



**Project Report
for
Yeti Online Restaurant Management System**

Unit Code: SENG 205

Unit Title: Software Engineering

Assessment 3

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Table of Content

Table of Content	2
1.0 Introduction	4
1.2 What is Online Restaurant Management System?.....	4
1.3 Background of the project	4
1.4 Objective of the project.....	5
1.5 Scope of the project.....	5
2.0 Requirements Elicitation.....	6
2.1 Initial investigation	6
2.2 Study and Requirement Gathering.....	6
2.3 High Level Elicitation Requirements.....	8
2.4 context level diagram	9
3.0 Requirements Analysis and Prioritization.....	10
3.1 Functional Requirements.....	10
3.2 Non-Functional Requirements.....	11
3.3 Requirement Specification	12
4.0 Software Development Life Cycle.....	13
4.1 Scrum Model.....	13
4.2 Sprint.....	13
4.3 Scrum Master and Daily Scrum.....	14
5.0 Project timeline.....	16
5.1 Gantt charts	16
5.2 Milestone	17
6.0 Architecture Design (High level Design)	18
6.1 Architecture Diagram.....	18
6.2 Sequence Diagram	19
7.0 Detailed Design (UML)	22
7.1 Logical Entity Relationship Diagram	17
7.2 Use Case Diagram	23
7.3 Use Case Description	24

8.0 High-Fidelity Prototypes	25
8.1 Home page	25
8.2 Order, Shopping cart, Checkout page, Register, Login and Payment	26
8.2.1 Order Selection	26
8.2.2 Checkout Page	28
8.2.3 Register or Login	31
8.2.4 Payment	33
8.3 Delivery Services	36
8.4 Online table booking.....	39
8.5 Customer loyalty program	42
8.6 Staff Login page	46
8.7 Payslip	47
8.8 Staff Timetable	48
8.9 Sales Report	49
8.10 Customer Loyalty Records	50
8.11 Inventory.....	51
9.0 Budget.....	52
9.1 Breakdown of the time and cost	53
9.2 Total cost time and cost analysis	54
9.3 Total Budget.....	55
10 Conclusion.....	56
11 Referencing List.....	57

1.0 Introduction

The project management requirements for the Yeti Restaurant are focused on delivering the restaurant a web-based solution for its IT purposes. The company is still using its legacy system, which cannot handle the restaurant's growing capacity. The system of the restaurant is in use for various organisational management purposes. Therefore, the upgrade of the restaurant's system is crucial for the company's business objectives.

1.2 What is Online Restaurant Management System?

The Online Restaurant Management System is a web-based restaurant management system. This method was intended to give both the restaurant and client with service facilities. Food ordering as well as reservation for table management was done by the customer through the web system. The management of information of customer and the employee, menu information management, and the reporting are among the services which were also provided. Therefore, it helps us to reduce the consumption of time as through the webpage the employees know the details of order within few seconds which make it more effective and convenient.

1.3 Background of the project

Yeti Restaurant Pty. Ltd., is based in Sydney, specializes in Indian, Pakistani and Nepalese cuisine. The restaurant provides a wide range of culinary products to their customers and which were currently operates with a network of marketing, promoting, staff, employees and vendors. Therefore, the Yeti restaurant wants to take their business to new heights as well as the restaurateur were dedicated to make the business operations which were more effective so that customers can be served in the quickest time possible.

1.4 Objective of the project

The management system of restaurant main goal is to serve as a central location for all food lovers to come and order their favourite dishes or dine with the finest cuisines at Yeti Restaurant Pty Ltd. The organization goal was to attract as many clients as possible. Therefore, the restaurant management main goals were to create a system for taking food orders as well as processing payments in real time. Secondly, to integrate a custom reporting feature as well. Thirdly, the system which can keep track of employees and pay hub generations. Fourth, reservations for tables in a restaurant can be made online. Fifth, maintaining a customer loyalty programme is also important. Finally, the procedure for developing the restaurant management system should be documented.

1.5 Scope of the project

The management system of restaurant mainly comprises of inventories, generate reports, record of employees and manages the orders. The creation and deletion of orders, the removal and addition of food workers from a request, and the closing of orders are all part of order administration. All the orders should be stored in the database of system and that was linked to major activities of project. Therefore, the testing as well as implementation might consume slightly longer time than expected.

2.0 Requirements Elicitation

2.1 Initial investigation

This web application system will be building base on React JS a web development framework that consist of HTML, CSS and JavaScript. This is to develop reusable user interface (UI) components (Aggarwal 2018). As a result, customer can order online and the order system will process the order and sent to the kitchen. Once the food is ready the kitchen staff will notify customer for pick up, dine in or delivery service.

The manager will be looking after the processing order, inventory, sales report, table reservation and customer loyalty program. This new restaurant management system is also be expected to manage staff timetable and generate their payslip every fortnight.

2.2 Study and Requirement Gathering

The day-to-day processes of Yeti Restaurant is substantial due to the ranging from managing employee time tables, monitoring attendance of the staff for preparing payroll. The management in Yeti Restaurant are generally involve with three major responsibilities. These responsibilities included the Front of House, back of house and Administration.

During the first week of the sprint meeting, we have investigated the legacy system from Yeti employees and customers used a requirement elicitation technique (Haumer & Weidenhaupt 1998) such as interviews to gather some of the requirements. Some of the questions were:

1. How the business flow?
2. What user interfaces would you preferred?
3. The employee's functionality?
4. What customer data required?
5. How customer would like to order from the internet
6. What sort of special discount or promotion would be customer like?

Interviewee	Comment
Regular Customers	<ul style="list-style-type: none"> Dining in and pick up the food was a little bit crowded, sometimes when we call for booking and take away.
Question 5,6	<ul style="list-style-type: none"> No one answer the call because the staff is busy. It would be nice if we get to order online It would be nice if we can check our loyalty points online instead of checking over the counter
Chef	<ul style="list-style-type: none"> I think notifying the customer when the food is done shouldn't be part of our job.
Question 3	<ul style="list-style-type: none"> Receiving an order from the system after a customer has ordered would be great for us to prepare the ingredient earlier.
Waiter	<ul style="list-style-type: none"> The chef normally hands over the take away food for us to pack in the bag and put inside the hot fridge.
Question 3,5	<ul style="list-style-type: none"> We will hand over the food when the customer arrived for pick up. We will arrange the table for the customer after we received call for table booking.

2.3 High Level Elicitation Requirements

Interviewee	Comment
Yeti Chief Executive Officer/ Owner	<ul style="list-style-type: none"> I always like the color of crimson; it looks majestic for my restaurant. That's why my signboard is crimson in color. The website would be nice in red or crimson to match my restaurant trademark.
Question 2	
Head Chef	<ul style="list-style-type: none"> After the first week of sprint prototype testing, I think the customer should choose the order type first before they choose the food because by the time the food ready it will take time for the customer to come and the food will turn cold.
Question 3,5,1	
Restaurant Manager	<ul style="list-style-type: none"> I need to look at the sales report and inventory list in the system The customer record should have name, loyalty card number and which date did they registered. Only the managers are allowed to amend and view of the sales, inventory and loyalty problem records. We don't think the customer will get a table while only given the option to choose the order type when the food is ready, we need to change this.
Question 3,1,5	

At first, the requirements of the order sequence were allowing the customer pay for the food first and then given the option to choose the order type once the food is ready.

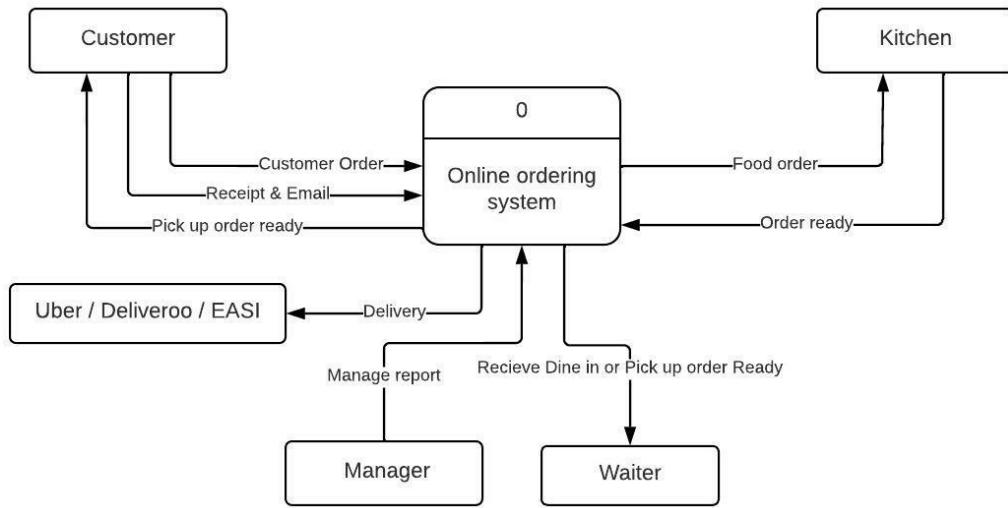
However, after the first week of sprint running the prototype testing on the order requirements from the manager and head chef. We notice that the food will get cold easily by the time the customer arrives for pick up or dine in. Moreover, customer order the food first and only reserve the table when the food is ready would be difficult for the waiter to prepare a new table in the event if all the table are fully occupied.

As a result, we have given the customer the option to choose the order type first before moving into selecting the food order and pay after eliciting high requirements from the first week of sprint by presenting the prototype to the head chef, manager and owner of Yeti.

2.4 context level diagram

Below the context level 0 diagram shows the business flow of the online ordering system after eliciting requirements.

Yeti Online ordering System



Context Level Diagram

3.0 Requirements Analysis and Prioritization

3.1 Functional Requirements

Functional Requirements	Priority
As customer they can scan QR code to our website	3
Customer can choose to Take away & delivery	1
Customer can dine in (able to select & update table number)	2
Customer can see the display Food image, details and price	1
Customer can add items in shopping cart	2
Customer can make Payment (Apple pay, google pay and Credit card)	2
Customer will receive Order Confirmation after paid	1
Manger and staff will get notification from CMS	2
Manager can view Inventory	2
Manager can access product list and details (CRUD)	1
Manager and waiter can access staff timetable and Pay slip	2
Manager can access to report (sales, inventory and loyalty program)	1
Manger will receive Notification (less stock in inventory)	2
Manager can change settings (payment, opening hours, tables etc.)	2

3.2 Non-Functional Requirements

Non-Functional Requirements

Security of the System:

The payment method should be secure in the online system because any other kind of risks are not bearable and prevent the system from any kind of outsider attack. The payment process will be secure with the help of the POS System.

Performance:

The performance of the system should be checked with the speed scalability, stability, and response time of the user. The 9 am to 3 pm and 5 pm to 10 pm are the peak hours in which there is a lot of loading the traffic on the system. The message confirmation will display on the user screen within 5 seconds after the user sends the request to the management.

Accessibility:

The authorized members of the Yeti Staff only have the accessibility to create and edit the menu. This action is only performed by the admin panel. Accessibility is only given to the authorized person.

Understandability:

The system can easily understand by the user. The system must be user-friendly any update can easily by the users.

Efficiency:

The system should be so efficient that the response time for the user should be less than 5 seconds after the user submitted their queries.

Maintainability:

If the restaurant management wants the modification to the system so they can easily modify the system. They could easily expand the capabilities which they want.

