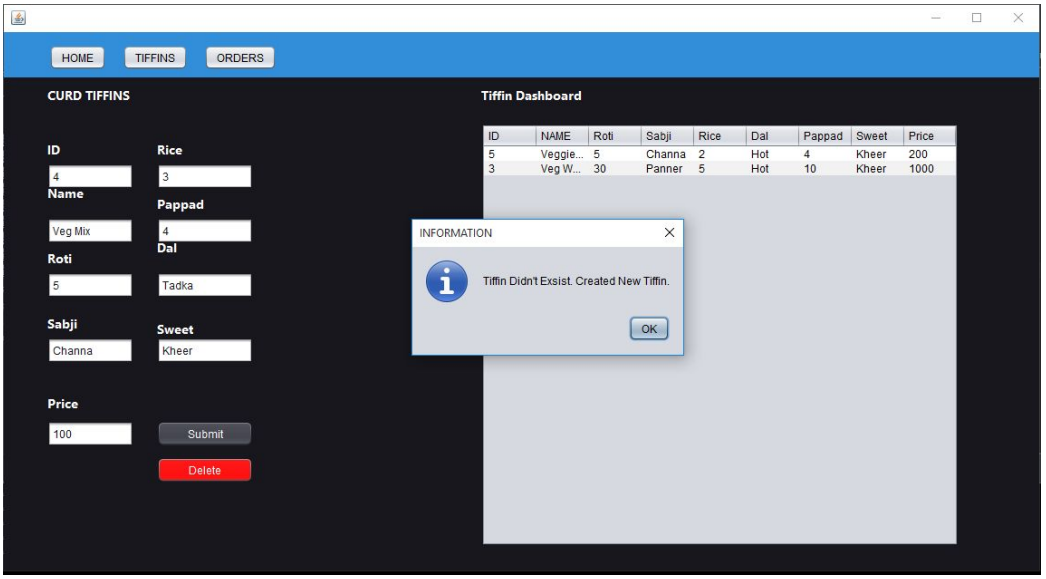
Form 7.9. Order Summary.

(User can get the summary of the orders including the price breakdown)



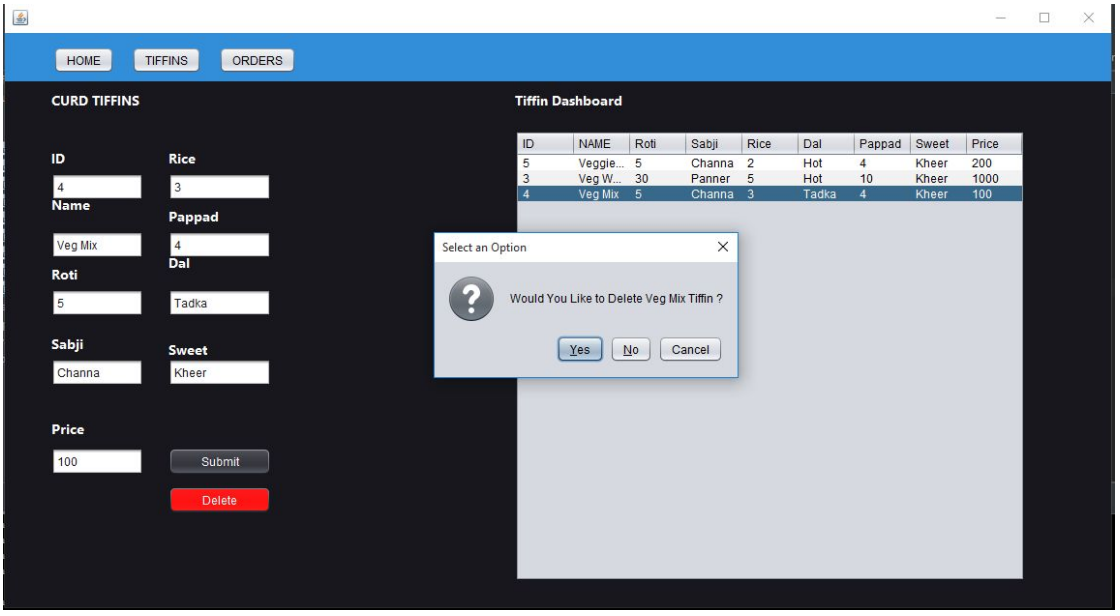
Form 7.10. Tiffin Dashboard

(Admin can Create and Delete Tiffins).



