Rajiv Gandhi University of Knowledge Technologies

(Catering the Educational Needs of Gifted Rural Youth of A.P)
R.K Valley , Y.S.R Kadapa(Dist)-516330

Project Report
On
Onilne Restaurant Management System

Submitted by

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CERTIFICATE

This is to certify that the project titled "**ONLINE RESTAURANT MANAGEMENT SYSTEM**" is a bonafied project submitted by **THARUN SAMA** with ID **R170663** in the department of **COMPUTER SCIENCE AND ENGINEERING** in partial fulfillment of requirement for the award of degree **BACHELOR OF TECHONOLOGY** for the year **2021-2022** carried out the work under the supervision.

CSE HOD

B. LingaMurthy
(Project Guide)

ACKNOWLEDGEMENT

The satisfaction that accompanies the successful of completion of any task would be incomplete without the mention of the people who made it possible and whose constant guidance and encouragement crown all the efforts success.

I would like to convey thanks to our guide Mr. B.LingaMurthy for guidance, encouragement, co-operation and kindness during the entire duration of course and academics.

ABSTRACT

"**Online Restaurant Management System**" is a web application in which the customer can place his/her order based on their interests in advance by giving their details. They can be also able to book preferred dinning table at the time of booking. This application helps to reduce the waiting time of customer at restaurant for food after booking. Customer can also cancel their order by giving the details which was given at the time of booking.

Table of Contents

1. INTRODUCTION

1.1 Purpose

The software requirement specification mainly describes both functional and non-functional requirements for the ORMS.This is mainly designed for ordering food and reserving a table in online .The document also povides a detailed information of the external interfaces, peformance considerations and design constraints. The document should act as a foundation for efficient and well managed project completion.

1.2 Intended audience and reading suggestions

The intended audience of this document would be manager and employees in the restaurant and the project team with the objective to refer and analyze the information. The SRS document can be used in any case regarding the requirements of the project and the solutions that have been taken. Here is the brief overview of the document.

1. Overall desciption
2. System features
3. Design
4. External interface requirements
5. Non-functional requirements

1.3 Project Scope

The main objective of this software is to reduce day to day pocess of the restaurant and saves the time. The system will be able to handle many services to the users. In current dining environment handling physical files for conveying available foods and choices to customer is not an easy task. In this system, easy to convey the food items and process of transfering orders to the kitchen for preperation. It comprises inventories, records and managing orders. The order management involves creation and deletion of the orders, updating the food menu, updating daily inventory and closing orders. All orders made should be stored in the system database. Safety and easyness of using and most importantly efficiency of retrieving information are the major benefits of the poject . The system should be user appropriate, easy to use, provide easy recovery and overall end user high subjective satisfaction.

2. OVERALL DESCRIPTION

The following section presents overall desciption about the system. The product has been put into a detailed assessment of the system, user, hardware, software and communication interfaces, memory consideration and adoptive requirements.

2.1 Product perspective

The restaurant resevation system is new self-contained system in order to overcome the problems that have occured in current system. The newly introduced system provides an easy access to the system and it will contain user friendly functions with attactive interfaces. System will give better options for handling large physical file system, for the errors occuring in calculation. In this system orders are made or cancelled by the customers by filling the details for specific date and time along with the quantity and the order processed by the software. Food details send to the kitchen or employee. Order details saved in the inventory database. The system will give final outcome which will incease the efficiency of all tasks.

2.2 Product Features

1. Make oders
2. Select items
3. Issue confirmations
4. Cancel orders
5. Update the food menu
6. Make changes in website
7. Manage inventory
8. Set rates
9. Retrieve reports

2.3 User classes and Characteristics

There are mainly 2 users:

1. Employee(waiter/cheff)
2. Manager

Employee:

Many cheffs are there for preparing different food items according to the orders they received though this system. Waiters are also there for serving the food for customers.

Manager:

Manager has the privilage of monitoring and authorization of all tasks handled by the system. Taking backups and restoring details all done by manager and can access all functionalities which are perfomed by system. Manager manages all these things and recieves the daily order details and info about the daily income. Manager has permission to update the menu or prices timely in the website.

2.4 Operating requirements

Hardware requirements:

1. Operating system supports all known operating systems.
2. Monitor with 512gb ROM+6gb RAM, minimum resolution of 1028x720, keyboard and mouse.
3. Hard drive should be with 10 gb of free space.

Software requirements:

1. Software is designed to open on any bowsers or any plateform.
2. Microsoft SQL sevrver management studio express 2010.
3. HTML , CSS, JAVASCRIPT, BOOTSTRAP, PHP AND MYSQL.

2.5 Design and implementation constraints

Development team can provide their best effort for developing. In order to maintain reliability and durability of the system some constraints are applied. Due to time constraint portability of system is not possible and need to have atleast 1GB of memory. In design interface we had the capability of work with new tools. Considering the budget decided to create interfaces in a simple manner with affordable technology.

2.6 Assumptions and Dependies

Some software use high cost for implementing the system and the client also agreed for that. Its assumed that client won't change the decison on the next phases. Although the client using a software we have to make the project according to them, if client need changes we need to change the SRS document.

3. EXTERNAL INTERFACE REQUIREMENTS

3.1 User Interfaces:

Manager interface

Manager have the pemission to access all interfaces, also change or update the menu inteface and can change the infomation of software. Manager accepts the orders and change the prices. The ordered details all are stored in inventoy database from that manager can access daily infomation about the orders. Also have the pemission to backup all the customer details and ordered details. Also add the employese and can remove the employees and customers.

Employee interface

Cheff prepare food according to the order details received from the system. Many cheffs are there for preparing different food items according to the quantity and types of food items ordered.

Waiter arranges the table accoding to the reservation details and serves the food based on the orders recieved from the customers. Employees receives the data according to their functions.

Customer interface

Uses restaurant opening page and details page for giving the details about the customer name, phone number etc. Uses menu page for selecting the list of food items with quantity and also perfoms table reservation.After ordering receives order confirmation via gmail. Use contact interface for clarifying the doubts if any quaries are there.

3.2 Software Interfaces

The system shall communicate with configurate to identify all the available poducts. The system should communicate with system manager to get the poduct sepcification and should use above windows 7 operating system. There are details interface and menu and ordeing intefaces are there in the system.

3.3 Hardware Interfaces

A specified computer must match with the above mention requirements in order to gain the maximum benifites from the system in a useful manner. Resevation alerts should be send to the employees of the restaurant so need of broadband internet connection. Also need network for updating the infomation. Shall be logical address of the system in Ipv6 format.

3.4 Communication Interfaces

Communication function required the internet protocol version 6 and it will follow HTTPS. It will use FTP for whole system with local server. And email communication to device to device of the system for giving the ordered details and infomation to the management and Employees.

4. FUNCTIONAL REQUIREMENTS

Food Order

Customer can order food using this system easily. Various items, prices and their quantity are there in the system. Customer can order in their convenient way by filling information about the customer.

Take Order

The cheff will recieve the ordered details and prepare the food according to the requirement.

Veiwing order statistics

The manager can access all the order details everyday and the data is stored in the inventory. The amount information also stored in inventory.

Updating menu and prices

The manager have the permission to update the data. Manager will add or remove the food items and also can change the prices.

5. NON-FUNCTIONAL REQUIREMENTS

5.1 Performance

Product will be based on local sever, perfomance will depend on the hardware and software components, different databases for employees.

5.2 Security

The whole system is secured. Only admin can access all the data. System will use HTTPS because this protocol is more secure.

5.3 Software quality

Its depend on the code and design used to develop the system.

5.4 Availability

The system is always available without any time limitation. But the restaurant opening time is 10.00 AM and closing time is 10.00 PM.

Design Introduction:

Design is the first step in the development phase for any techniques and principles for the purpose of defining a device, a process or system in sufficient detail to permit its physical realization. Once the software requirements have been analyzed and specified the software design involves three technical activities - design, coding, implementation and testing that are required to build and verify the software.

The design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished softwareor a system.

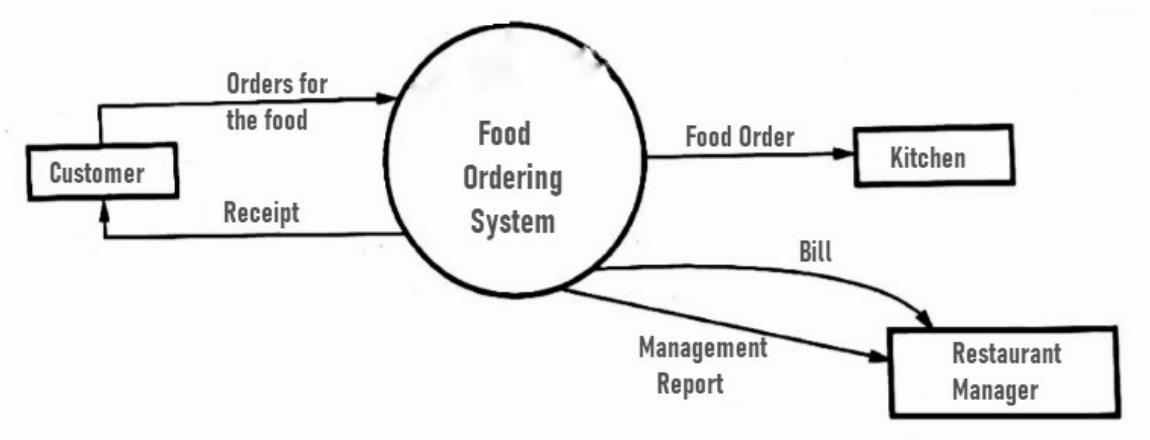
Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into a representation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data.