3.3 Requirement Specification

Hardware Requirements	
memory	MEMORY (RAM): 64.00 GB
Processor	11th Gen Intel(R) Core (TM) i9-1135G7 @ 4.40GHz 4.42 GHz
MEMORY:	64.0 GB (15.8 GB usable)
STORAGE CAPACITY:	1 TB SSD CPU: 4.30GH
SYSTEM TYPE:	64-bit operating system, x64-based processor

Software Requirements	
Operating software	Edition Windows 11 Home
Experience	Windows Feature Experience Pack 1000.22000.613.0
OS	Windows 10 PRO Version 21H2
Database	MS SQL
Tools	React JS (HTML, CSS, JavaScript) Virtual Studio (VS) Code ASP.net MVC tools
Cloud service	Microsoft Azure

4.0 Software Development Life Cycle

When we create a software management system for Yeti Restaurant, we will follow the standard business practice for building software applications which is called the Software Development Life Cycle (SDLC). A Software Development Life Cycle (SDLC) are essential for software developers (Balaji & Murugaiyan 2012). However, we also need a method to build this software management system within the progress of the development cycle.

We will be using Scrum an Agile framework to develop Yeti restaurant management system. Scrum framework is one of the Agile Methodology that increase the speed and flexibility in the software development project (Permana 2015).

4.1 Scrum Methodologies

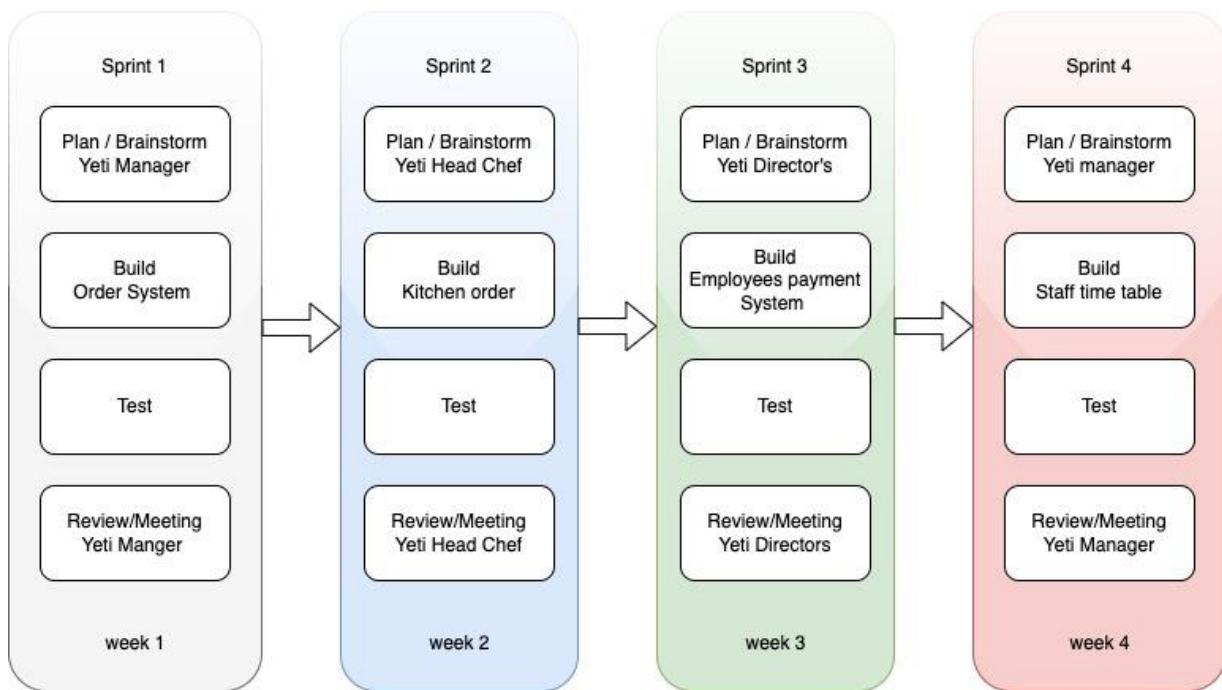
Scrum framework is a flexible approach, the development of Agile methodologies is based on iterative and incremental development which requires to work very closely with the client during every stage of unforeseen requirement or solution changes (Ozturk 2013). This means we will focus on what the client wants and needs in every incremental and iterative process (Hoda, Noble & Marshall 2011).

Iterative is the idea to develop a system through repeated cycles, while incremental takes a smaller portion at a time which helps the developer to learn the breakdowns of the development (Ozturk 2013). To simply put this, Iterative helps us to get better and better and incremental start from smaller parts throughout of Scrum development cycle. This is because as the client understands of those needs and wants which will evolves in every incremental and iterative stage, we need to adjust and adapt with them with our flexible approach changing along the way in the software development cycle (Qurban & Austria 2009).

4.2 Sprint

Sprint is the main target to be achieved and go forward to the next scrum sprint, an incremental process that clarifies more needs and wants. Yeti restaurant management system will take 4 weeks of sprints. Every Sprint begin with a meeting planning a session to determine what to do for next sprint (Permana 2015).

For example, we will have a brainstorm session with Yeti stakeholders discussing about the order system features then we build and test the requirements and finish with a review on zoom meeting about the outcome.



4.3 Scrum Master and Daily Scrum

The Scrum master is the person who set the scrum process. Daily, team will discuss “what has been done yesterday”, “challenges” and “what to do on next scrum?” (Rising & Janoff 2000). The meeting will be organised by the Scrum master with demo that has been done after sprint end (Rising & Janoff 2000).

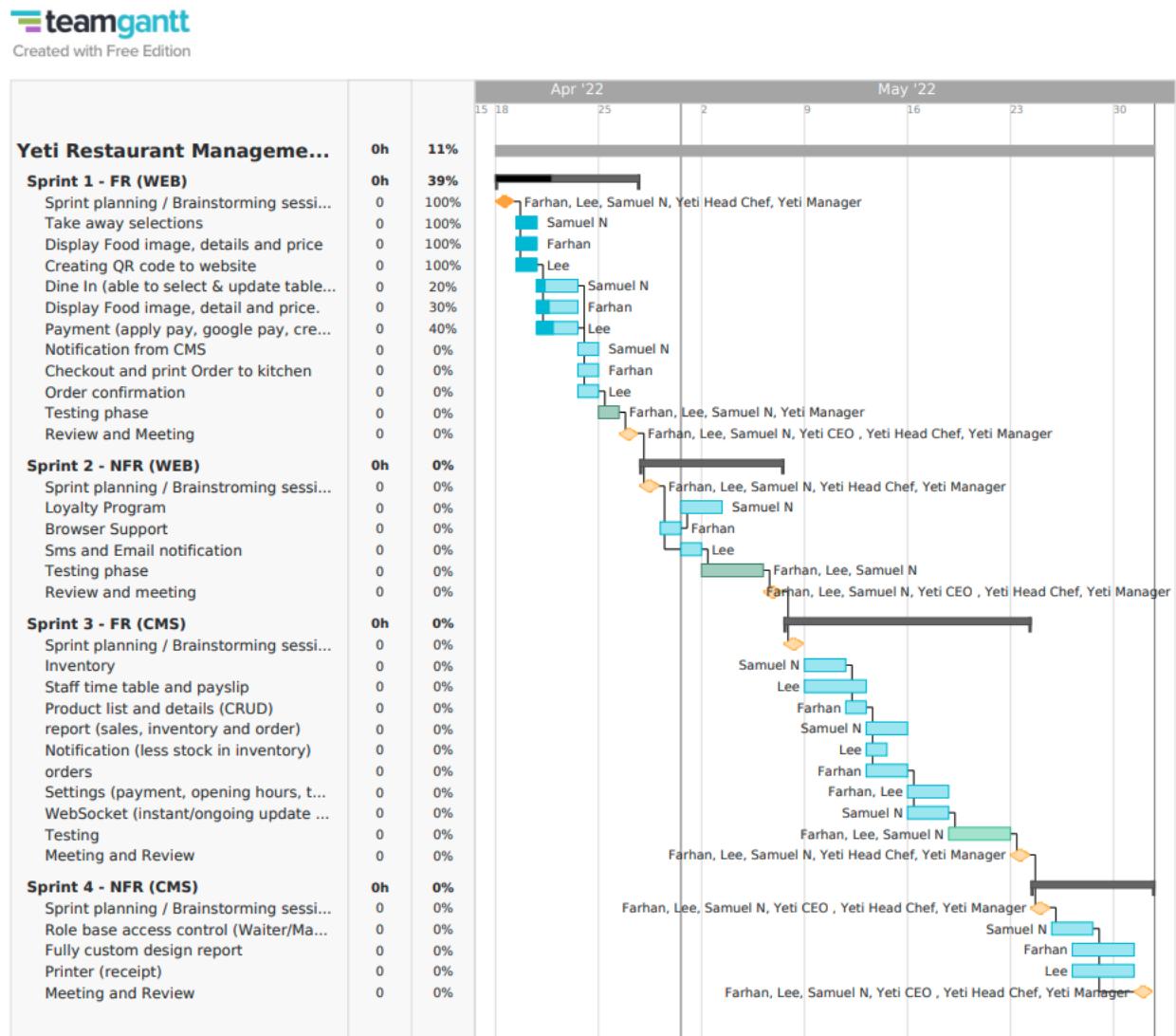
We will record all the things we have done at the Daily stand-up meeting. This is to monitor the performance from meeting daily for reports of every member progress (Permana 2015).

Daily Stand-up Meeting Template								
Question	Name	Monday	T	W	T	F	S	S
Task yesterday	Lee	Creating QR code to Website						
	Sam	Take away selections						
	Farhan	Payment for checkout interface						
Task today	Lee	Printing order to kitchen						
	Sam	Dine in (able to select table numbers)						
	Farhan	Payment option (credit card, google and apple pay)						
Challenge and process	Lee	Bug in the printing						
	Sam	Yeti Manager wants a better selection design						
	Farhan	N/A						

5.0 Project timeline

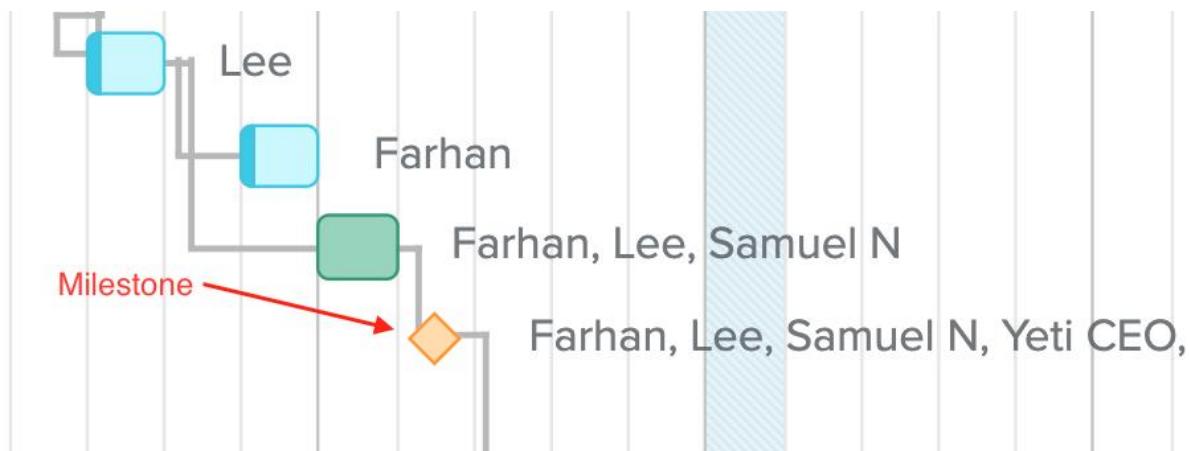
We will use Gantt chart as a graphical representation for Yeti restaurant management activity process. Gantt chart is very useful project planning in agile environments for Scrum master to share among stakeholders (Evdokimov 2018). The estimated time of completion of Yeti Restaurant management system will be 40 days on 30 of May.