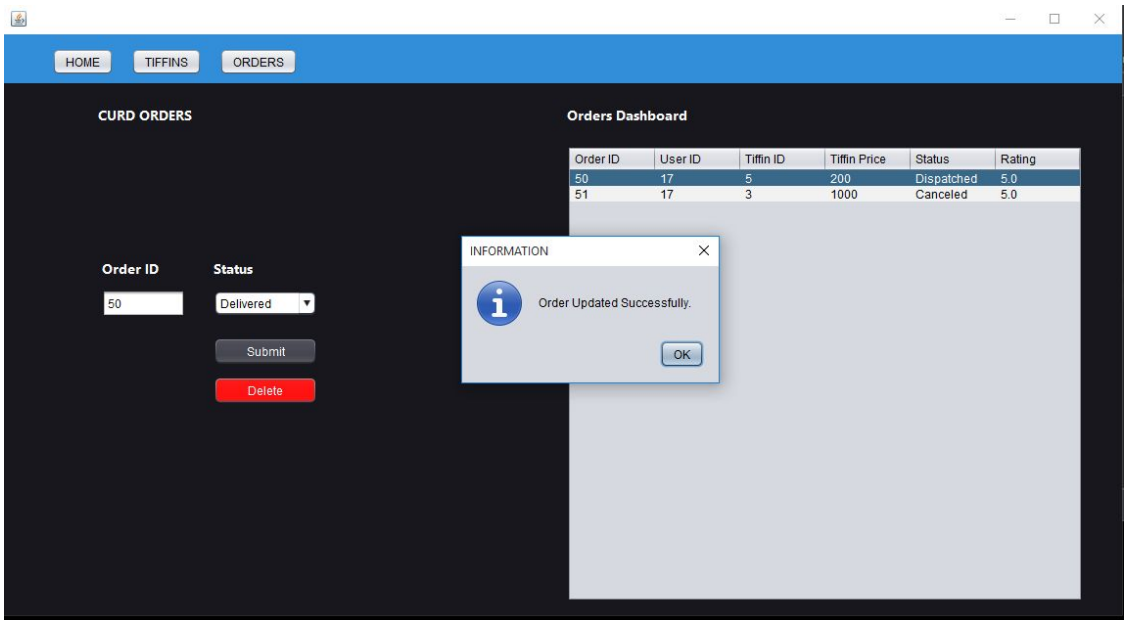
Form 7.11. Creation of new tiffin

(Admin creating new tiffin)



