IN PARTNERSHIP WITH PLYMOUTH UNIVERSITY

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Student Reference Number:10638366

Module Code: SOFT255SL	Module Name: Software Engineering for the internet using Java
Coursework Title: Point Of Sales system for restaurant	
Deadline Date: 08/01/2019	Member of staff responsible for coursework: Mrs. Sulari Fernando
Programme: BSc(hons) in Software Engineering	

Please note that University Academic Regulations are available under Rules and Regulations on the University website www.plymouth.ac.uk/studenthandbook.

Group work: please list all names of all participants formally associated with this work and state whether the work was undertaken alone or as part of a team. Please note you may be required to identify individual responsibility for component parts.

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We confirm that we have read and understood the Plymouth University regulations relating to Assessment Offences and that we are aware of the possible penalties for any breach of these regulations. We confirm that this is the independent work of the group.

Signed on behalf of the group: K.C.A.A.Iroshan

Individual assignment: ***I confirm that I have read and understood the Plymouth University regulations relating to Assessment Offences and that I am aware of the possible penalties for any breach of these regulations. I confirm that this is my own independent work.***

Signed :

Use of translation software: failure to declare that translation software or a similar writing aid has been used will be treated as an assessment offence.

I *have ~~used~~/not used translation software.

If used, please state name of software……

Overall mark _____% Assessors Initials _____ Date_____

*Please delete as appropriate

Acknowledgement

We expressed our gratitude to Mrs. Sulari Fernando, our humble lecturer and the module leader of Software Engineering for the internet using java, for the enormous help and guidance we received in completion of this project and the module

We would also like to extend our special thanks to all the lecturers and our dearest colleagues of NSBM for their immense support and motivation thought our studies.

Finally, we would like to express our heartfelt affection to all those people who have been helpful and supportive thought the successful completion of the project

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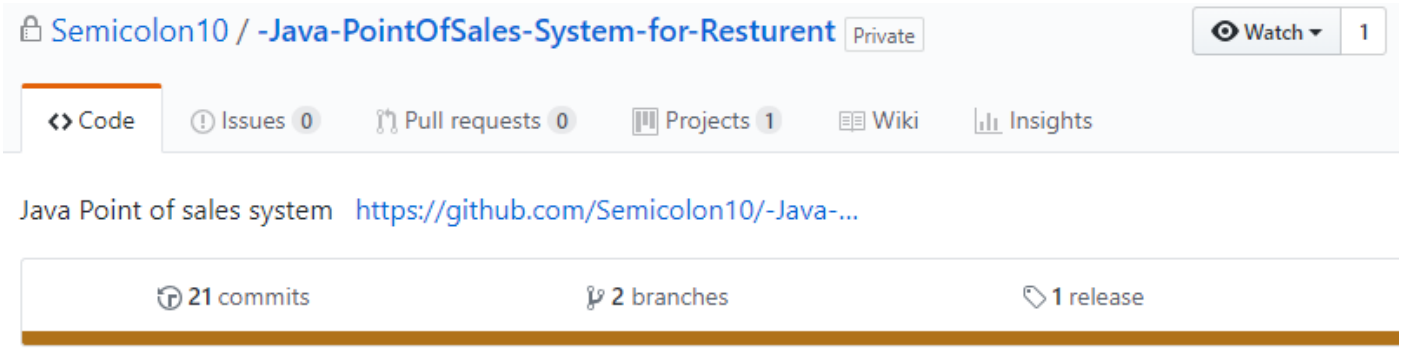
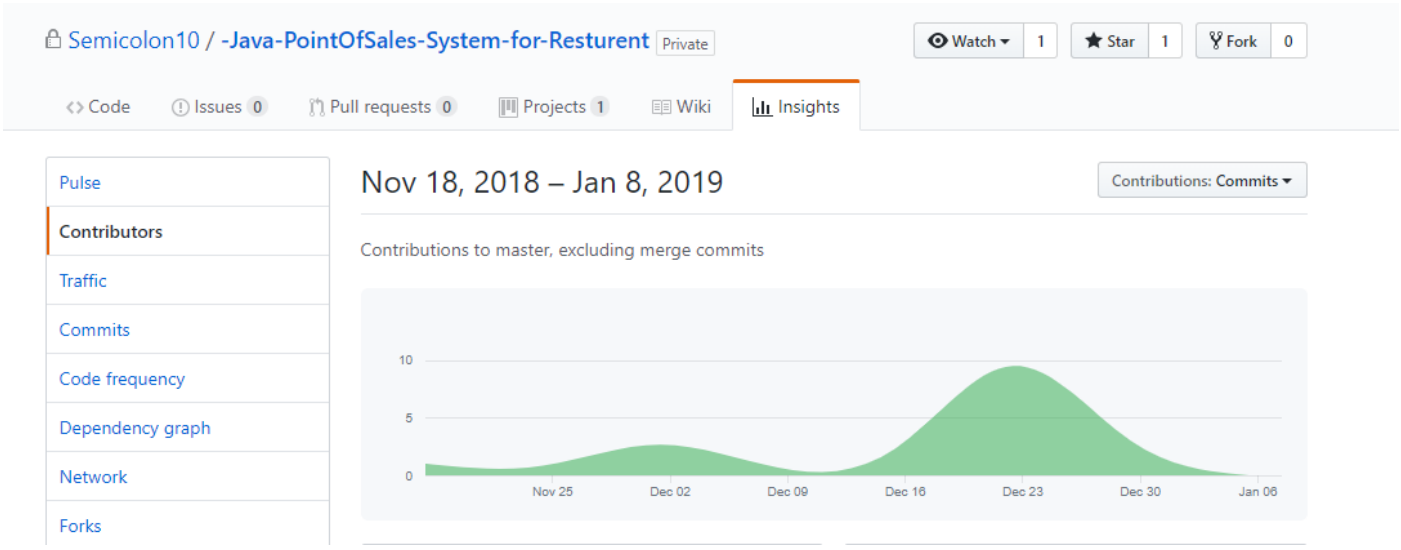
1.How we collaborated

We used git version control system with the GitHub platform and collaborated virtually as well as physically.