6. UML DIAGRAMS

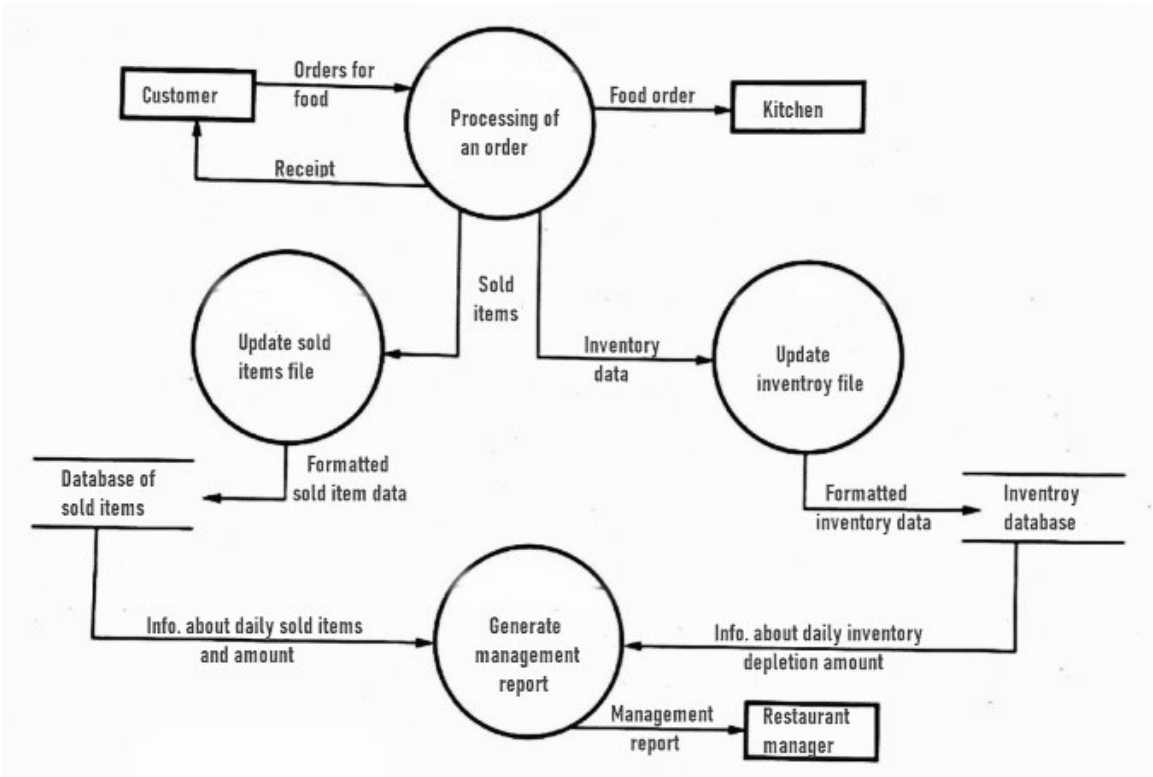
UML stands for Unified Modeling Language. UML is a language for specifying, visualizing and documenting the system. This is the step while developing any product after analysis. The goal from this is to produce a model of the entities involved in the project which later need to be built. The representation of the entities that are to be used in the product being developed need to be designed.

6.1 Data flow Diagrams

Level 0



Level 1



6.2 ER Diagram

The Entity-Relationship (ER) model was originally proposed by Peter in 1976 [Chen76] as a way to unify the network and relational database views. Simply stated the ER model is a conceptual data model that views the real world as entities and relationships. A basic component of the model is the Entity-Relationship diagram which is used to visually represent data objects. Since Chen wrote his paper the model has been extended and today it is commonly used for database design for the database designer, the utility of the ER model is:

- It maps well to the relational model. The constructs used in the ER model can easily be transformed into relational tables.
- It is simple and easy to understand with a minimum of training. Therefore, the model can be used by the database designer to communicate the design to the end user.
- In addition, the model can be used as a design plan by the database developer to implement a data model in specific database management software.

ER Notation:

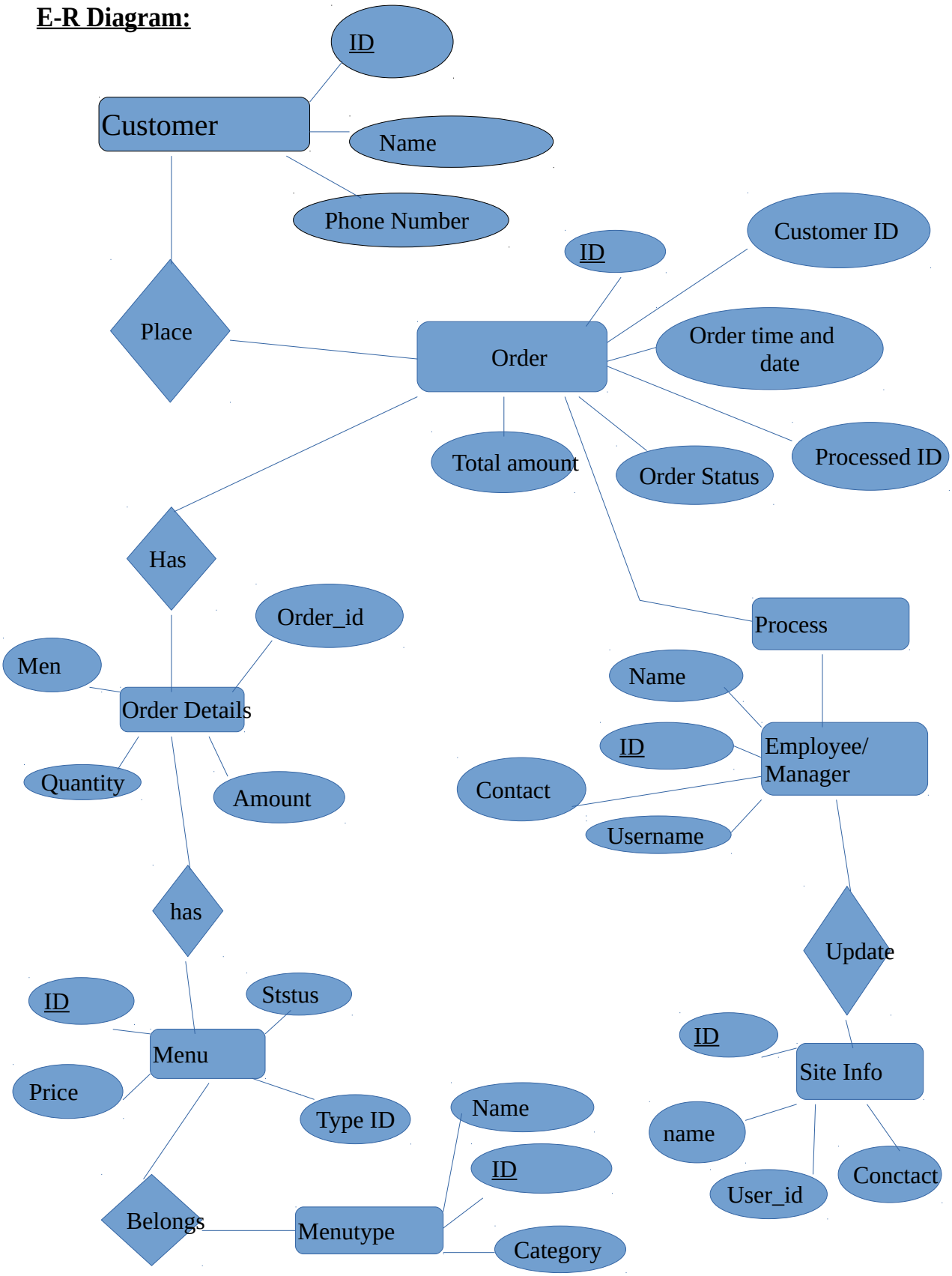
There is no standard for representing data objects in ER diagrams. Each modeling methodology uses its own notation. The original notation used by Chen is widely used in academics texts and journals but rarely seen in either CASE tools or publications by non-academics. Today, there are a number of notations used; among the more common are Bachman, crow's foot, and IDEFIX.
All notational styles represent entities as rectangular boxes and relationships as lines connecting boxes. Each style uses a special set of symbols to represent the cardinality of a connection. The notation used in this document is from Martin. The symbols used for the basic ER constructs are:

- **Entities** are represented by labeled rectangles. The label is the name of the entity. Entity names should be singular nouns.