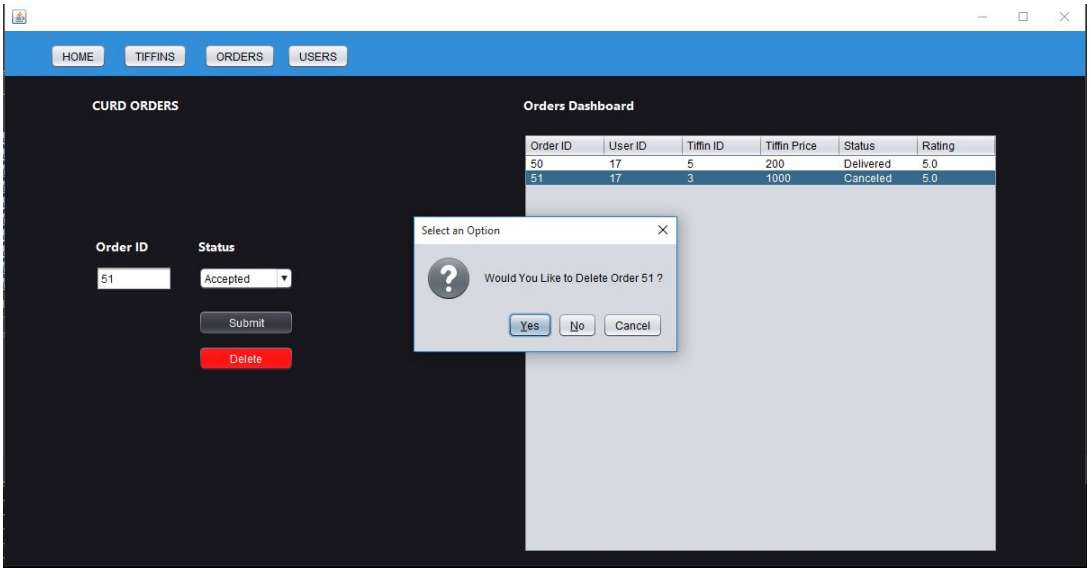
Form 7.12. Deletion of tiffin.

(Admin can delete the tiffin if the tiffin is out of stock)



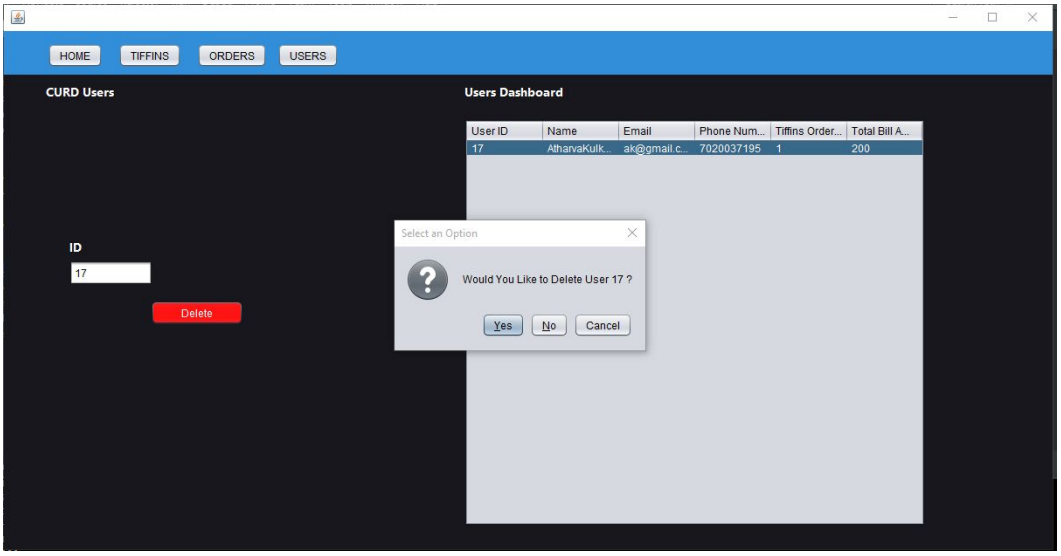
Form 7.13. Tiffin Status Update.

(Admin can change the status of order maintaining transparency between User)