2. Introduction to the system

A stand-alone application that enables “Knuckles Restaurant” to provide an efficient self-service Point of Sales system (POS System). It is designed to be handled by the minimum number of employees. The interaction between the system and the customer has been maximized. Customer can reserve table and order food item using the automated menu. Once the user place an order kitchen gets the order details. When the order is ready the user will be notified with an email.

The orders will be settled using First in First out(FIFO) basis.

The project need to be done using Java/NetBeans.

3. Analysis of the system

3.1. How our system addresses the drawbacks of a conventional system

Many of the current POS systems used in Sri Lanka today need operators. This requires lot of labour which is costly. In order to address this, we have created a POS system that enables self-service.

This system addresses many flows in the manually operating systems.

An automated POS system like what we have developed enables customers to quickly order and make payments without having to wait for a cashier to clear up.

In a conventional system if the cashier is crowded the customers have to wait in line to place the order or pay the bills. This is mainly because of having to pay for operators, restaurants usually employees only a couple of employees. In our system since there is no need for labour to operate the system, a restaurant can easily put multiple computers (with touch screen interfaces) so that even in busy hours' customers won't have to stay in a line.

Unlike in a conventional system where the customers have to wait till a waiter attends to them, which could take time if the restaurant is busy, in our system since everything (ordering and paying) is done by the customer himself, the above time delay is avoided.

The only possible delay that occurs is the waiting time till the kitchen fulfils the order. Because of the self-serviceability the restaurant gets the chance to prepare the meals real time and provide customers with fresh new foods.

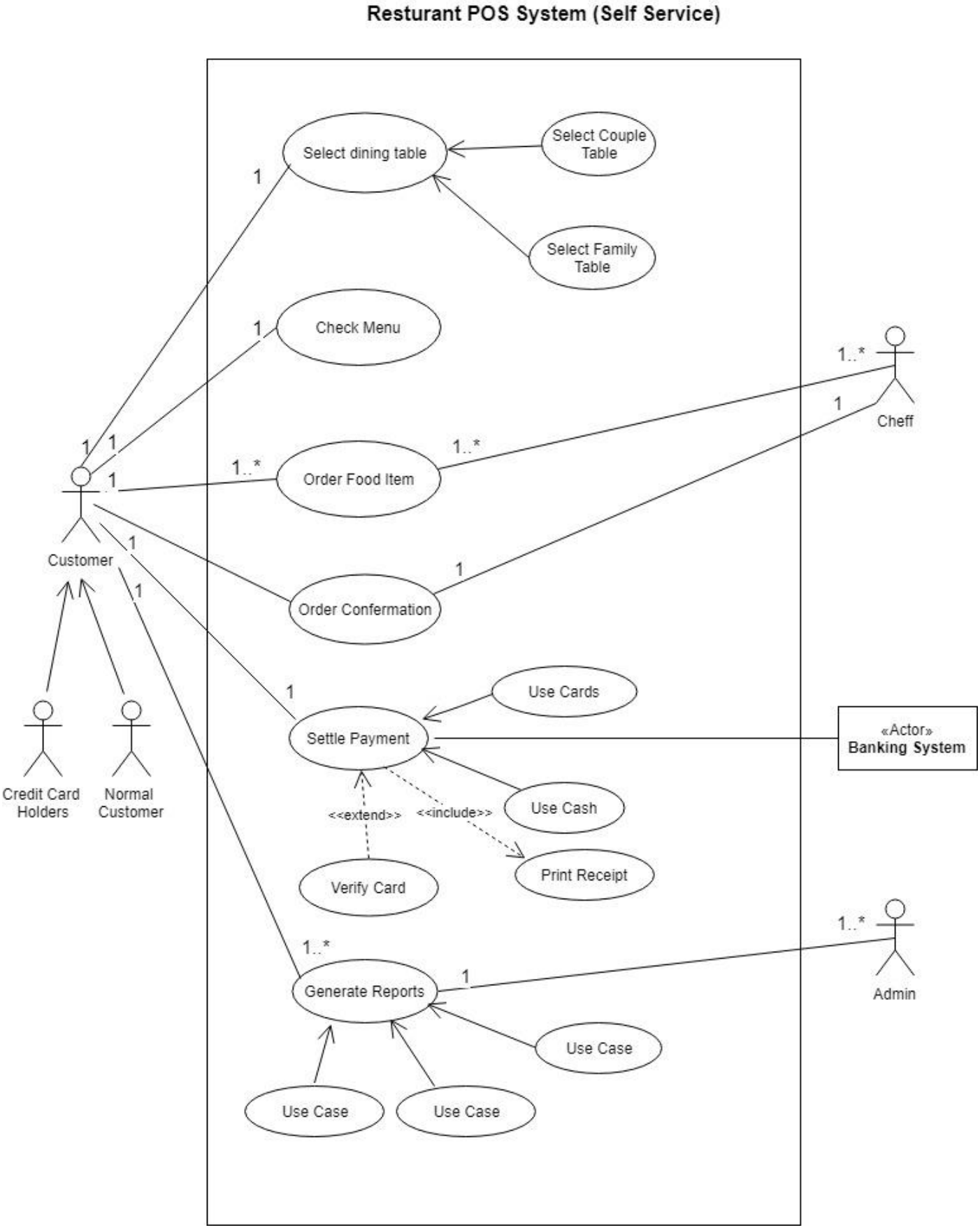
3.2. Object Oriented solutions to the given problems