- **Relationships** are represented by a solid line connecting two entities. The name of the relationship is written above the line. Relationship names should be verbs.
- **Attributes**, when included, are listed inside the entity rectangle. Attributes which are identifiers are underlined. Attribute names should be singular nouns.
- **Cardinality** of many is represented by a line ending in a crow's foot. If the crow's foot is omitted, the cardinality is one.

Existence is represented by placing a circle or a perpendicular bar on the line. Mandatory existence is shown by the bar (looks like a 1) next to the entity for an instance is required. Optional existence is shown by placing a circle next to the entity that is optional.

E-R Diagram:


ID
Customer
Name
Phone Number
Customer ID
ID
Place
Order
Order time and date
Total amount
Order Status
Processed ID
Has
Order_id
Process
Men
Order Details
Name
ID
Employee/ Manager
Quantity
Amount
Contact
Username
has
Update
ID
Ststus
ID
Menu
Site Info
Price
Type ID
Name
name
ID
User_id
Conctact
Belongs
Menutype
Category

6.3 USECASE DIAGRAMS

Use case diagrams model behavior within a system and helps the developers understand of what the user require. The stick man represents what's called an actor.

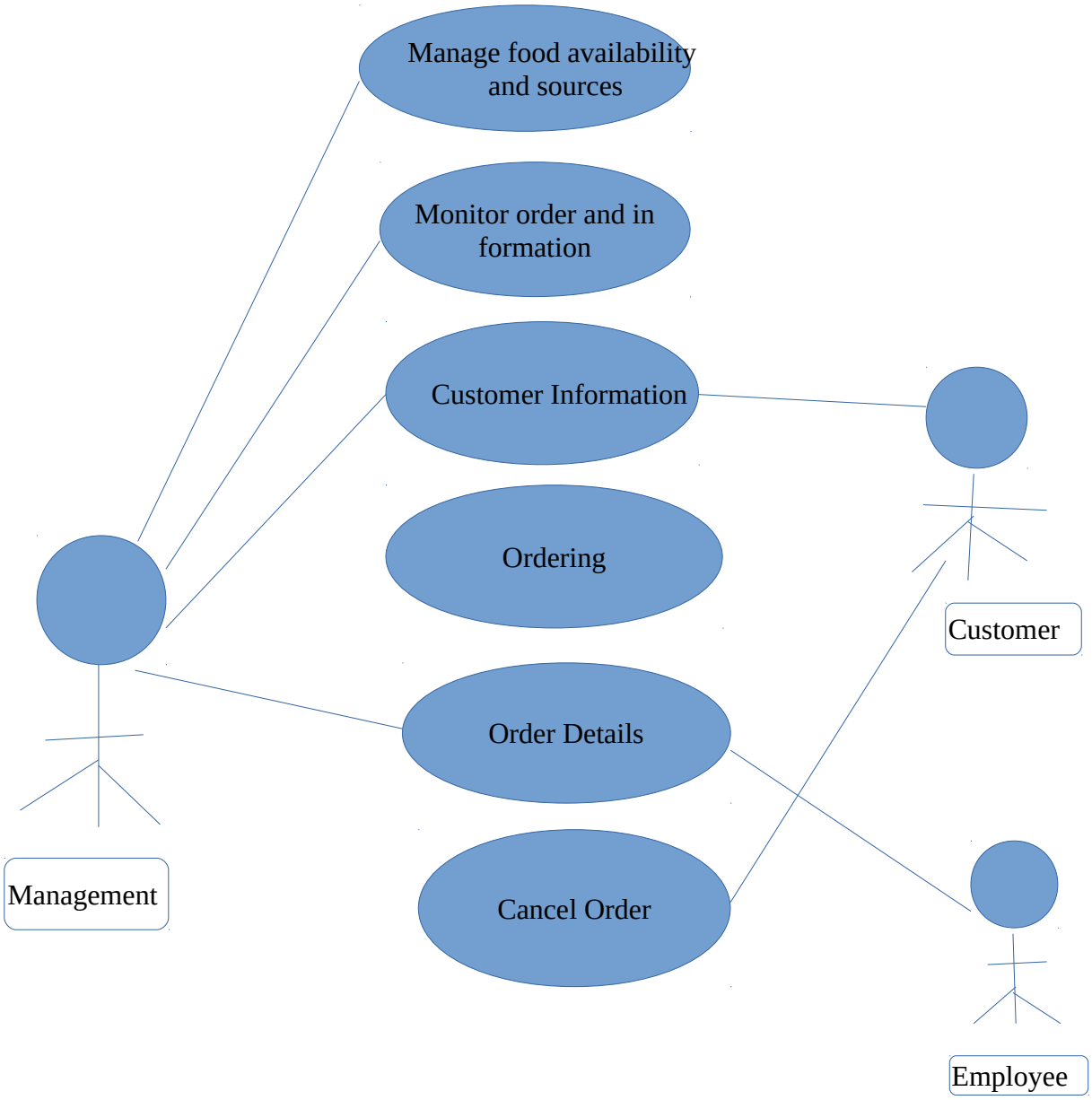
Use case diagram can be useful for getting an overall view of the system and clarifying that can do and more importantly what they can't do.

Use case diagram consists of use cases and actors and shows the interaction between the use case and actors.

- The purpose is to show the interactions between the use case and actor.
- To represent the system requirements from user's perspective.
- An actor could be the end-user of the system or an external system.

USECASE DIAGRAM: A Use case is a description of set of sequence of actions. Graphically it is rendered as an ellipse with solid line including only its name. Use case diagram is a behavioral diagram that shows a set of use cases and actors and their relationship. It is an association between the use cases and actors. An actor represents a real-world object. Primary Actor – Sender, Secondary Actor Receiver.

Usecase Diagram:



7. IMPLEMENTATION AND SYSTEM TESTING:

After all phase have been perfectly done, the system will be implemented to the server and the system can be used.

System Testing

The goal of the system testing process was to determine all faults in our project .The program was subjected to a set of test inputs and many explanations were made and based on these explanations it will be decided whether the program behaves as expected or not. Our Project went through two levels of testing.

1. Unit testing
2 .Integration testing

Unit Testing

Unit testing is commenced when a unit has been created and effectively reviewed. In order to test a single module we need to provide a complete environment i.e. besides the section we would require. The procedures belonging to other units that the unit under test calls Non local data structures that module accesses.

Integration Testing

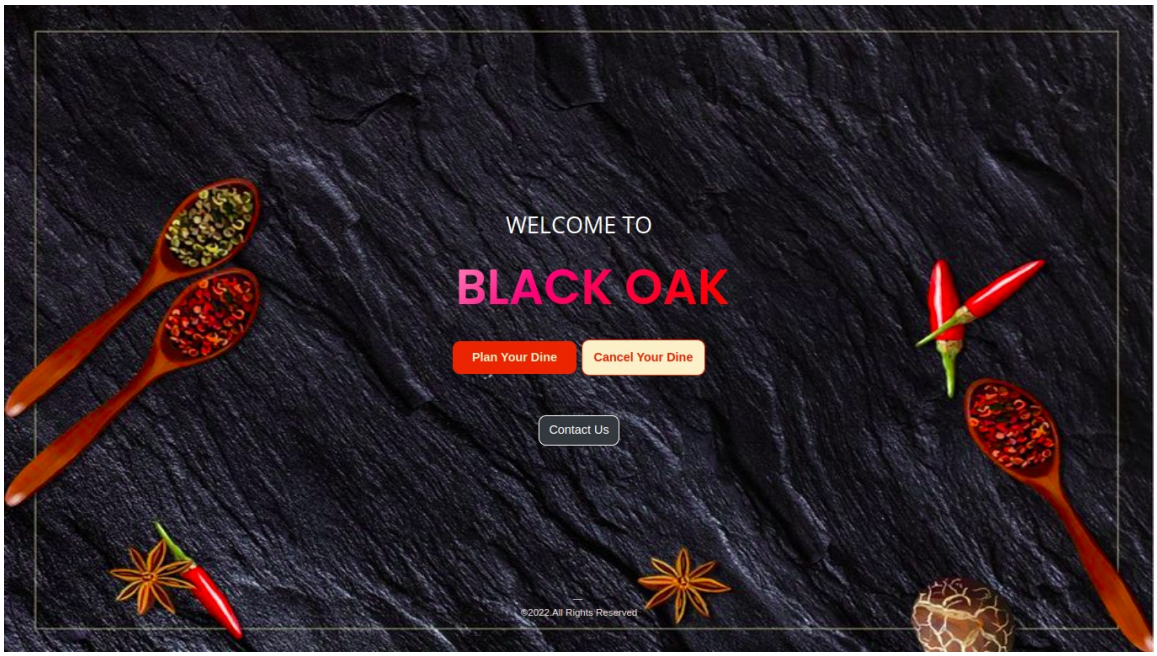
In the Integration testing we test various combination of the project module by providing the input. The primary objective is to test the module interfaces in order to confirm that no errors are occurring when one module invokes the other module.