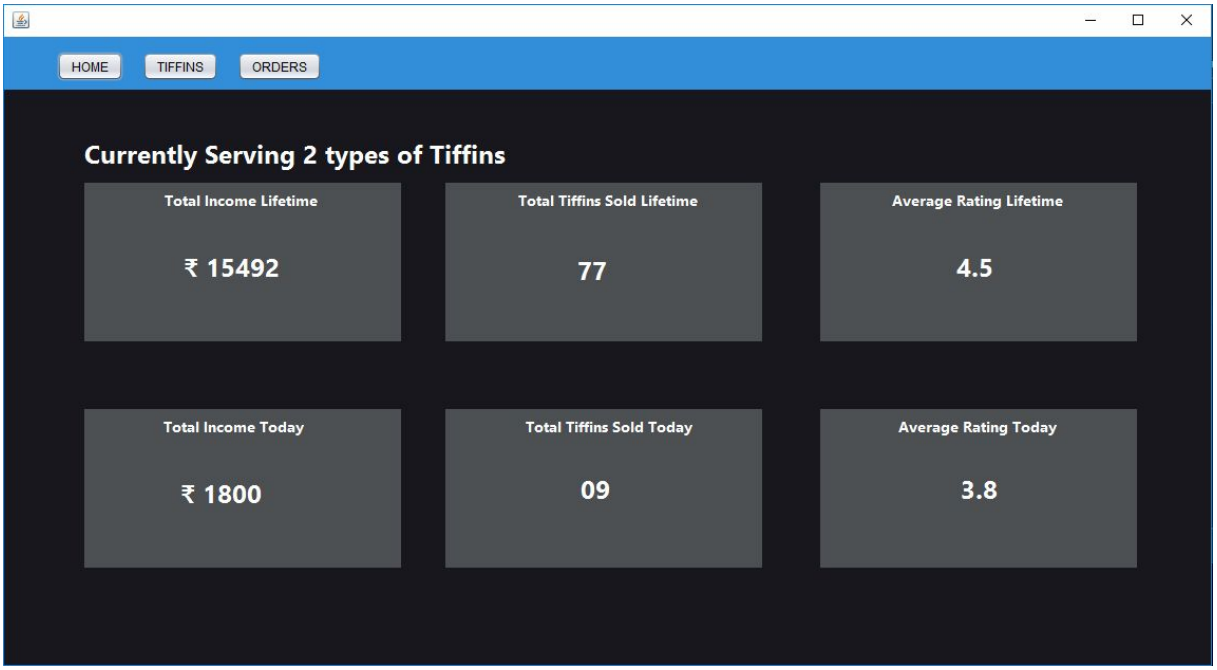
Form 7.14. Deletion of orders.

(Admin can delete orders which are Delivered or Canceled)



Form 7.15. Deletion of User.

(Admin can delete the user from Homeffins database if any users applies for termination of subscription)



Form 7.16 Admin Statistics.

(The admin can see the statistics of tiffins and ledger of his/her account)

Chapter 8
Features

The software developed is a desktop application. The users can sign up or login to access the software. The prominent features of the software can be described as follows;

8.1 Tiffin Ordering Facility for Customers

Customers can login the application by proper credentials or signing up for one account. The integrity constraints of the software ensure that a customer is not allowed to change any information regarding the tiffin or orders. Acustomer can see various tiffins and place desired orders, they can also cancel the orders and view the history.

8.2 Comprehensive Orders Database and Logs

The software maintains a comprehensive database containing all the relevant details of every order. This information in this database can be manipulated to generate various reports for the administrator.

8.3 Comprehensive Tiffin Database

The software maintains a comprehensive database containing all the relevant details of different types of tiffin present in the restaurants. The administrator can add or remove tiffins and their related information from the database at any time. Every tiffin has two fees associated with it, namely fees for tiffin base price and it's tax.

8.4 Customer Management

The software maintains a comprehensive database containing all the relevant details of all customers. The order placed by the customers are recorded in a log along with the appropriate details. The customers are issued customer id for better management. The corresponding data is added to the table and is used for generation of powerful insights.

Chapter 9

Conclusion

In this project we have implemented a role-based mess tiffin management system which efficiently manages the entire functionality of mess owner and customer. The owner can manage customer records,tiffins and orders easily whereas the customer can register and enjoy tiffin service based on personal preferences. It also handles the status of tiffins according to status set by admins. Food wastage is reduced as the customer orders only that food which he/she prefers to order from a range of available tiffins.Hence this project aims on efficient and simple management of the customers and the tiffin database and to update them. Thus this project provides a faster and better approach to do so.

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3] Expert Oracle JDBC Programming, Book by R.M. Menon
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