System is designed using object oriented concepts,

- Abstraction
- Encapsulation
- Polymorphism
- Inheritance

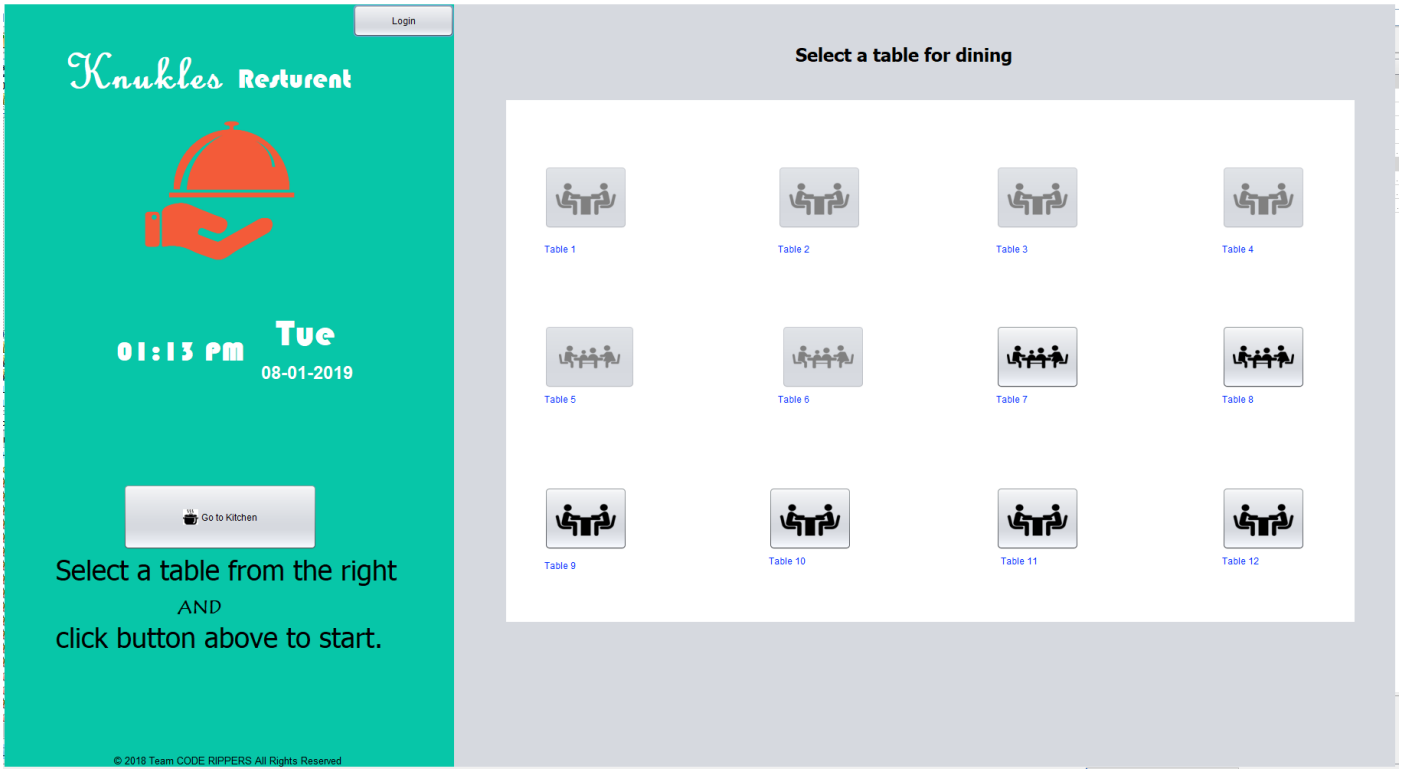
3.3. UML diagrams for the system

3.3.1. Use Case Diagram



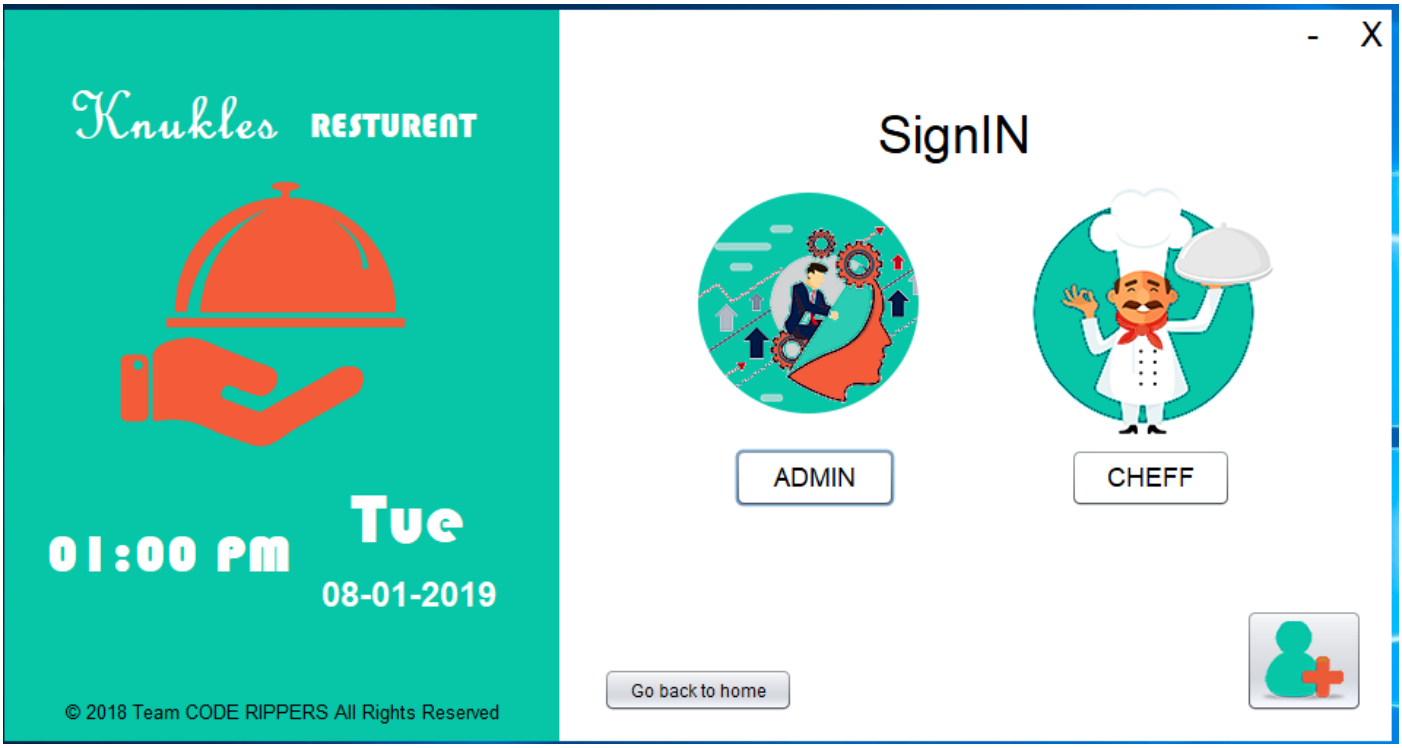