5.1 Gantt charts



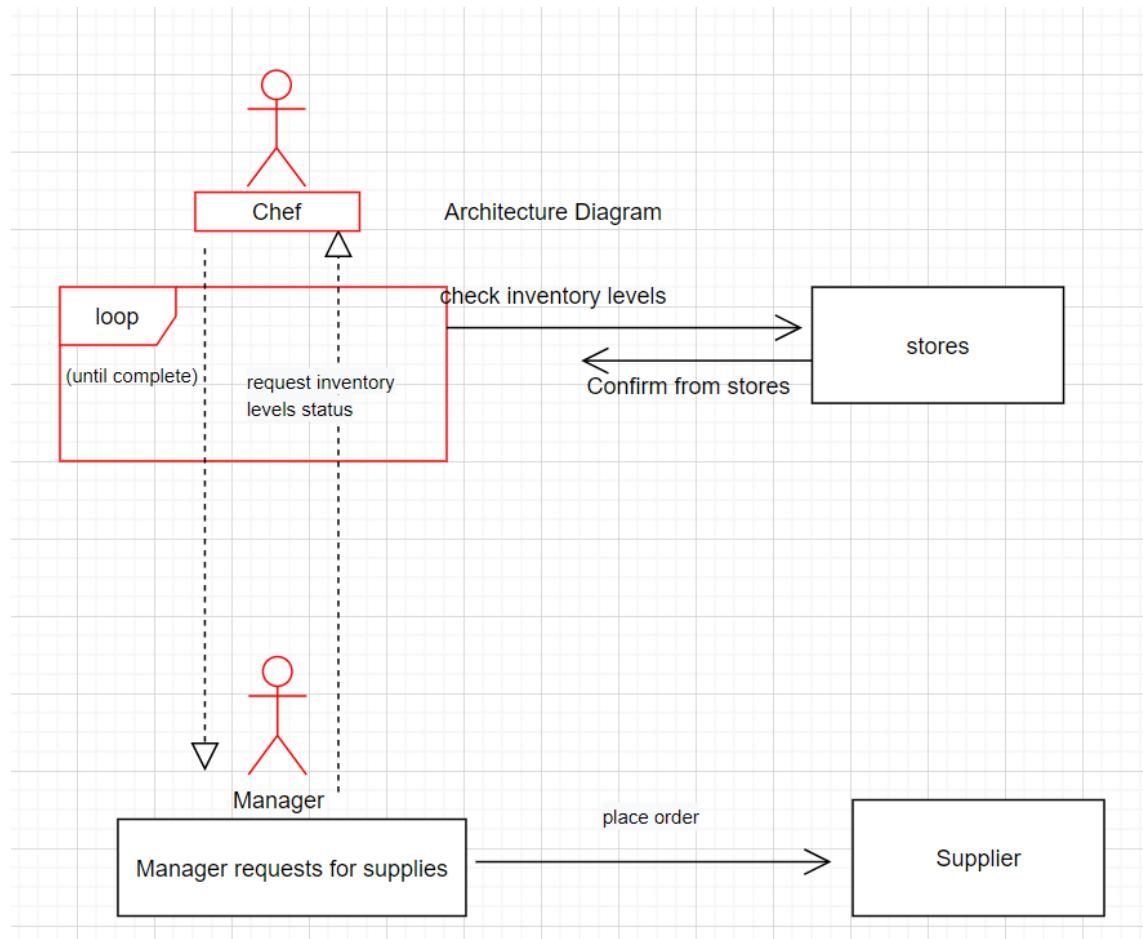
5.2 Milestone

The key concept in the Gantt chart is a milestone - tool used to mark specific points along a project timeline (Evdkimov 2018). The yellow diamond shapes are the icon showing certain part of the progress has been complete. Each of the milestone achieved by the team brings closer to completion of the project.



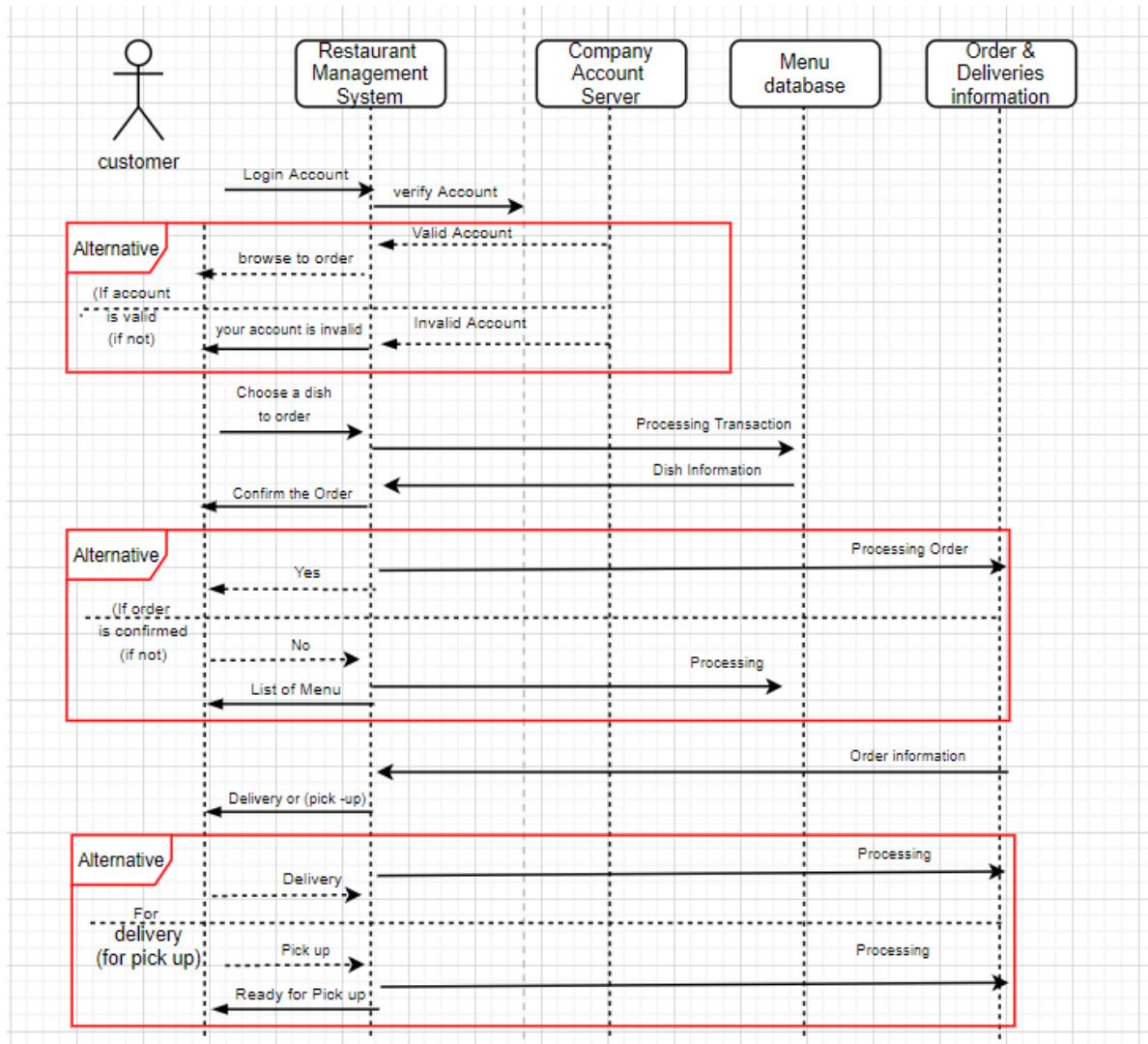
6.0 Architecture Design (High level Design)