Regression testing

Regression testing is a software testing practice that ensures an application still functions as expected after any code changes, updates, or improvements. Regression testing is responsible for the overall stability and functionality of the existing features.

8. PROJECT OUTPUT:

HOME PAGE:



CONTACT US PAGE:

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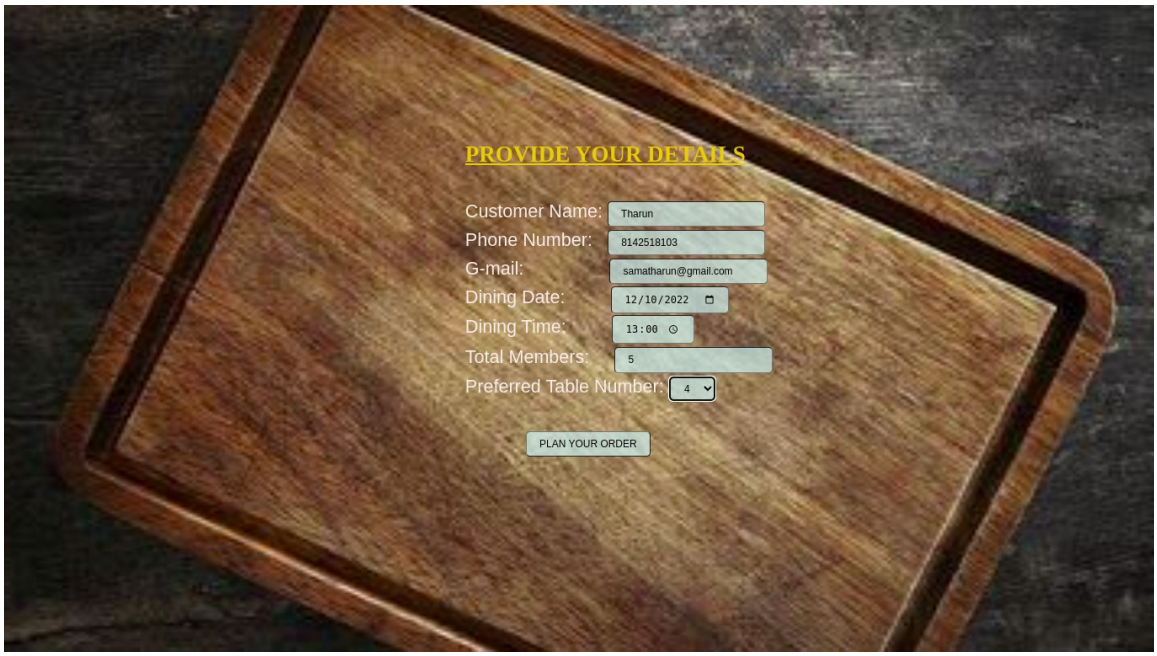
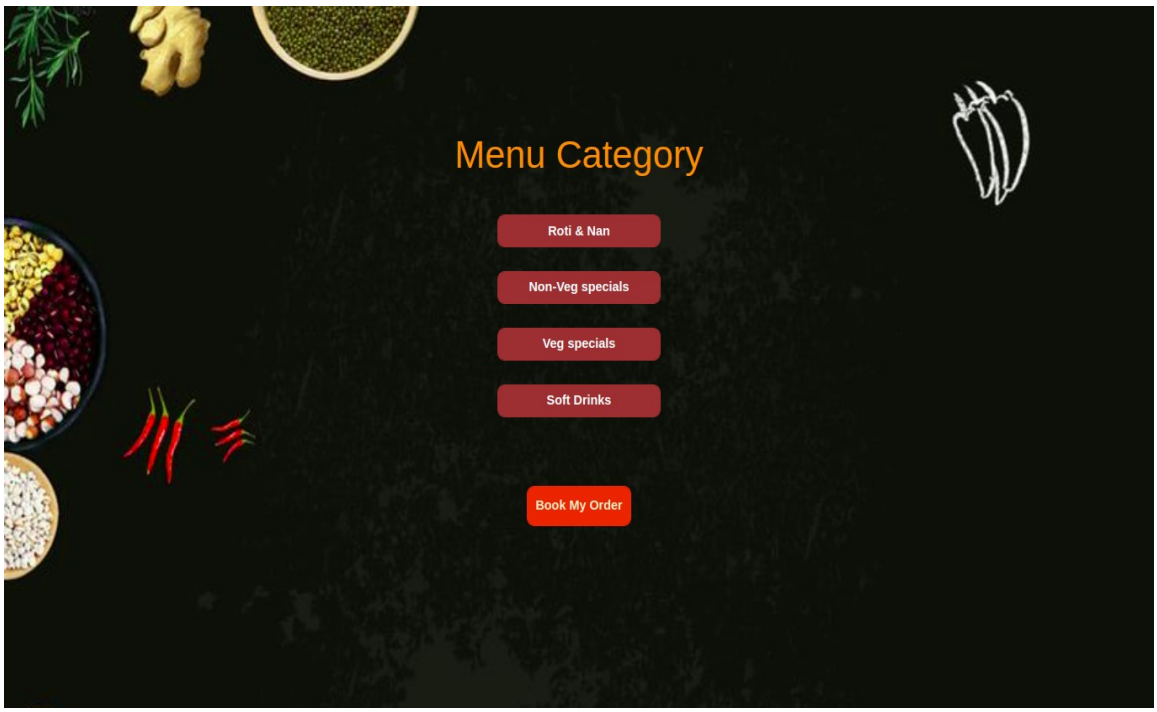
+918142518103

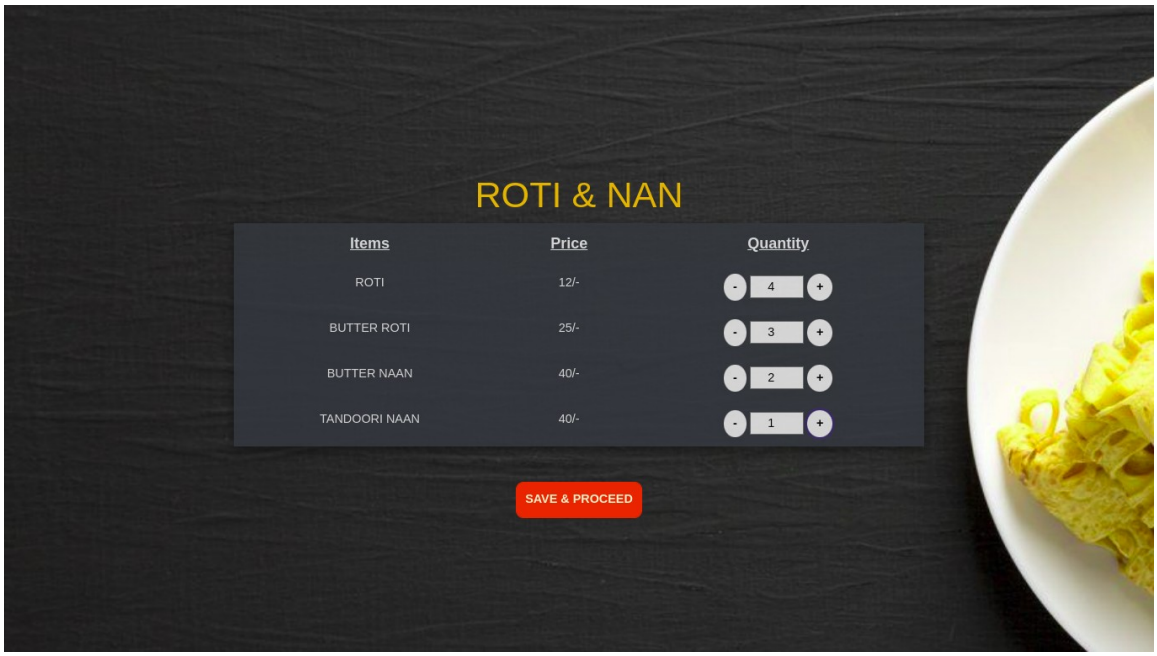
CUSTOMERS DETAILS PAGE:



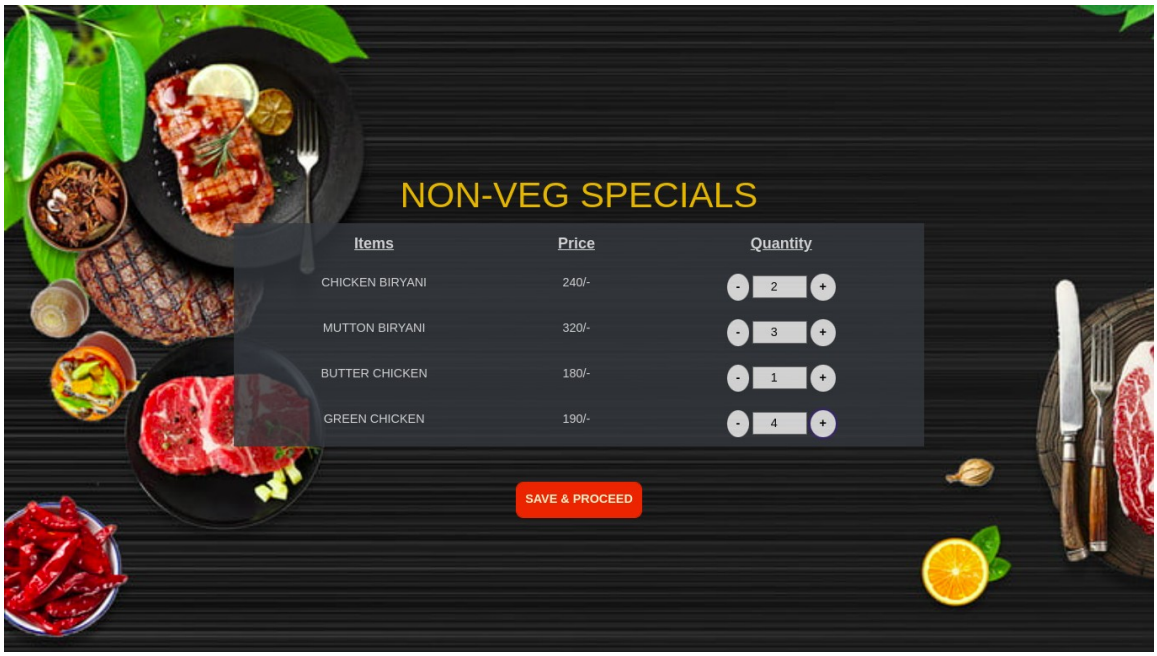
MENU PAGE:



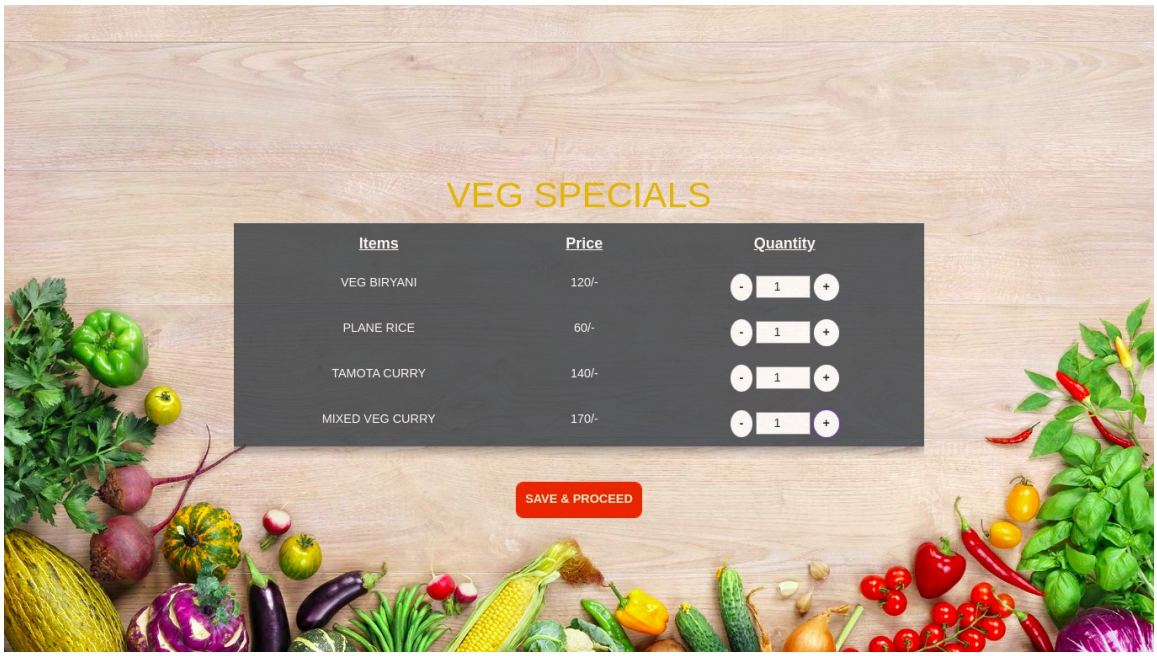
ROTI PAGE:



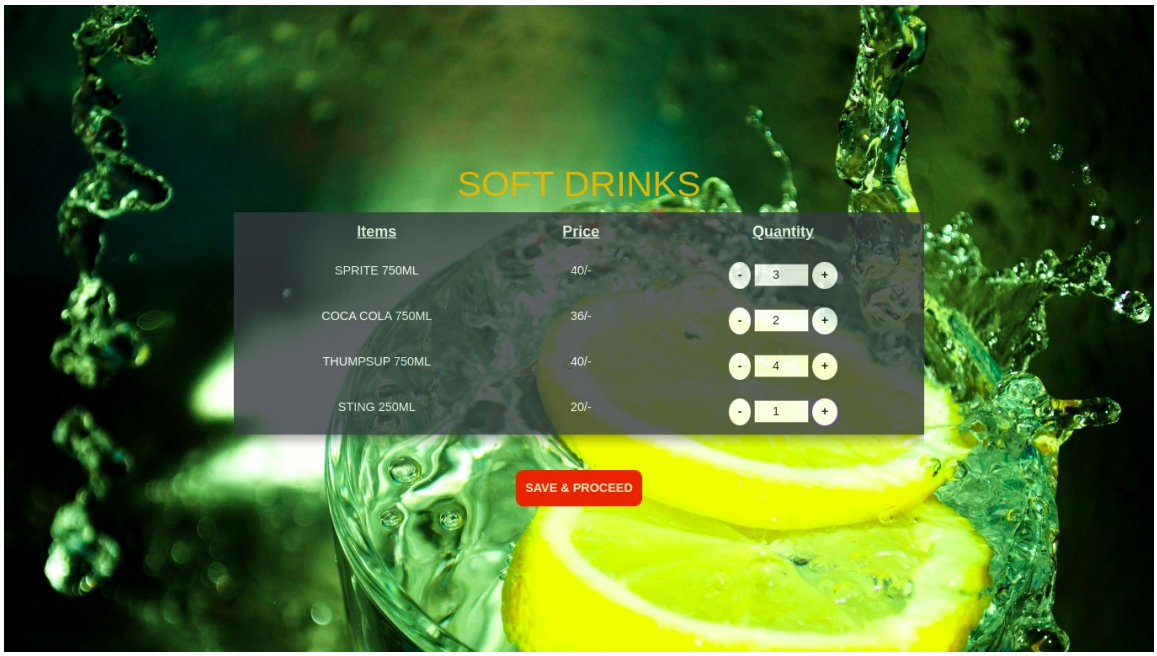
NON VEG SPECIALS PAGE:



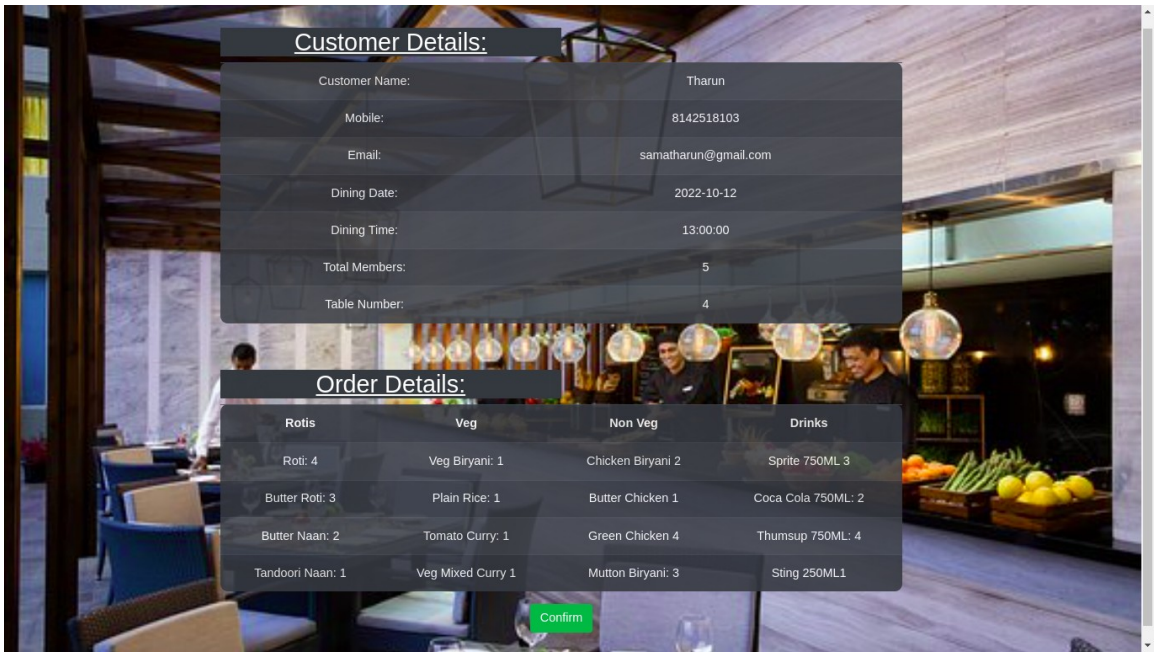
VEG SPECIALS PAGE:



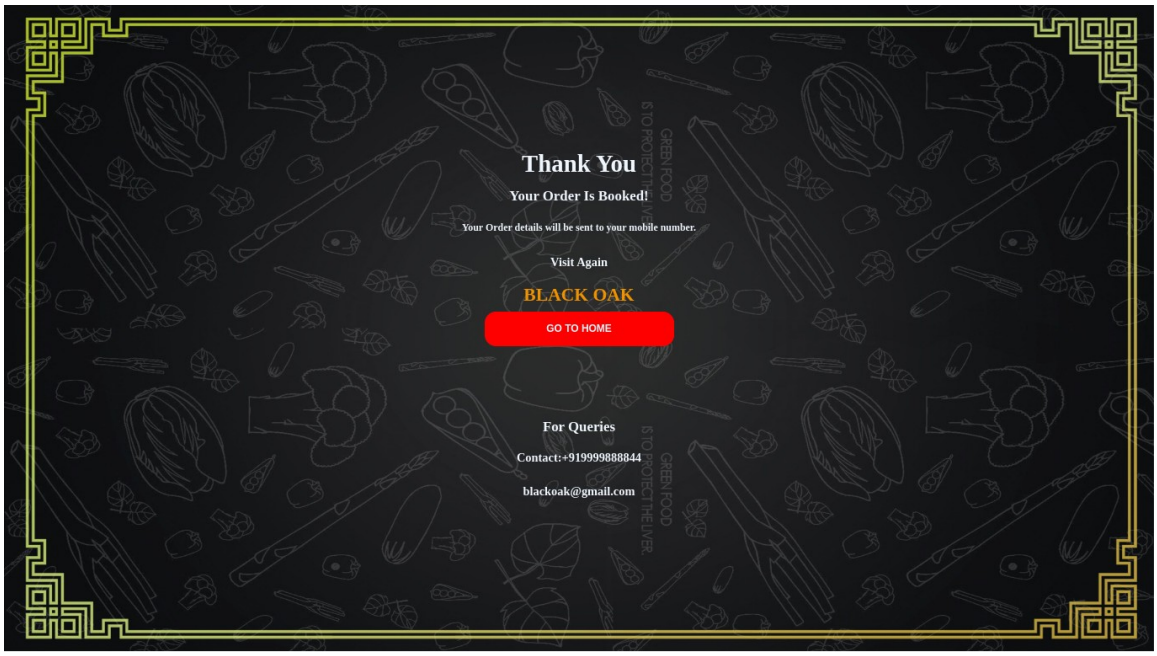
SOFT DRINKS PAGE:



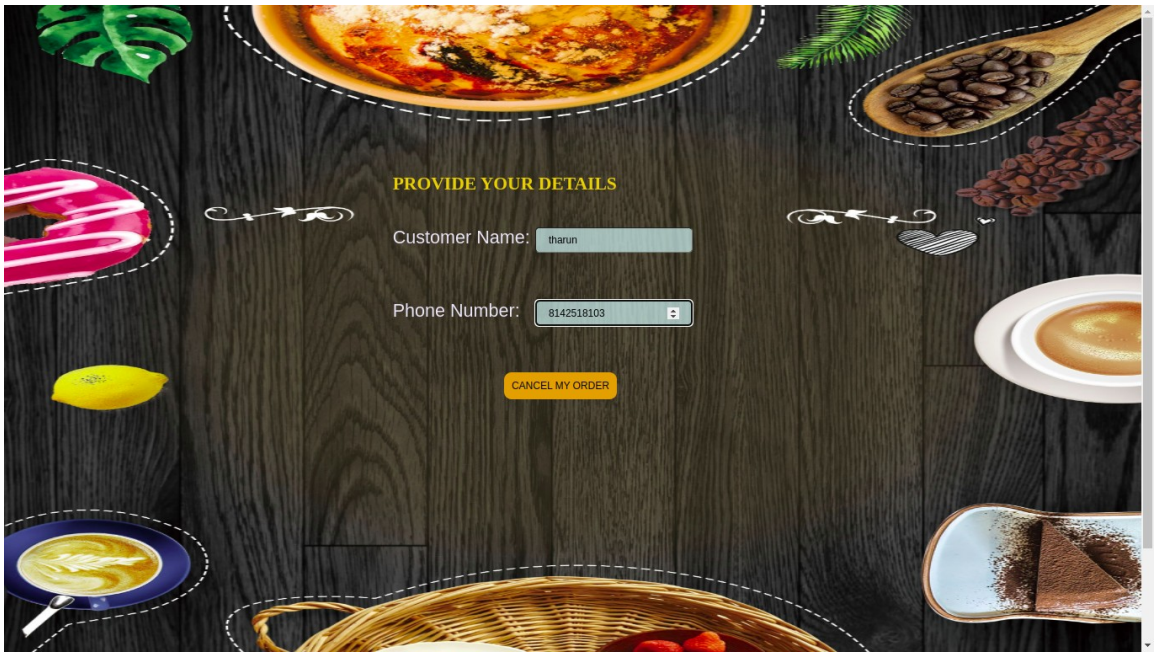
ORDER DETAILS PAGE:



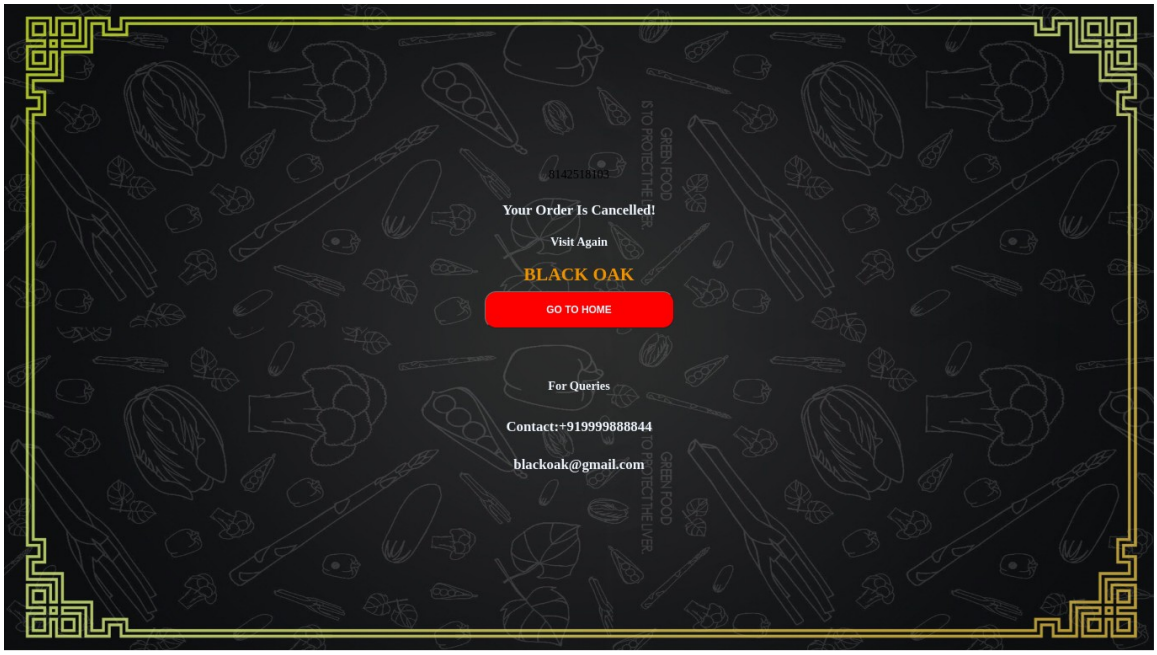
ORDER CONFIRMATION PAGE:



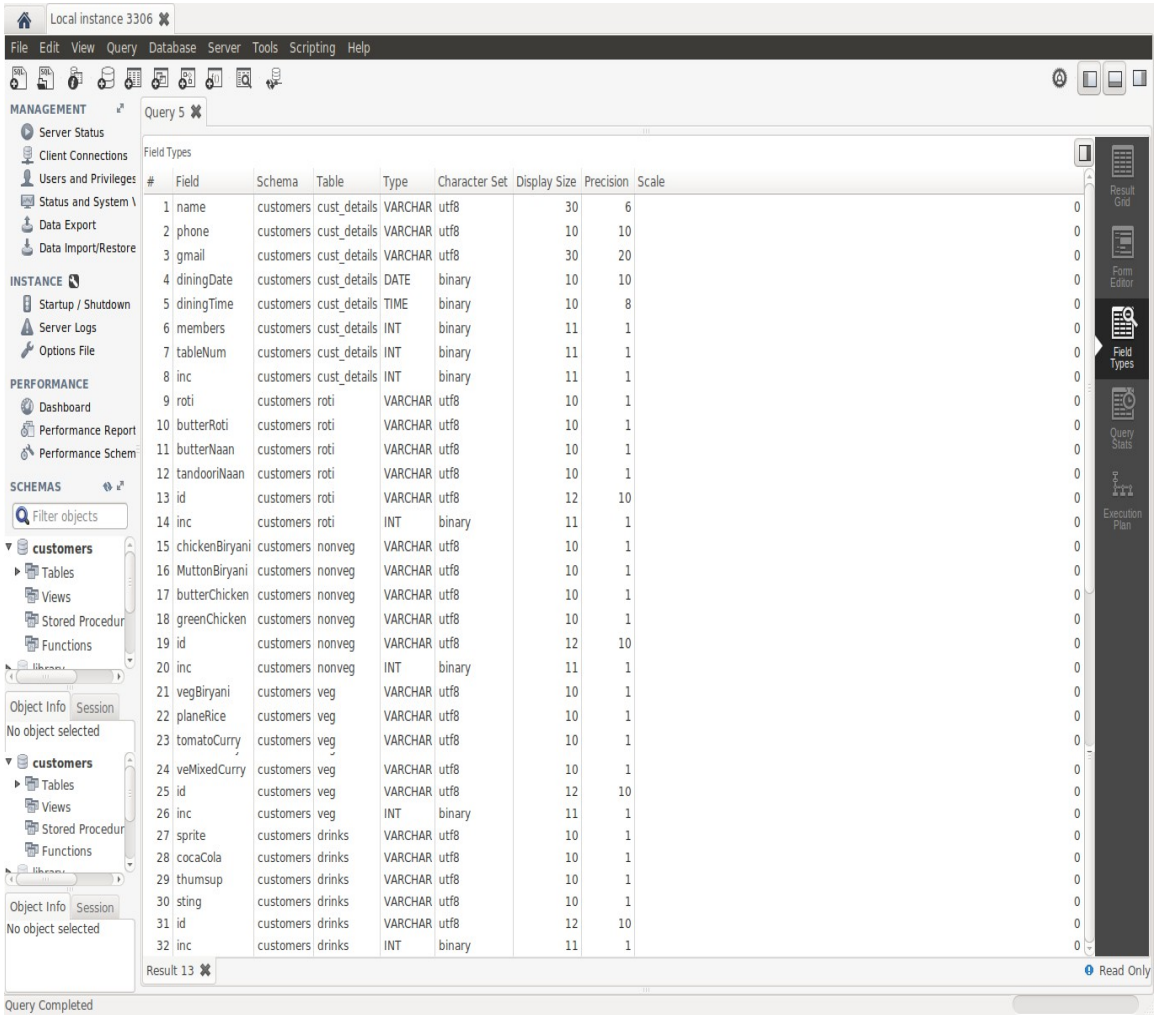
ORDER CANCELLATION PAGE:



ORDER CANCEL CONFIRMATION PAGE:

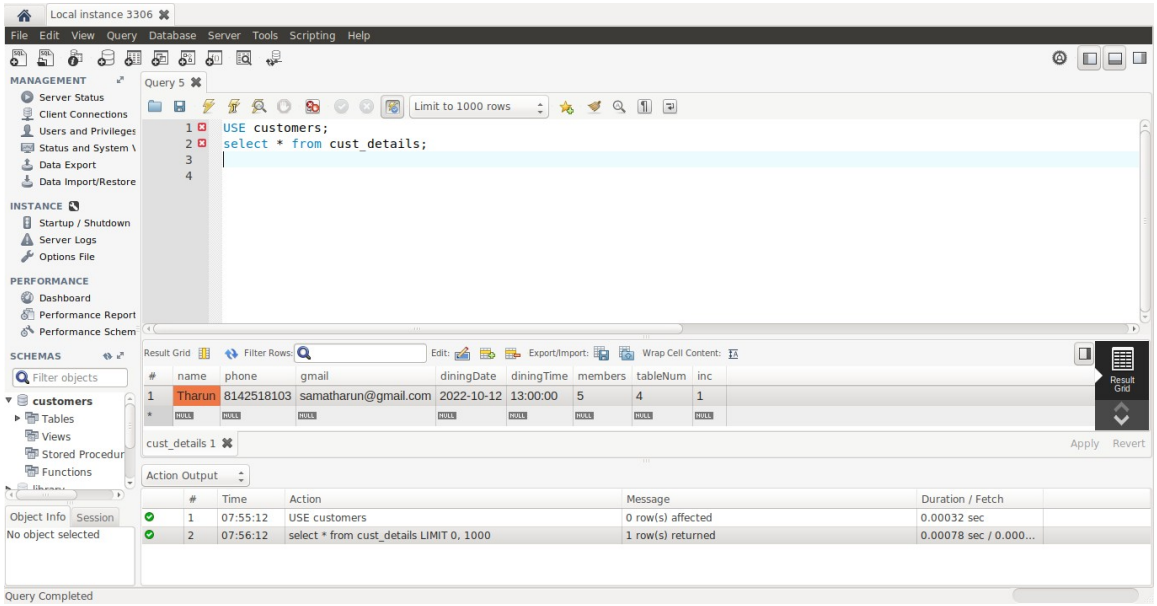


9. MYSQL DATABASE

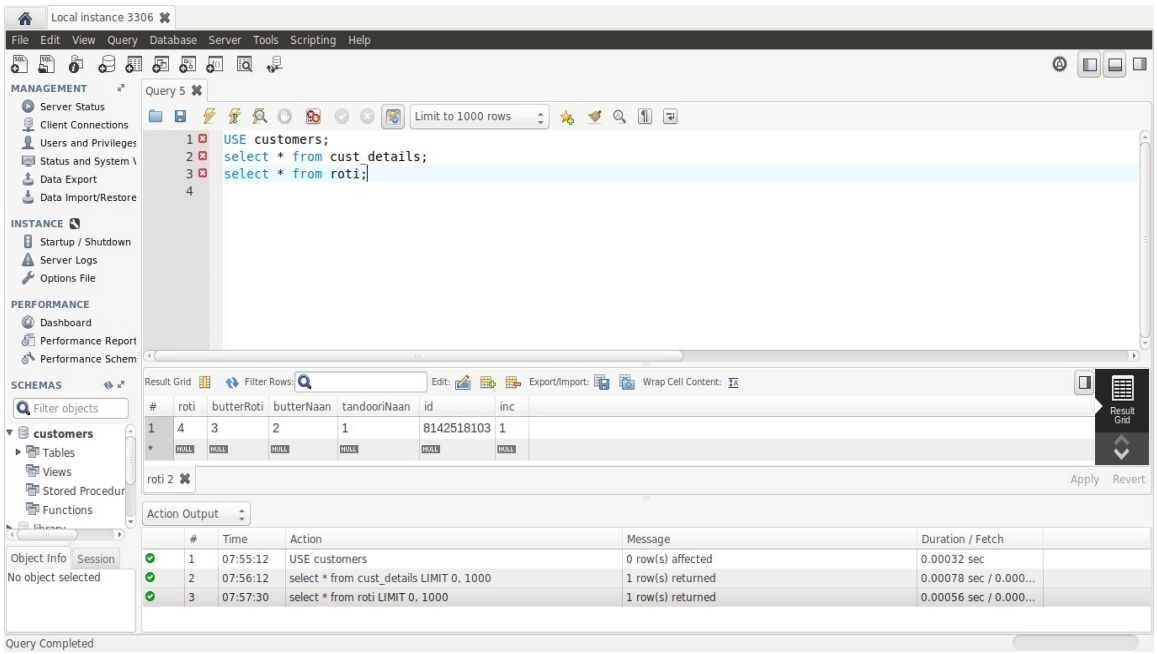


#	Field	Schema	Table	Type	Character Set	Display Size	Precision	Scale
1	name	customers	cust_details	VARCHAR	utf8	30	6	0
2	phone	customers	cust_details	VARCHAR	utf8	10	10	0
3	gmail	customers	cust_details	VARCHAR	utf8	30	20	0
4	diningDate	customers	cust_details	DATE	binary	10	10	0
5	diningTime	customers	cust_details	TIME	binary	10	8	0
6	members	customers	cust_details	INT	binary	11	1	0
7	tableNum	customers	cust_details	INT	binary	11	1	0
8	inc	customers	cust_details	INT	binary	11	1	0
9	roti	customers	roti	VARCHAR	utf8	10	1	0
10	butterRoti	customers	roti	VARCHAR	utf8	10	1	0
11	butterNaan	customers	roti	VARCHAR	utf8	10	1	0
12	tandooriNaan	customers	roti	VARCHAR	utf8	10	1	0
13	id	customers	roti	VARCHAR	utf8	12	10	0
14	inc	customers	roti	INT	binary	11	1	0
15	chickenBiryani	customers	nonveg	VARCHAR	utf8	10	1	0
16	MuttonBiryani	customers	nonveg	VARCHAR	utf8	10	1	0
17	butterChicken	customers	nonveg	VARCHAR	utf8	10	1	0
18	greenChicken	customers	nonveg	VARCHAR	utf8	10	1	0
19	id	customers	nonveg	VARCHAR	utf8	12	10	0
20	inc	customers	nonveg	INT	binary	11	1	0
21	vegBiryani	customers	veg	VARCHAR	utf8	10	1	0
22	planeRice	customers	veg	VARCHAR	utf8	10	1	0
23	tomatoCurry	customers	veg	VARCHAR	utf8	10	1	0
24	veMixedCurry	customers	veg	VARCHAR	utf8	10	1	0
25	id	customers	veg	VARCHAR	utf8	12	10	0
26	inc	customers	veg	INT	binary	11	1	0
27	sprite	customers	drinks	VARCHAR	utf8	10	1	0
28	cocaCola	customers	drinks	VARCHAR	utf8	10	1	0
29	thumsup	customers	drinks	VARCHAR	utf8	10	1	0
30	sting	customers	drinks	VARCHAR	utf8	10	1	0
31	id	customers	drinks	VARCHAR	utf8	12	10	0
32	inc	customers	drinks	INT	binary	11	1	0