4. Screenshots of GUI Design

4.1. Home Page



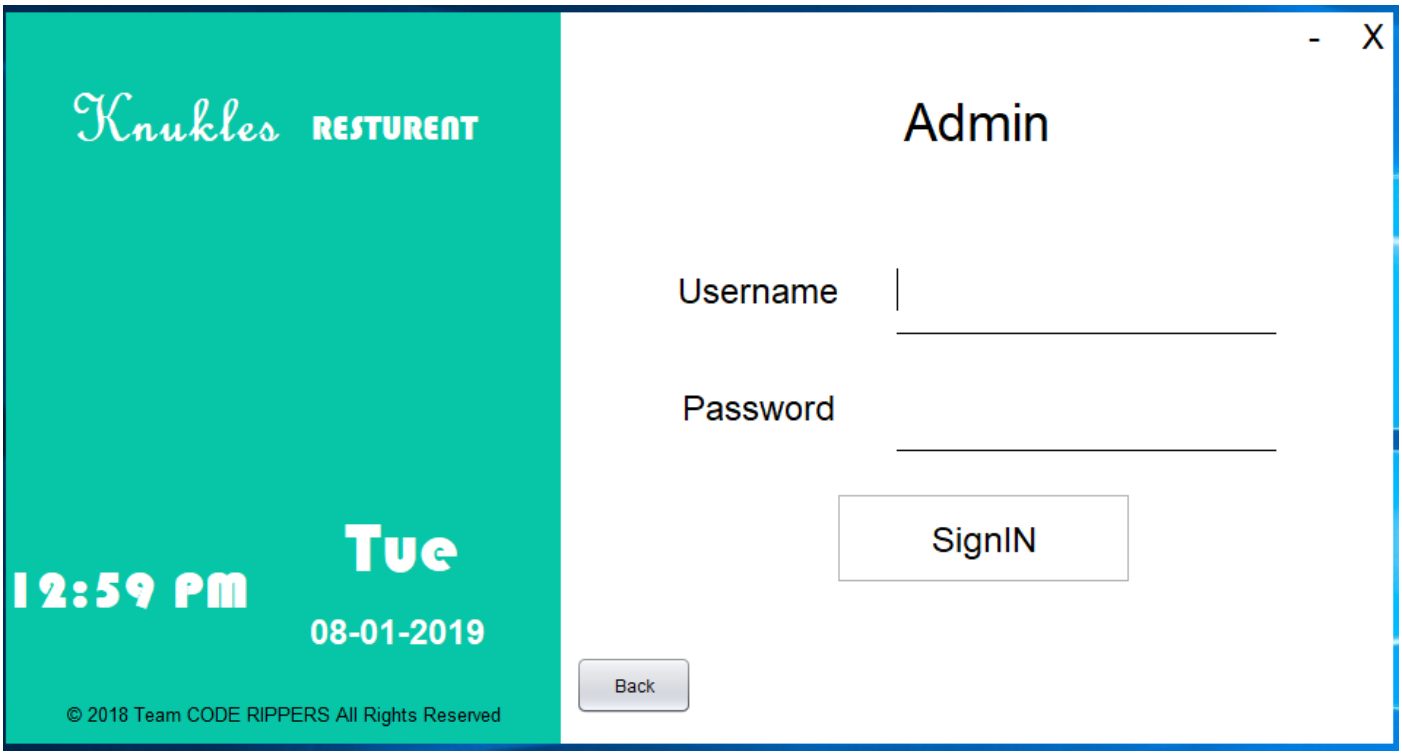
Once a user reserves a table a new record is created in the “Reservedtables” table and the reservation will time out in an hour