6.1 Architecture Diagram

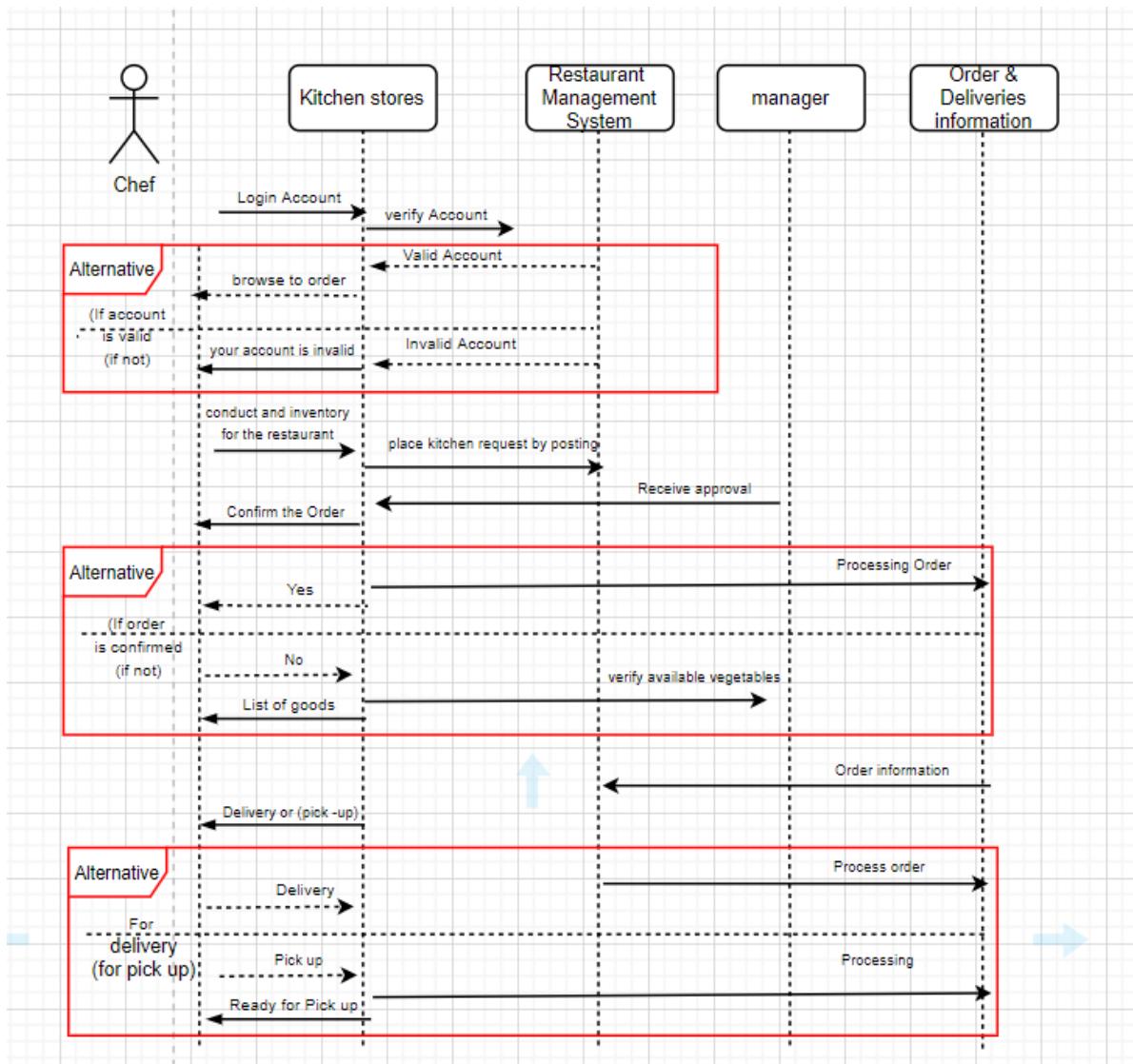


6.2 Sequence Diagram

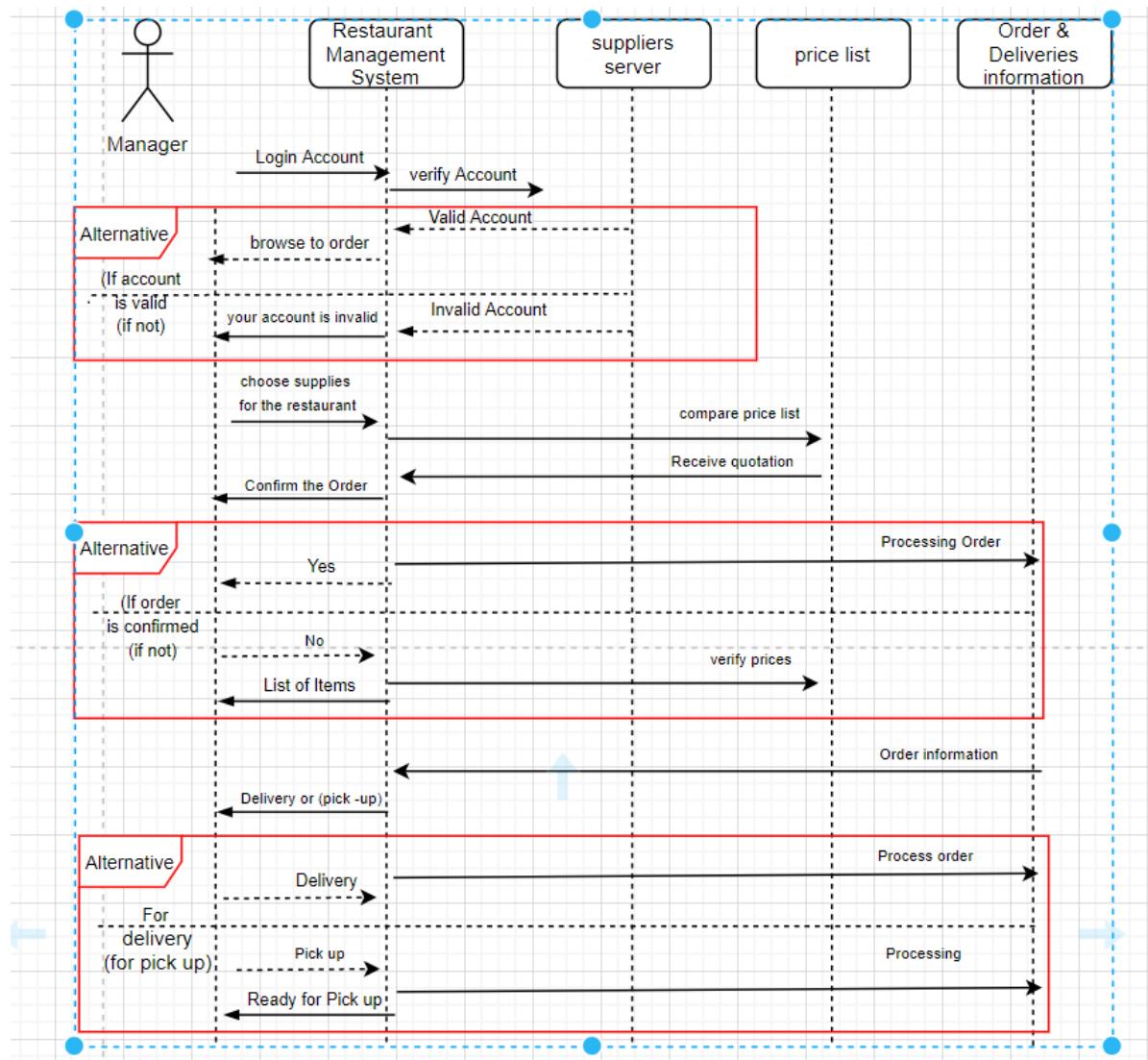
Sequence diagram for Online order – actor customer



Sequence diagram for kitchen – actor chef



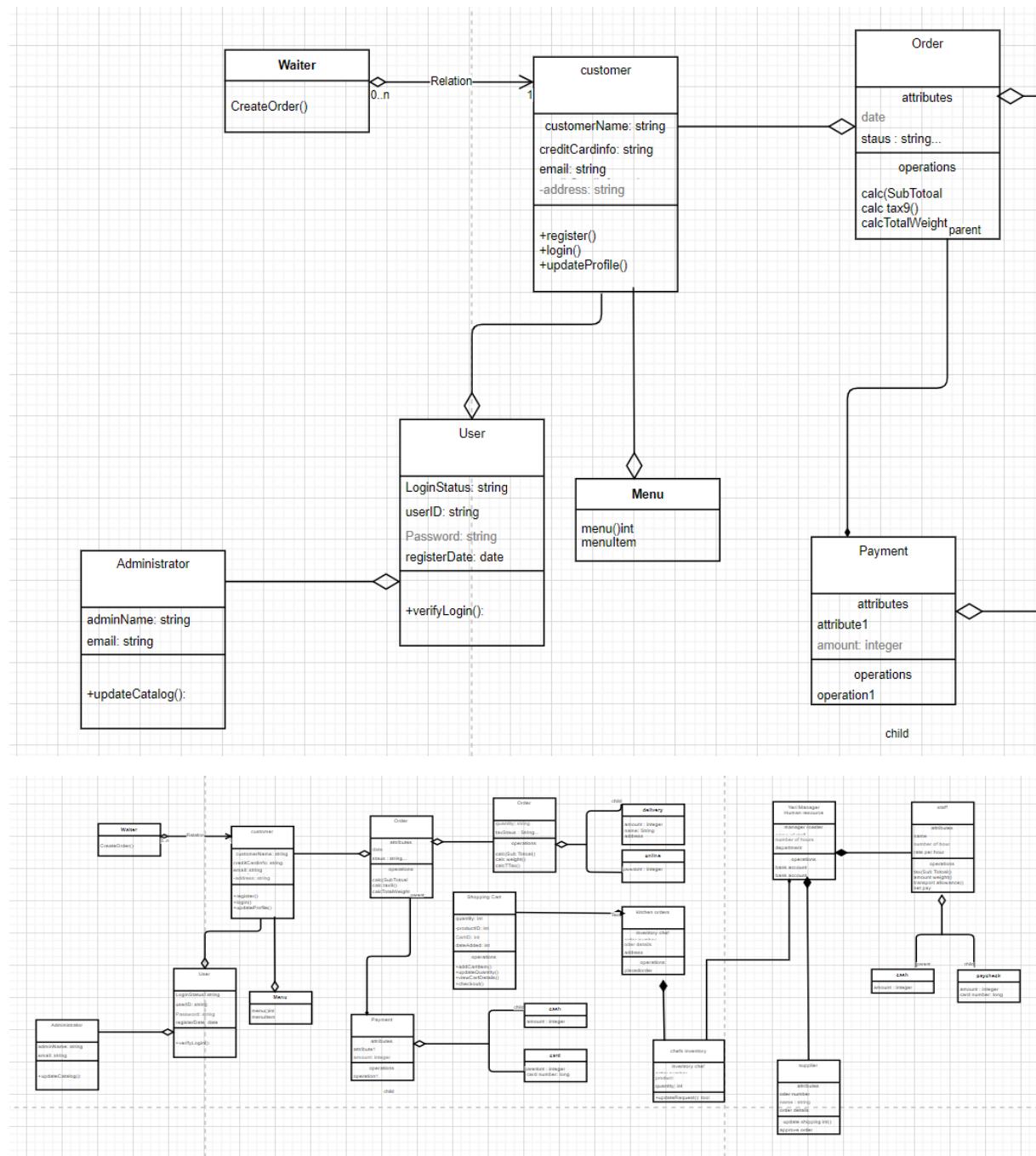
Sequence diagram for Inventory – actor manager



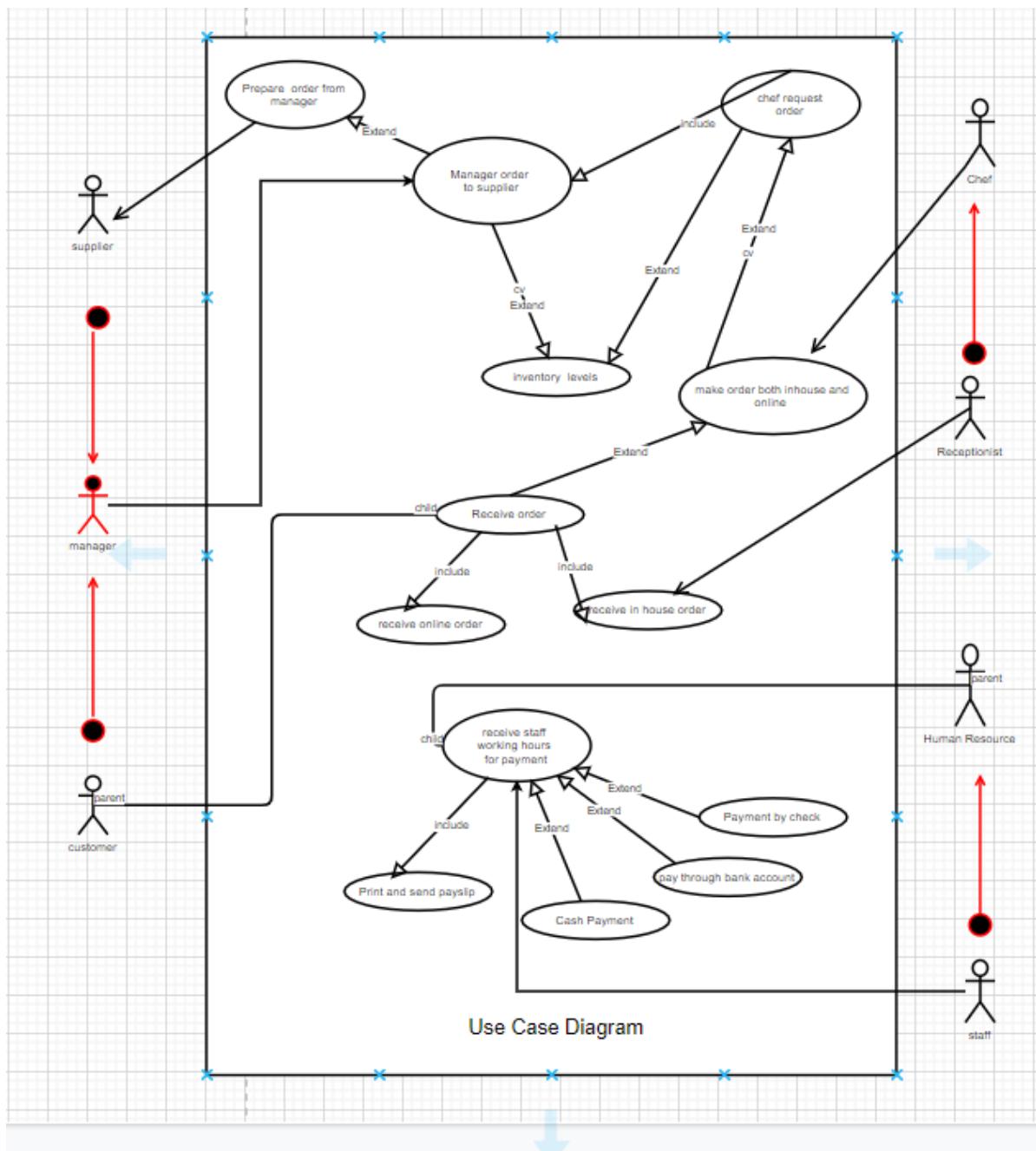
7.0 Detailed Design (UML)

UML are unified modelling Language showing class names coupled of objects with their attribute's properties, UML can go from being very coarse to fine details.