CUSTOMERS DETAILS DATABASE:



ROTI ORDERING DATABASE:



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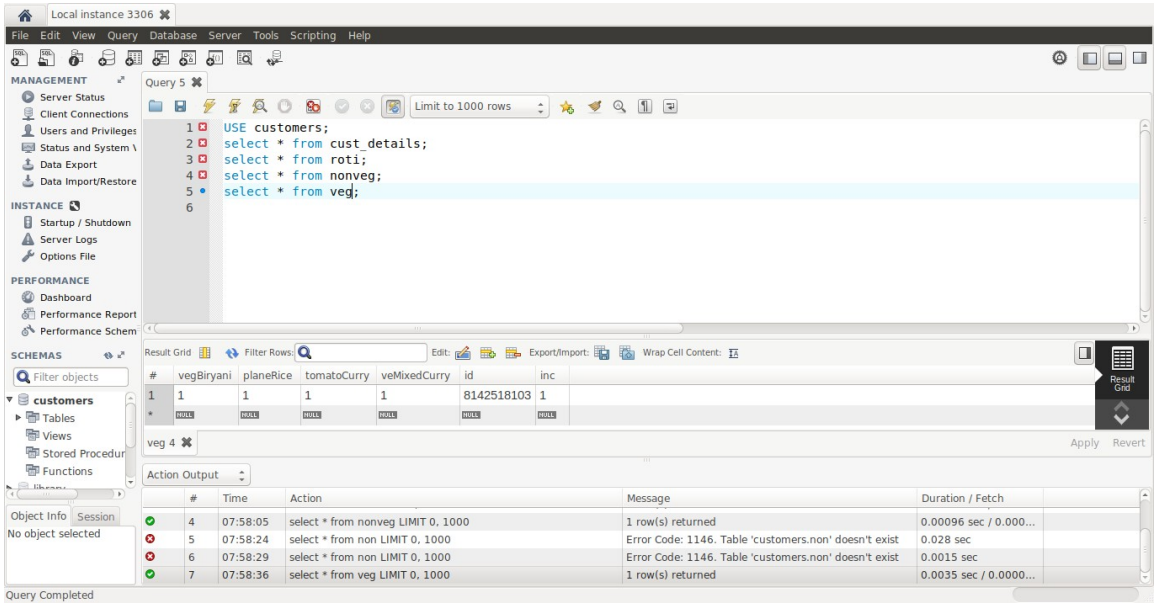
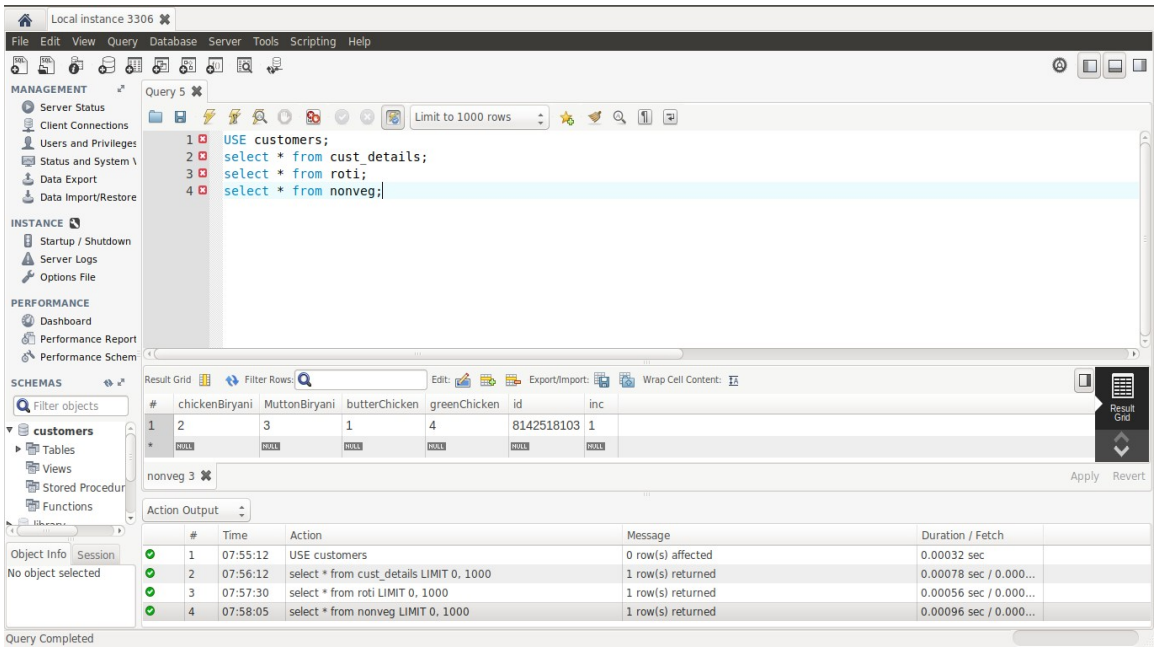
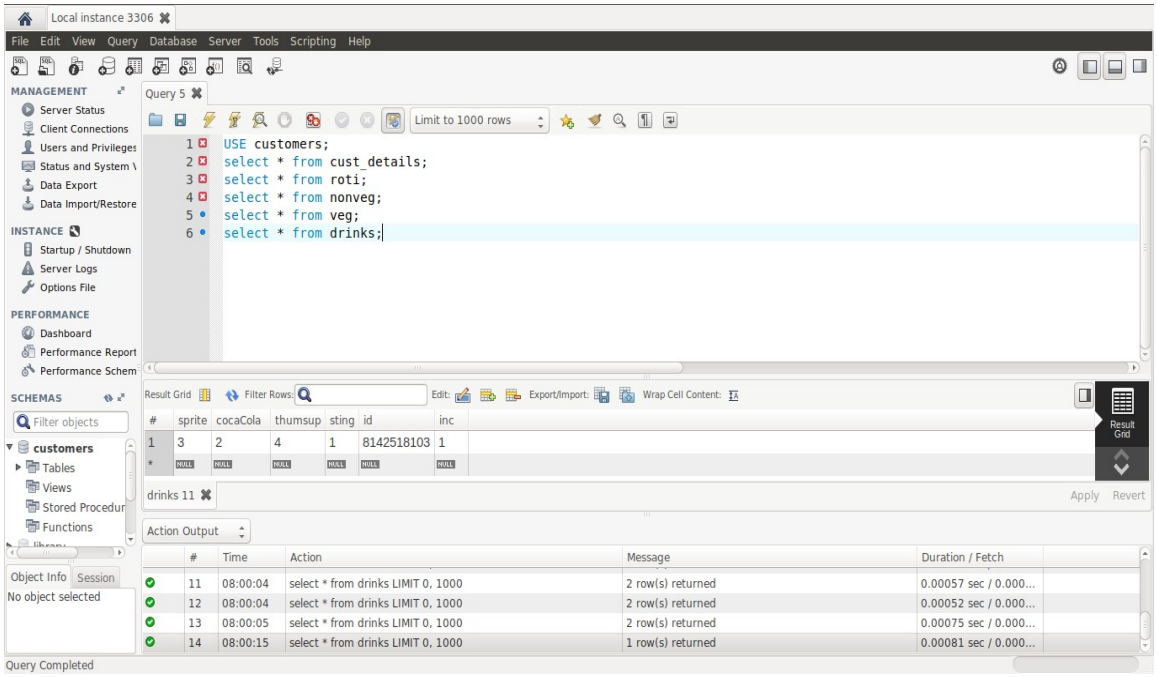


NONVEG ORDERING DATABASE:



DRINKS ORDERING DATABSE:



10. CONCLUSION

Online restaurant management system will include both restaurant software and hardware that is user friendly and provides management features in accorodance with business needs. The best restaurant management systems anticipate future upgrades or business expansions and are compatible with social media and mobile app platforms. A restaurant management system can improve both employee and customer experience and increase profitability from business bottom line.

11.REFERENCES

www.academia.edu
www.w3schools.com
www.stackoverflow.com
www.getbootstrap.com

********** **THANK YOU** **********