4.2. Sign in Page

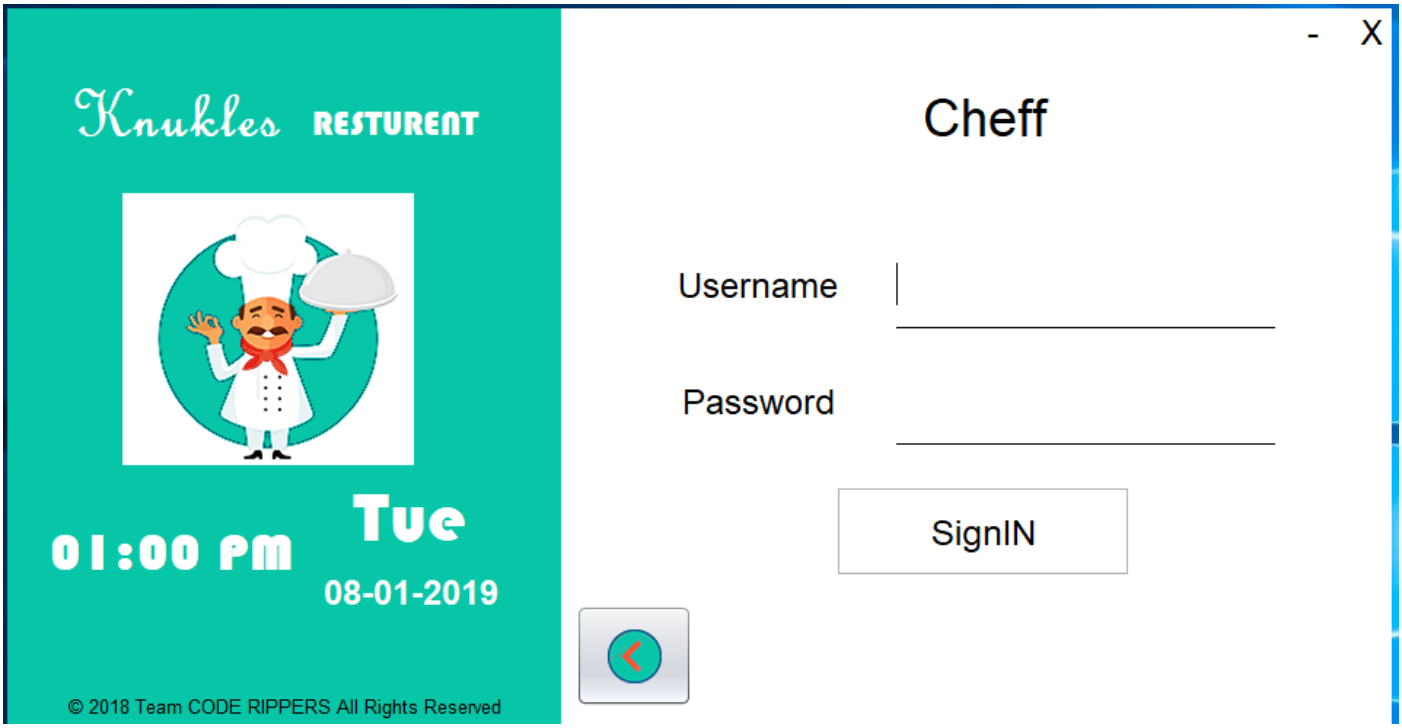


Admin and cheff need to sign in in order to use the system.