7.1 Logical Entity Relationship Diagram



7.2 Use Case Diagram



7.3 Use Case Description

Use case names		Name of the use case
Actors		The Actors in this project are external entity to the system being specified who interact with it. They perform various tasks 1. Manager, 2. Customer, 3. Staff 4. Human resource, 5. Suppliers, 6. Receptionist. 7. chef
Precondition		Activities that must take place: 1. Manager must make order to supplier 2. Chef can make request for items declining in his inventory. Any conditions that must be true:
Normal flow	Description	[users' action] make payment without confirming payment can occur
	Post conditions	Confirm payment or even issue receipt is a normal occurrence
Alternative flows and exceptions		Major Alternative flows or exceptions that may occur in the flow of event. Customer can place orders either through online or can walk in. customers
Non-functional requirements		All non-functional requirements e.g., dependability (safety, reliability etc.) performance A chef's orders are totally dependent on the received orders from the kitchen and online
inheritance		1. A chef inherits all the attributes of a receptionist. 2. Human resource manager class includes all the attributes of a staff. This includes number of hours worked, wages, rate, benefit 3. Managers class has all the attributes of a supplier that includes his name address, products he delivers, pricelist, discount, offers,

8.0 High-Fidelity Prototypes

We started to design the website by using a design method called low-fidelity prototyping. This is to visualize the design by creating wireframes using paper and other “low-fidelity materials at the very early stages (Abidin & Ashaari 2019). Once all the elements are properly in place and achieved in the roughest form, we will seek for approval from the management and move the High-fidelity prototypes.

High-fidelity prototypes are designed by computer that comes with realistic feel of the user interactions (fonts, colours, all work together). High-fidelity prototypes provide the user a true representation of the user interface, very close resemblance to the final design (Mugisha, Wakholi & Tylleskär 2019).

8.1 Home page



GREETINGS! Welcome To YETI Restaurant

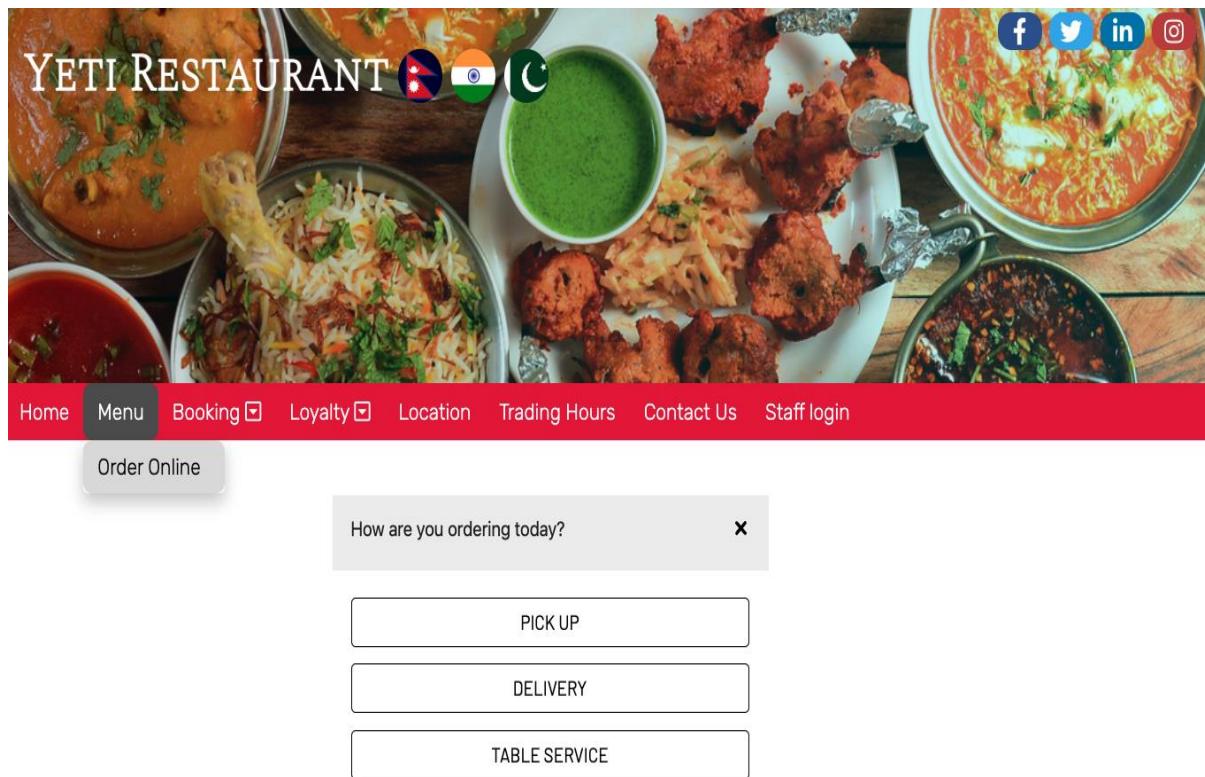
Yeti is as varied and diverse as the cultures and language of Nepal, Pakistan and India. Our flavors are as exotic as its climate and as varied as its people. We claim to be one of the most unique and finest restaurants. We offer enjoyable, memorable dining experience and genuine Indian food from the true sources - the gourmet homes and street stalls - prepared by our skilled chefs. We are considering our cuisines as an art form. Our recipes have passed down the recipes for years, and our passion is to bring to you and your family. We take our time to source only high-quality ingredients that are sure to have you coming back for seconds. ✨



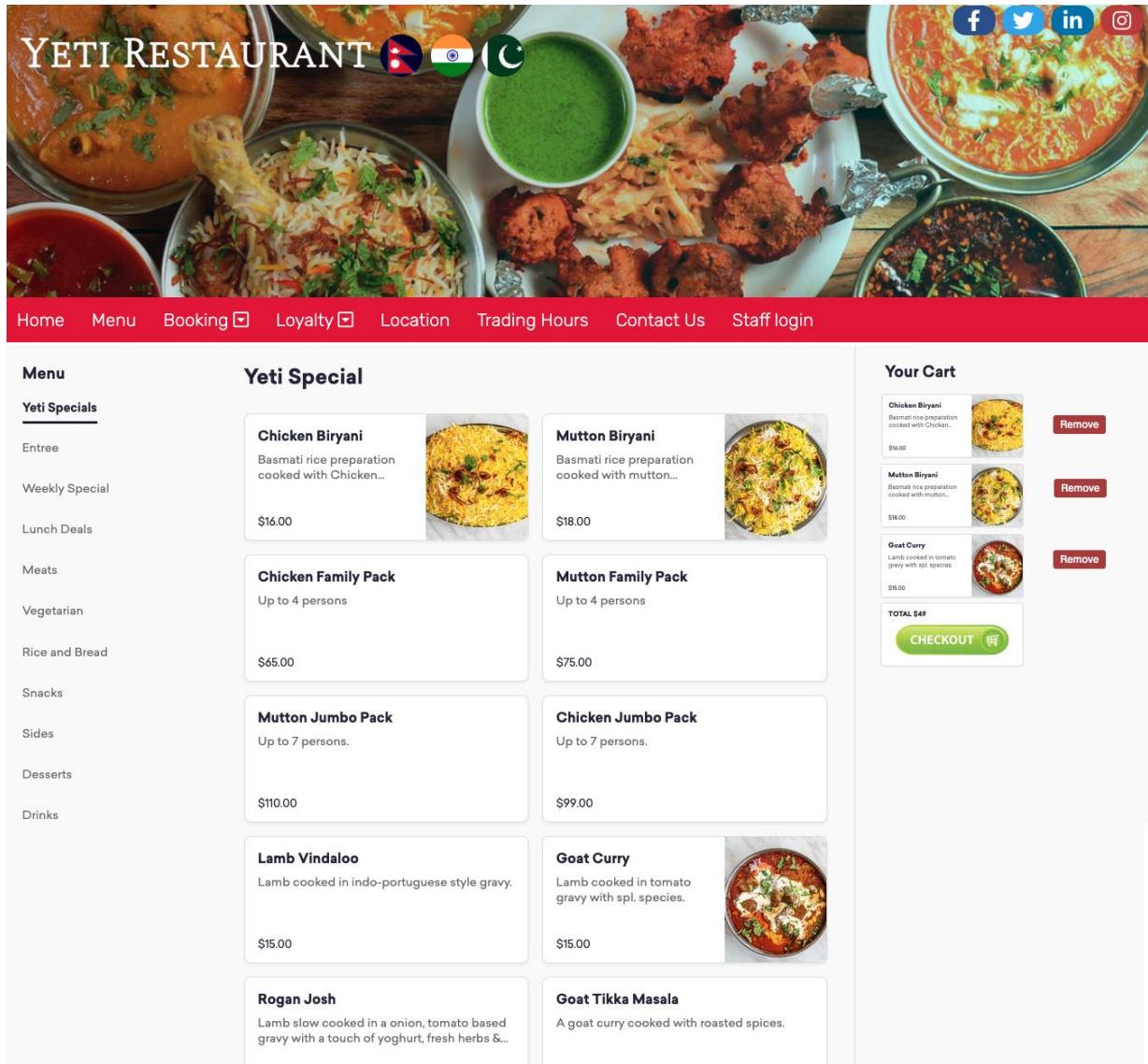
8.2 Order, Shopping cart, Checkout page, Register, Login and Payment

8.2.1 Order Selection

Customer can order online and chooses the choice of ordering such as pick up, delivery and table service.



Then it will bring customer to the menu page, customer can select the food they wanted and add to the shopping cart next to the right-side. Alternatively removing the unwanted items in the cart or proceed to check out.

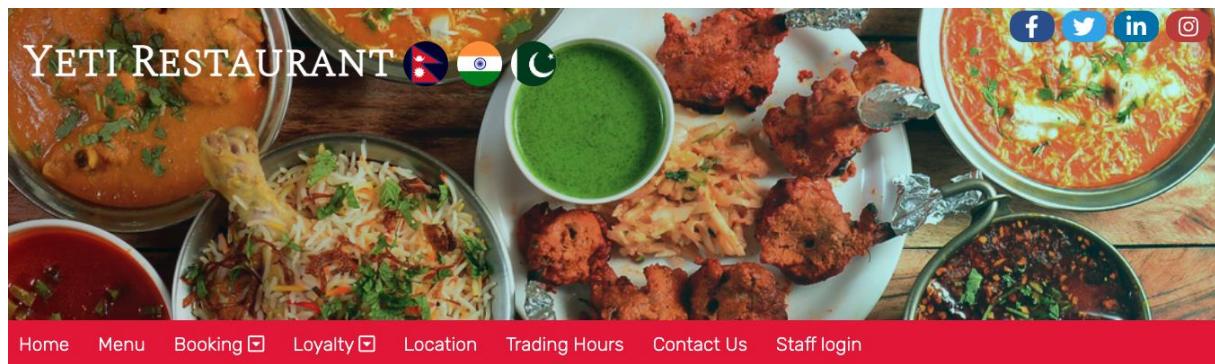


The screenshot shows the homepage of Yeti Restaurant. At the top, there's a banner featuring several Indian dishes like Biryani, Tandoori chicken, and dal. Below the banner is a red navigation bar with links: Home, Menu, Booking (with a calendar icon), Loyalty (with a key icon), Location, Trading Hours, Contact Us, and Staff login. The main content area has a title "Yeti Special". On the left, a sidebar lists categories: Entree, Weekly Special, Lunch Deals, Meats, Vegetarian, Rice and Bread, Snacks, Sides, Desserts, and Drinks. The main grid displays various menu items with images, descriptions, and prices. To the right, a "Your Cart" section shows three items: Chicken Biryani, Mutton Biryani, and Goat Curry, each with a "Remove" button. A "TOTAL \$49" label and a green "CHECKOUT" button are at the bottom of the cart section.