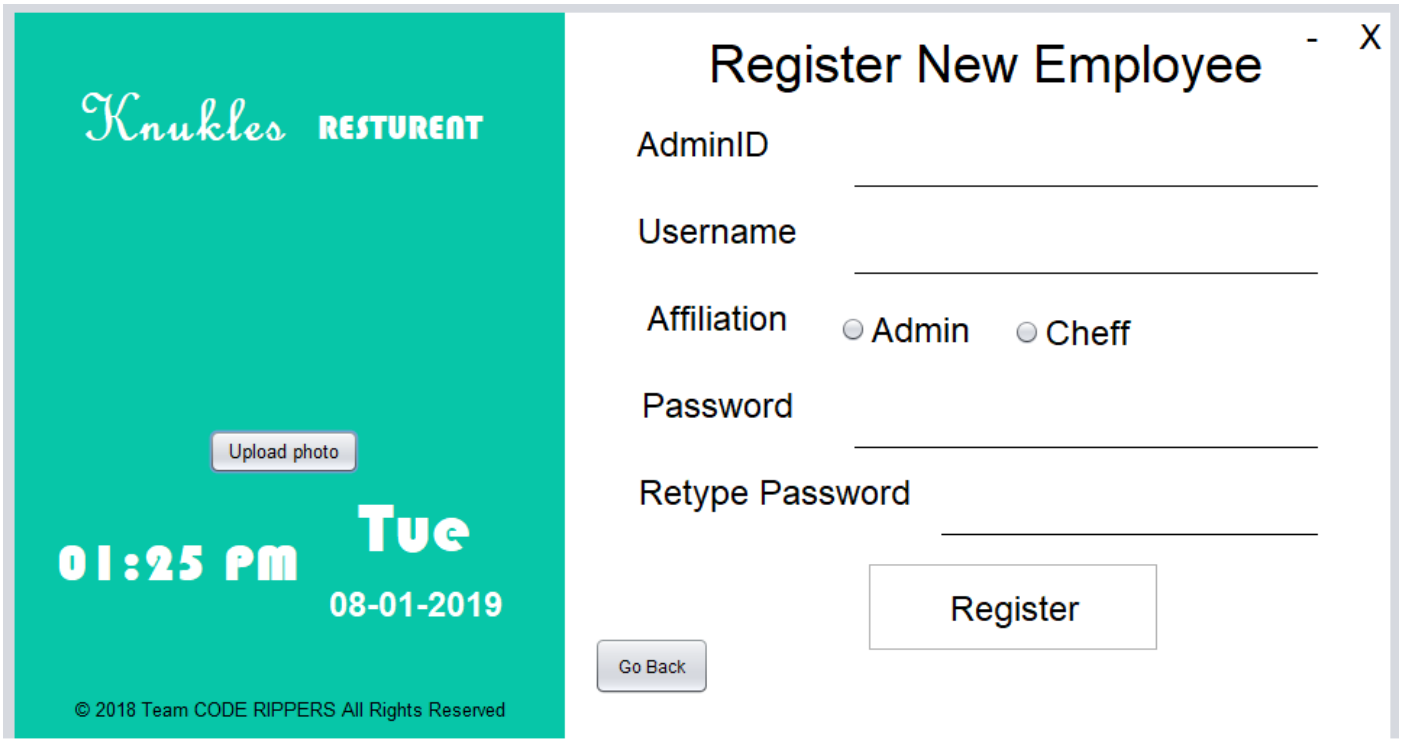
4.3. Admin SignIn Page



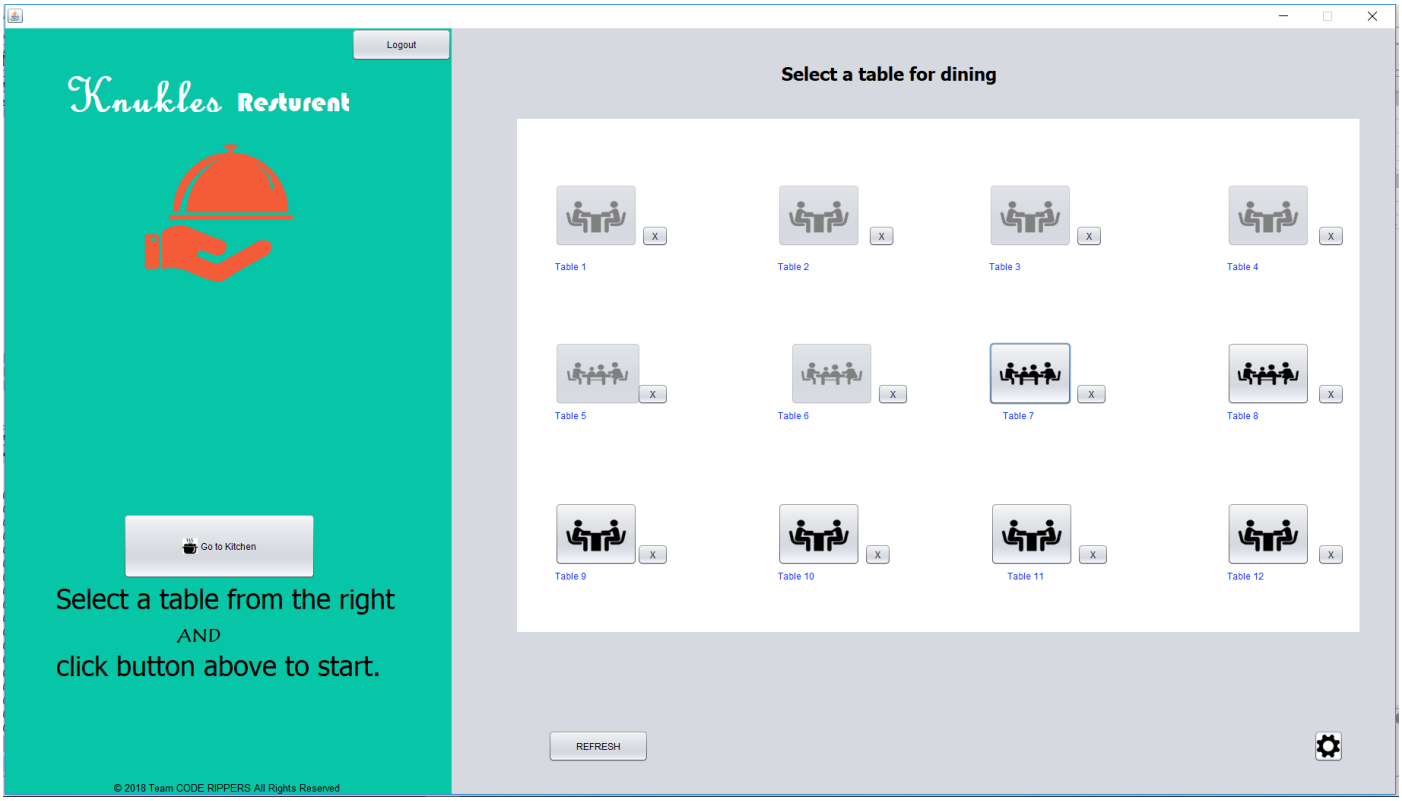
4.4. Chef SignIn Page



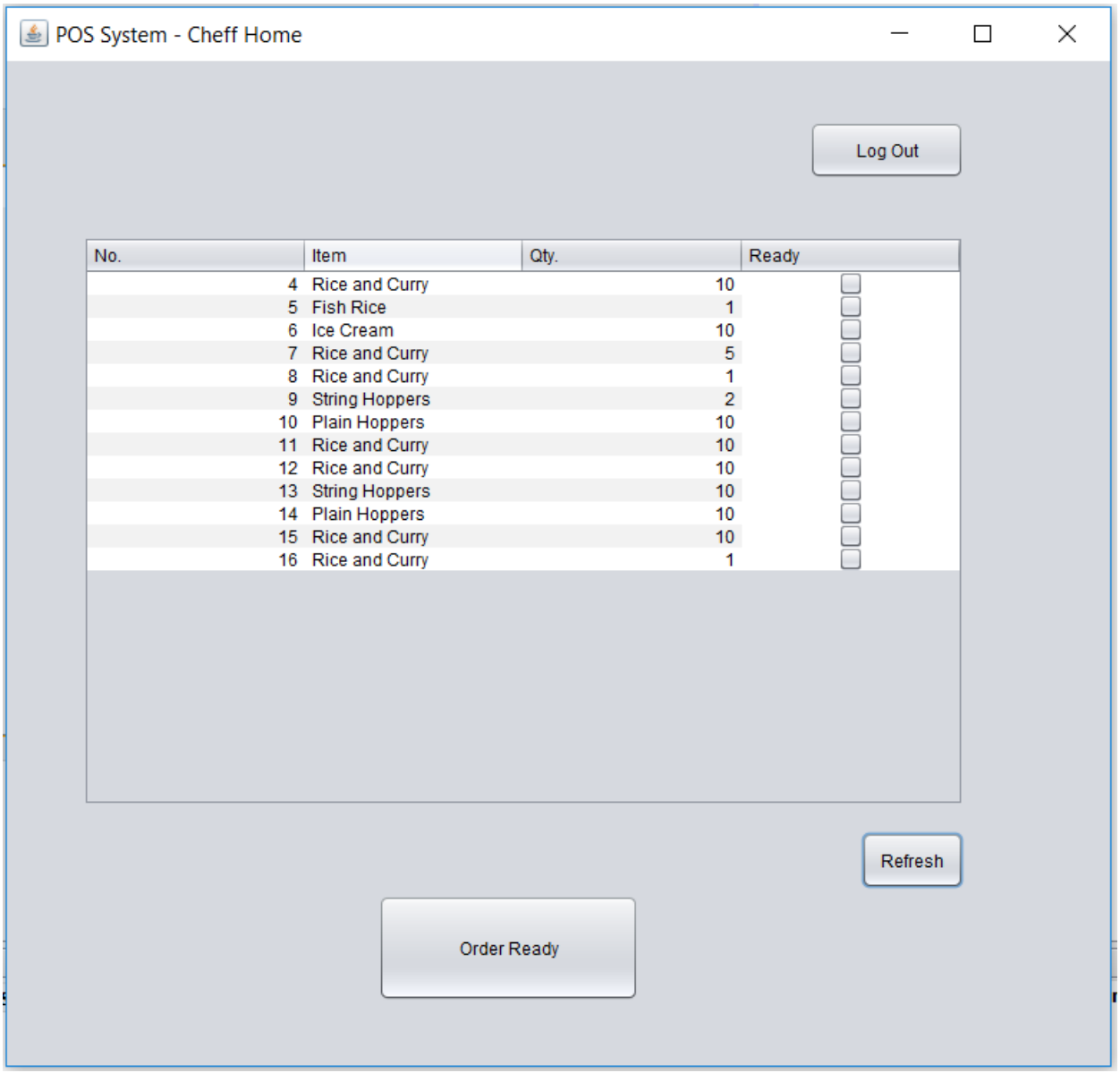
4.5. Register Page



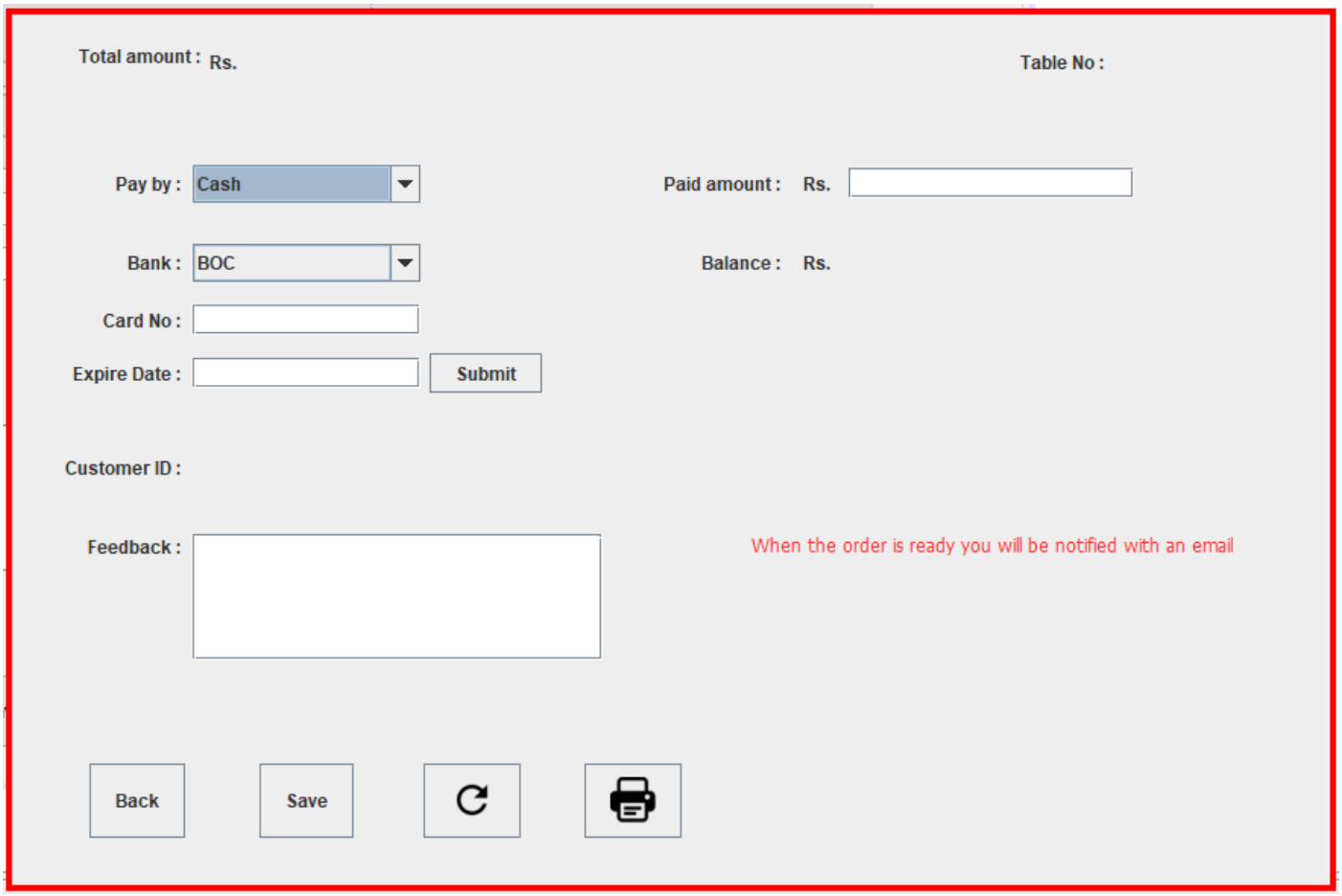
4.6. Admin Home Page



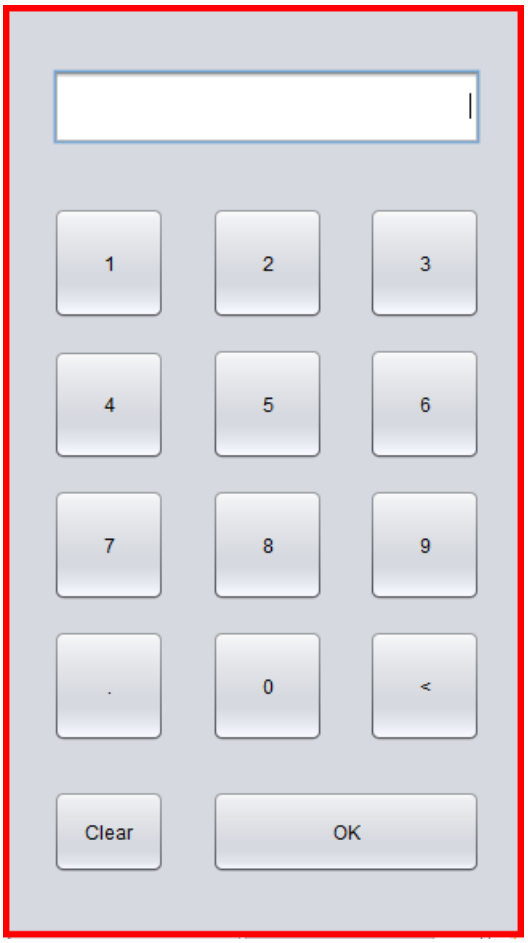
4.7. Chef Home Page



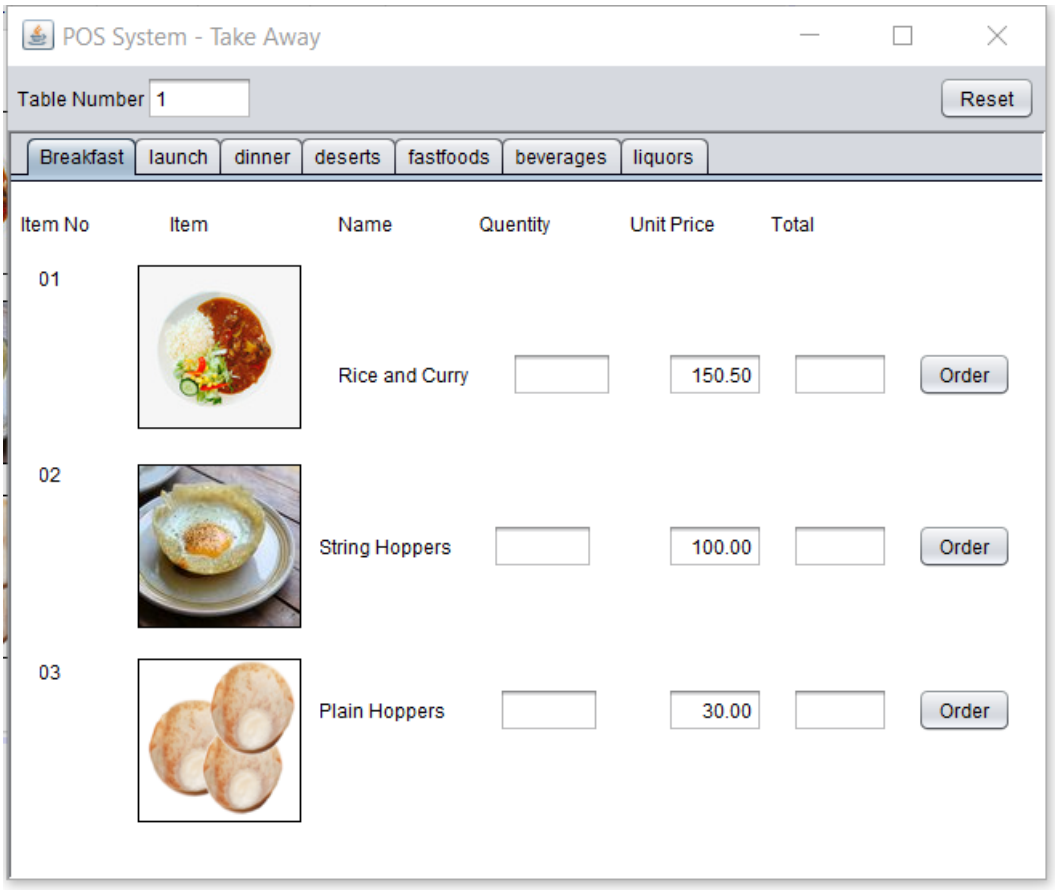
4.8. Payment Page



4.9. Calculator



4.10. Take Away page



4.11. Printed receipt

fileName.txt - Notepad

File Edit Format View Help

```
                    Knukles Resturent

            No 42,Malwaththa Rd,Kurunagala
                011-2312325,077-8512456

-----------------------------------------------------
Date: 08 January 2019
Time: 2:32 PM

No      Item            Qty         Price       Amount
-----------------------------------------------------

1 Rice and Curry 10 150.0 1500.0
1 Fish Rice 1 150.0 150.0
10 Ice Cream 10 150.0 1500.0
1 Rice and Curry 5 150.5 752.5
1 Rice and Curry 1 150.5 150.5
2 String Hoppers 2 100.0 200.0
3 Plain Hoppers 10 30.0 300.0
1 Rice and Curry 10 150.5 1505.0
1 Rice and Curry 10 150.5 1505.0
2 String Hoppers 10 100.0 1000.0
3 Plain Hoppers 10 30.0 300.0
1 Rice and Curry 10 150.5 1505.0
1 Rice and Curry 1 150.5 150.5
1 Rice and Curry 5 150.5 752.5
2 String Hoppers 4 100.0 400.0
3 Plain Hoppers 8 30.0 240.0
-----------------------------------------------------

Net Total                                           100

Cash                                                1000

Balance                                             900
```

5. Critical Evaluation

The intention of our system is to provide a user friendly and hassle free service for customers as well as to provide a law cost ordering and payment handling system for the restaurant (By implementing self-serviceability). But the current iteration of the system has a couple of unrefined items/

Our implementation at the moment does not utilize the abstraction concept of the object oriented concepts.
The system is not capable of handling multiple orders per user.
The payment part of the system needs improvements.

6. Future implementations

The system will be developed further by implementing all of the object oriented concepts and the payment system is expected to be completed.
The system will be enhanced to handle multiple orders per user and the behaviour of the system will be refined further to provide a friendlier user experience.

7.Our Contribution

Member / Activity	Member 01 ID:10638366	Member 02 ID:10638431	Member 03 ID:10638389	Member 04 ID:10638387	Member 05 ID:10637387
Complete Login & Register	S	S	R	S	S
Table Reservation, Admin & Home	R	S	S	S	S
Food Ordering & Email Order	S	R	S	S	S
Order Conformation from Kitchen	S	S	S	R	S
Invoice generation and order conformation email	S	S	S	S	R
Total Contribution	20%	20%	20%	20%	20%