Item	Description	Price
Chicken Biryani	Basmati rice preparation cooked with Chicken...	\$16.00
Mutton Biryani	Basmati rice preparation cooked with mutton...	\$18.00
Goat Curry	Lamb cooked in tomato gravy with spl. species.	\$16.00

8.2.2 Checkout Page

During the checkout customer can choose to login or register as new user before proceed into payment. The red pen icon is to edit the order type. Pick up Location is stated below order type.



Main menu > Checkout

Please register or sign in to continue

NEW USER

SIGN IN

ORDER TYPE

Pick Up

LOCATION

Sydney CBD

Lot 5/155 Yeti Street, Surrey Hills, NSW,
2004
0211 111 111

AVERAGE WAIT TIME

30 minutes

Add notes...

ORDER SUMMARY

1 x	Chicken Biryani 	\$16.00
1 x	Mutton Biryani 	\$18.00
1 x	Goat Curry 	\$15.00
Total		\$49.00

Customer can add or reduce the number of items in the checkout

The screenshot shows the Yeti Restaurant website interface. At the top, there is a banner featuring various Indian dishes and social media icons (Facebook, Twitter, LinkedIn, Instagram). Below the banner is a red navigation bar with links: Home, Menu, Booking (with a dropdown arrow), Loyalty (with a dropdown arrow), Location, Trading Hours, Contact Us, and Staff login. A back arrow icon is also present.

The main content area shows the user is at the 'Checkout' page, indicated by the breadcrumb 'Main menu > Checkout'. A modal window is open over the page, prompting the user to 'Please register or sign in to continue'. It includes 'NEW USER' and 'SIGN IN' buttons.

On the left side of the modal, there are sections for 'ORDER TYPE' (set to 'Pick Up') and 'LOCATION' (set to 'Sydney CBD'). Below these are 'AVERAGE WAIT TIME' (30 minutes) and a note input field.

The right side of the modal displays the 'ORDER SUMMARY' for a 'Chicken Biryani'. The summary table is as follows:

1 x	Chicken Biryani	\$16.00
	Edit	
		\$18.00
		\$15.00
		\$49.00

Below the summary are buttons for quantity adjustment (-, +) and an 'UPDATE (\$16.00)' button.

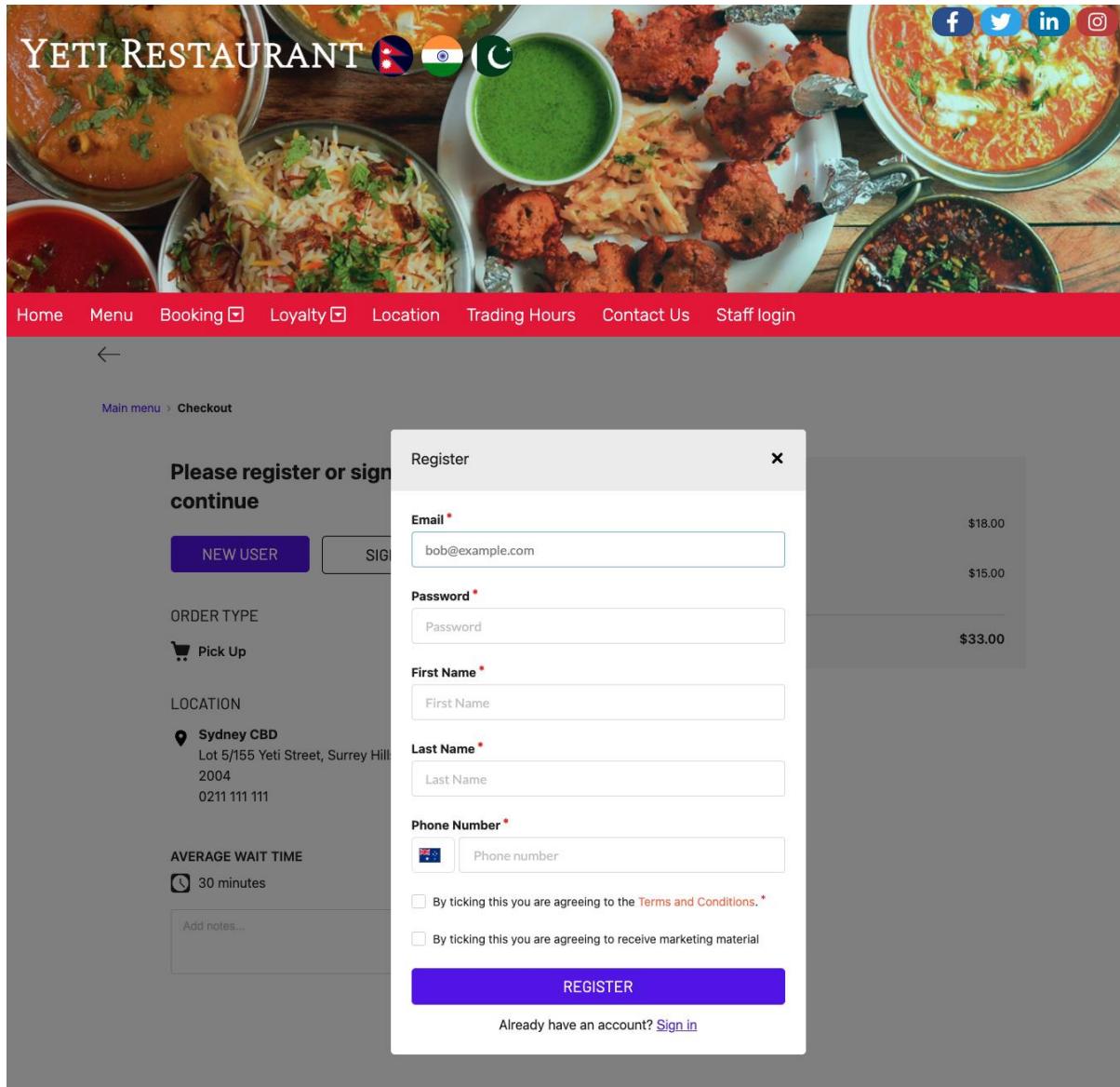
Customer can remove the items from the checkout page

The screenshot shows the Yeti Restaurant website with a red header bar containing links for Home, Menu, Booking, Loyalty, Location, Trading Hours, Contact Us, and Staff login. Below the header is a navigation bar with a back arrow, the text "Main menu > Checkout", and a "Please register or sign in to continue" message with "NEW USER" and "SIGN IN" buttons. The main content area displays an "ORDER SUMMARY" for a "Chicken Biryani" item. The summary includes a quantity of 1x, a price of \$16.00, and an "Edit" link. There is also a note about the dish being a Basmati rice preparation cooked with Chicken species in a sealed pot with raita and salan. A note input field and a "REMOVE" button are present. The background features a collage of various Indian dishes.

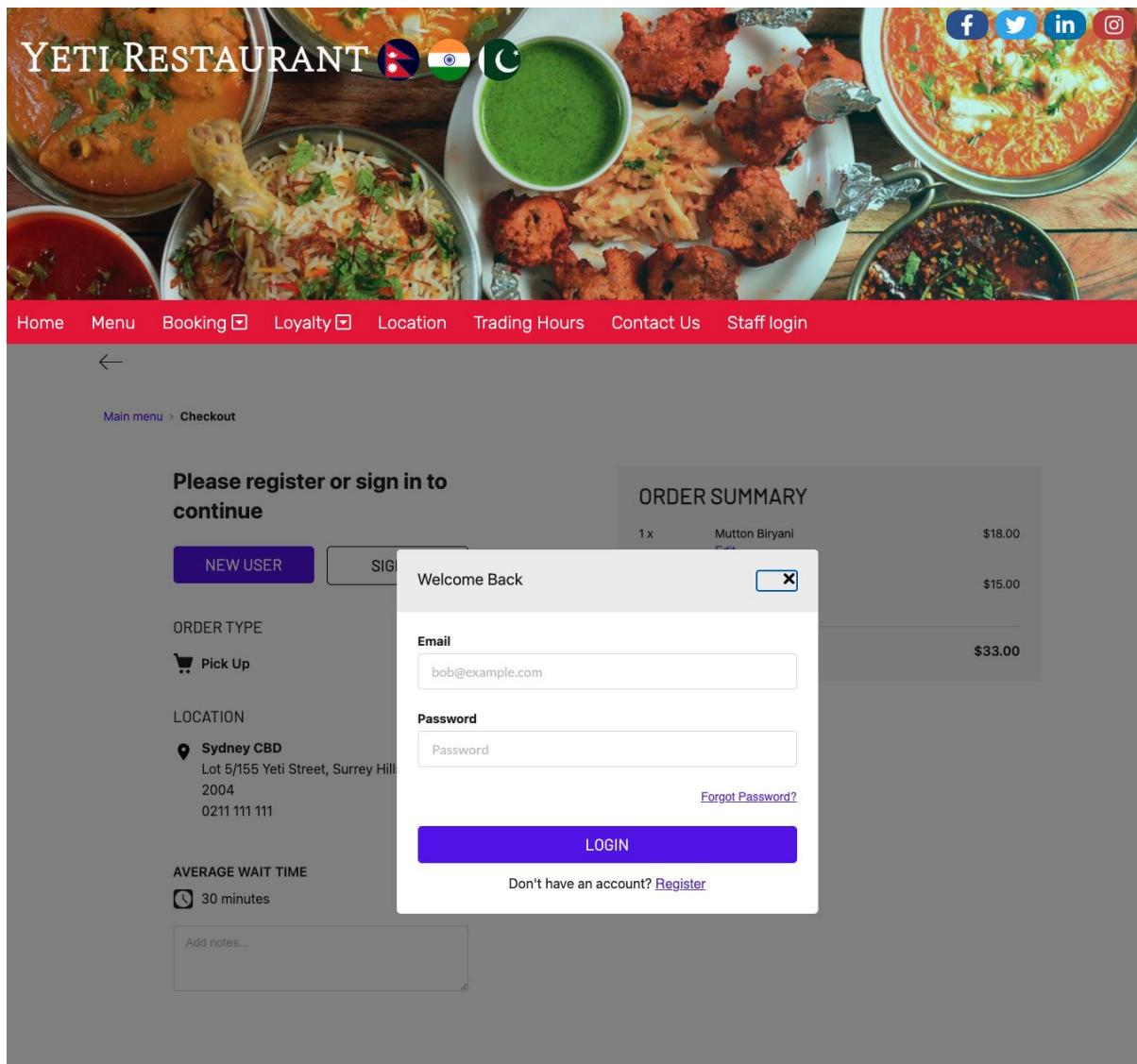
ORDER SUMMARY	
1 x	Chicken Biryani Edit
\$16.00	
\$18.00	
\$15.00	
\$49.00	

8.2.3 Register or Login

Customer can register as new user

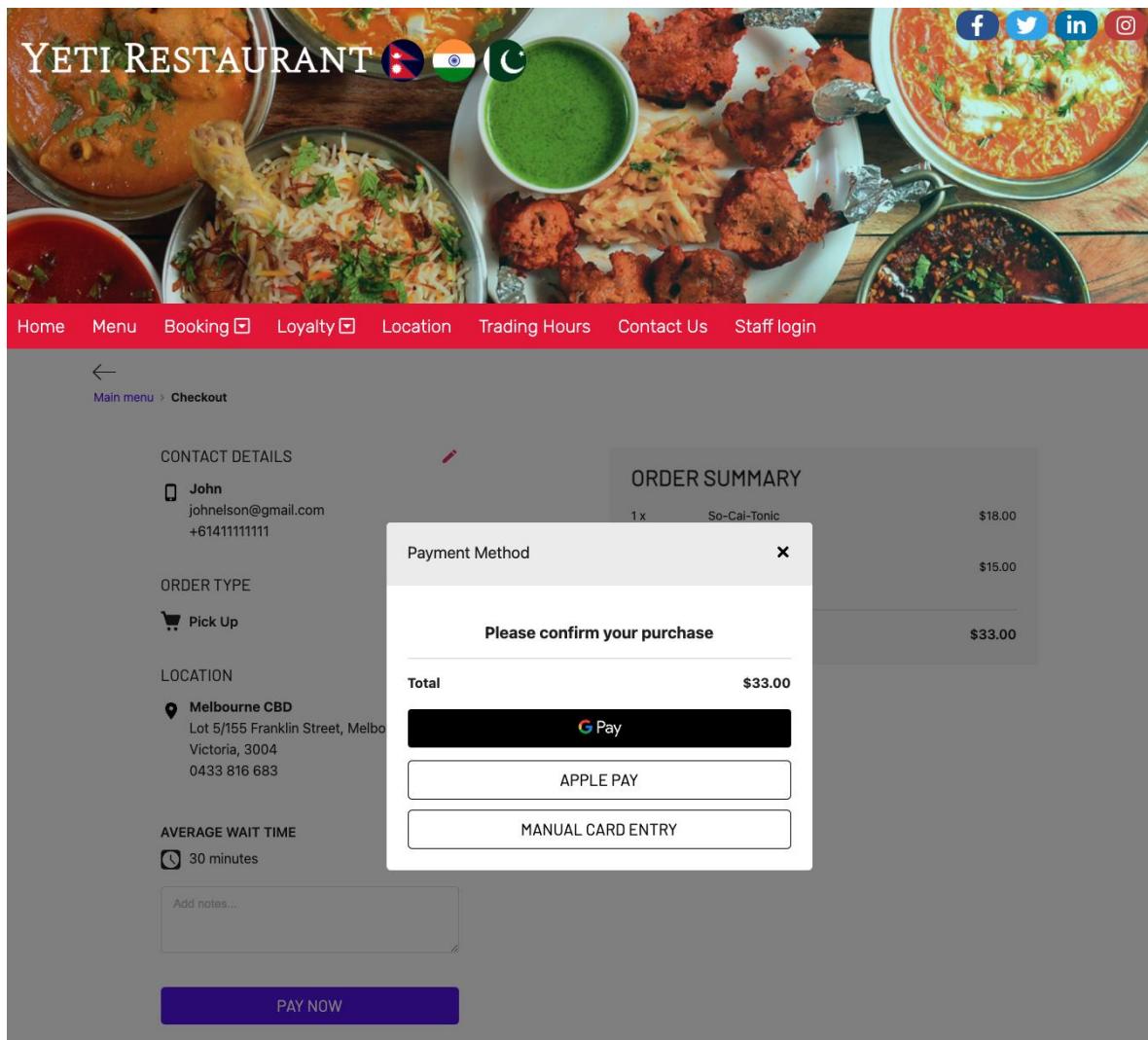


Customer can Login by using the username and password



8.2.4 Payment

Once after the customer has login, contact details and payment button will be appearing. After clicking the payment button, customer has several choices of payment options such as google pay; apple pay and credit card payment.



Customer can insert card details and proceed payment

The screenshot shows the Yeti Restaurant website with a payment overlay. The overlay is titled 'ORDER SUMMARY' and contains the following information:

Item	Quantity	Price
So-Cai-Tonic	1 x	\$18.00
Payment Method		\$15.00
Total		\$33.00

Below the table, there is a purple button labeled 'PAY \$36.00'. The background of the page shows a banner for 'YETI RESTAURANT' featuring various Indian dishes like biryani, tandoori chicken, and dal makhni.

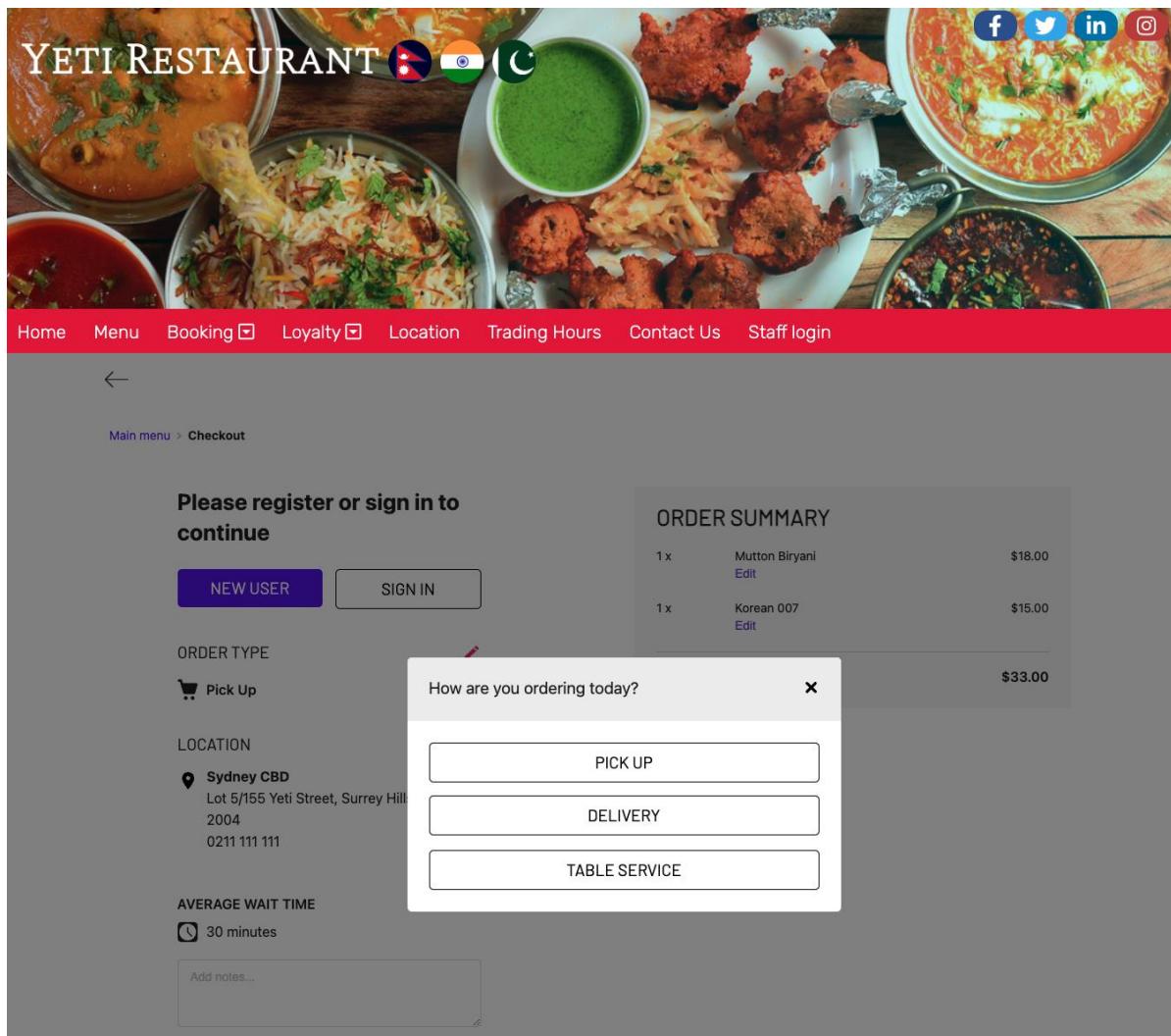
Customer had received payment confirmation.

The screenshot shows the Yeti Restaurant website. At the top, there is a banner featuring various Indian dishes like biryani, curry, and tandoori chicken. Below the banner is a red navigation bar with links: Home, Menu, Booking, Loyalty, Location, Trading Hours, Contact Us, and Staff login. There are also social media icons for Facebook, Twitter, LinkedIn, and Instagram. A back arrow icon is located below the navigation bar. The main content area displays a completed order summary. The order was placed on 23 May 2022 at 22:35 and is marked as 'Order Completed'. The order detail number is OL-1420759525. The breakdown of the order is as follows:

Item	Quantity	Price
1 x Mutton Biryani	1	\$18.00
1 x Goat Curry	1	\$15.00
Sub Total		\$33.00
Total		\$33.00

8.3 Delivery Services

When click into the red pen icon (8.2.2 Checkout Page) customer can edit the order service.



If customer click on delivery service, customer can select third party delivery option and add delivery address. If the customer has already selected delivery service at (8.2.1 Order Selection) this page will appear after login.

The screenshot shows the Yeti Restaurant website's checkout process. At the top, there's a banner featuring various Indian dishes like Chicken Biryani, Tandoori Chicken, and Dal Makhni. Below the banner, the navigation menu includes Home, Menu, Booking, Loyalty, Location, Trading Hours, Contact Us, and Staff login. A back arrow is visible above the main content area. The main content area shows contact details for John Nelson (johnnelson@gmail.com, +61411111111), an order summary for 1x Chicken Biryani (\$20.00), and an order type section indicating 'Delivery'. A modal dialog titled 'Delivery Service' is open, listing three options: UBER (selected), DELIVEROO, and EASI. There's also a button to 'ADD DELIVERY ADDRESS'.

YETI RESTAURANT

Home Menu Booking Loyalty Location Trading Hours Contact Us Staff login

Main menu > Checkout

CONTACT DETAILS

John Nelson
johnnelson@gmail.com
+61411111111

ORDER TYPE

Delivery

Your Delivery Service & location

Delivery Service: UBER
111 Your Street, Surrey Hills, NSW

AVERAGE WAIT TIME

30 minutes

Add notes...

ORDER SUMMARY

1 x Chicken Biryani \$20.00

Total (Delivery Fees Included) \$20.00

Delivery Service

UBER

DELIVEROO

EASI

ADD DELIVERY ADDRESS

Customer can edit delivery address by clicking the pen icon or proceed payment.

YETI RESTAURANT

Home Menu Booking ▾ Loyalty ▾ Location Trading Hours Contact Us Staff login

Main menu > Checkout

CONTACT DETAILS

John Nelson
johnnelson@gmail.com
+61411111111

ORDER TYPE

Delivery

Your Delivery Service & location

Delivery Service: UBER
111 Your Street, Surrey Hills, NSW, 2004

AVERAGE WAIT TIME

30 minutes

Add notes...

PAY NOW

ORDER SUMMARY

1 x	Chicken Biryani	\$20.00
Total (Delivery Fees Included)		\$20.00

8.4 Online table booking

Customer can choose the number of people, date and time. The system will show the specific time available for the customer to choose.

YETI RESTAURANT

Home Menu Booking ▾ Loyalty ▾ Location Trading Hours Contact Us Staff login

← Yeti Restaurant
Nepalese, Indian & Pakistani Cuisine

People Date Time

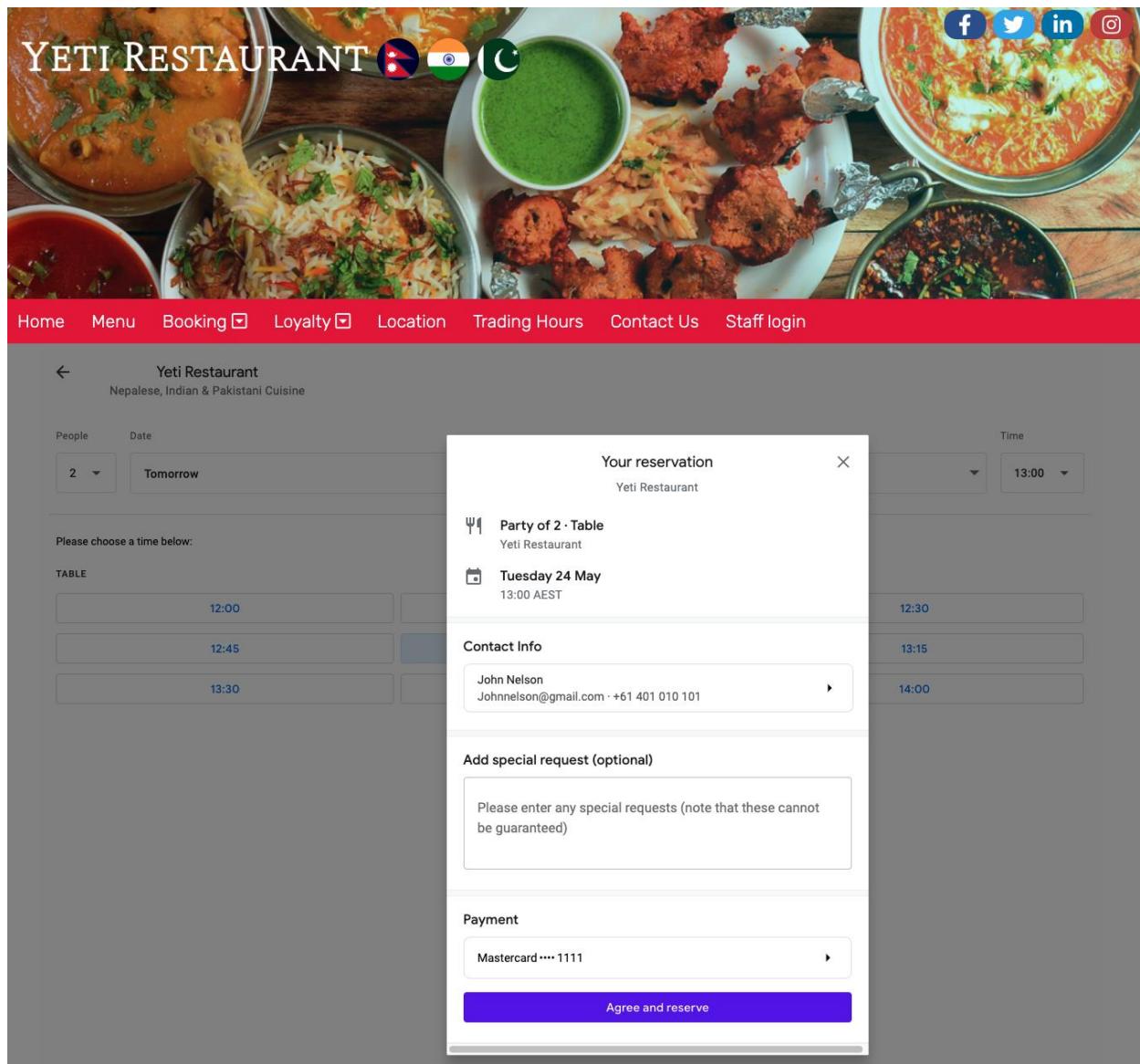
2 ▾ Tomorrow 13:00 ▾

Please choose a time below:

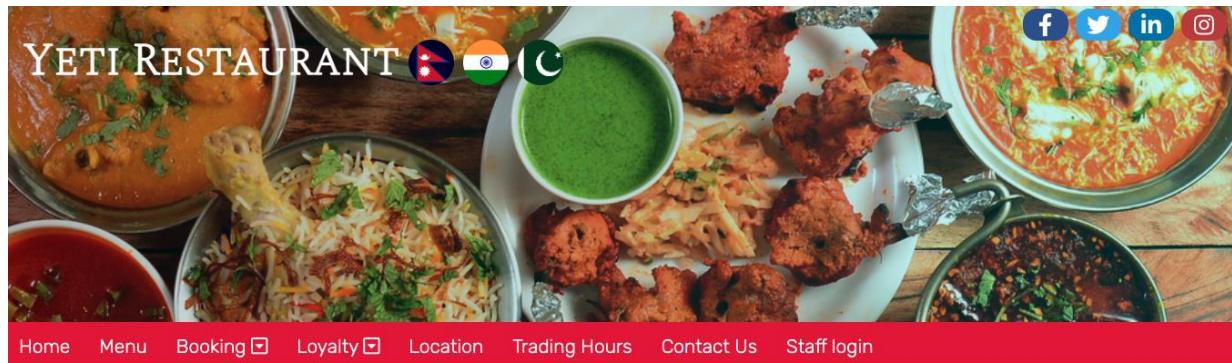
TABLE		
12:00	12:15	12:30
12:45	13:00	13:15
13:30	13:45	14:00

Continue

Example, if customer have chosen 2 people for Tuesday, added contact and payment details for reserving the table.



Confirmation of the table booking and email will be sent to customer.



Reservation booked.

Yeti Restaurant

Tuesday, May 24 at 1:00pm

Party of 2, Table



[MANAGE RESERVATIONS](#)

[CANCEL RESERVATION](#)

[ADD TO CALENDAR](#)

[Google](#) [Apple](#) [Outlook](#)

Thank you for making a reservation, We have email the confirmation about this booking.

We will hold your table for 15 minutes, so please call [+611111111111](#) if you're running late.

For any special requests relating to your booking, please email info@yeti.co as not all requests can be guaranteed.

We hope you enjoy your experience at Yeti Restaurant!

Please note if your booking falls on a public holiday there will be a 15% surcharge

8.5 Customer loyalty program

Customer can register or login their account with username and password

The screenshot shows the homepage of Yeti Restaurant. At the top, there is a banner featuring various Indian dishes like Biryani, Naan, and Tandoori chicken. Below the banner, the restaurant's name "YETI RESTAURANT" is displayed along with small flags of Nepal, India, and the United States. Social media icons for Facebook, Twitter, LinkedIn, and Instagram are also present. A red navigation bar contains links for Home, Menu, Booking, Loyalty (which is highlighted with a dropdown menu), Location, Trading Hours, Contact Us, and Staff login. The dropdown menu for Loyalty includes "Register" and "Customer Login". Below the navigation bar, there is a large image of two men, one holding a tablet, smiling. To the right of this image is a login form with fields for Username and Password, and buttons for "Not verified?", "Forgot Password?", and "Log in". Below the login form, there is a section titled "Yeti Loyalty Program" with the text "We give you the best reward points !!". A link "Find out more" is also visible.

Customer register page



The image shows the homepage of Yeti Restaurant. At the top, there is a banner displaying various Indian dishes like curries, biryani, and tandoori chicken. Below the banner, the restaurant's name "YETI RESTAURANT" is prominently displayed along with small icons of the Nepali, Indian, and Pakistani flags. To the right of the banner are social media links for Facebook, Twitter, LinkedIn, and Instagram. A red navigation bar at the bottom contains links for Home, Menu, Booking (with a dropdown arrow), Loyalty (with a dropdown arrow), Location, Trading Hours, Contact Us, and Staff login.

Yeti Loyalty Program

First Name

Last Name

Email

Username

Password

Password Confirmation

Register

Customer will receive email confirmation for login



Loyalty Account Registered

Yeti Restaurant

Name: John Nelson

Card ID: 1000 1000 1000 1000



Hi John,

Thank you for your registering our loyalty program. Your Username is
JohnNelson2022

We have emailed you for verification to johnnelson@gmail.com

Please check your email and confirm verification

Customer can access their account and view at their remaining loyalty points

The screenshot shows the homepage of Yeti Restaurant. The header features the restaurant's name "YETI RESTAURANT" in large letters, accompanied by three small flags (Nepali, Indian, and Tibetan). Social media icons for Facebook, Twitter, LinkedIn, and Instagram are also present. Below the header is a red navigation bar with links: Home, Menu, Booking (with a dropdown arrow), Loyalty (with a dropdown arrow), Location, Trading Hours, Contact Us, and Staff login.

The main content area displays a large image of various Indian and Nepali dishes, including curries, rice, and tandoori chicken. Overlaid on this image is a purple rectangular box containing a digital representation of a loyalty card. The card is titled "LOYALTY CARD" and features a grid of icons representing different rewards or categories. Below the card, the following information is displayed:

- Name: John Nelson
- Card Number: 1000 1000 1000 1000
- Username: JohnNelson2022
- Points: 300
- Registered Date: 22 May 2022

8.6 Staff Login page

Staff Login page

YETI RESTAURANT

Home Menu Booking Loyalty Location Trading Hours Contact Us Staff login

Welcome to Yeti RMS

Username [Not verified?](#)
samuel6249ng@gmail.com

Password [Forgot Password?](#)

Log in

8.7 Payslip

Waiter and manager can generate payslip

The screenshot shows the 'Payslip May 2022' page. At the top, there's a navigation bar with 'Home', 'Payslip' (which is highlighted in black), 'Sales Report', and 'Timetable'. To the right are icons for heart, question mark, notifications (with 3), and a user profile for 'Hello, Samuel'. Below the navigation is the title 'Payslip May 2022'. Underneath it, there are two buttons: 'Generate Payslip PDF' and '12th May - 19th May'. The main content area displays a detailed payslip for Joel Davis (Employee ID 3) for the pay period 12th - 19th May. The payslip is divided into several sections:

- Employee:** Joel Davis, ID 3, Pay period 12th - 19th May.
- Printed Date:** 12th - 19th May
- Payslip no.:** 3
- Payment Date:** 12th - 19th May
- Payments:** A table showing earnings from basic hours (9 hours at \$20.50/hour), fixed extra (\$10.00), and super exclusive job C (\$9.50). Total gross earnings are \$234.88.
- Expenses:** A table showing expenses for super-job C (\$20.38) and salary sac (\$150.00). Total expenses are \$170.38.
- Employee elected super fund:** Acumen
- Deductions:** A table showing deductions for test (\$10.00) and total deductions (\$10.00). Total deductions are \$10.00.
- Tax:** Acumen
- Net earnings:** Total net earnings are \$41.50.
- Annual net earnings to date:** -\$10,028.60
- Annual tax to date:** -\$1,269.00
- Leave:** Annual, Personal, Long Service, RDO
- Balance:** 134.458, 205.867, 151.88, -3.334

At the bottom right of the main content area is a 'Load More' button.

8.8 Staff Timetable

Waiter and manager can look at working schedule

The screenshot shows the Yeti Online RMS Timetable interface. The top navigation bar includes Home, Payslip, Tasks, and Timetable. The Timetable tab is selected. The date range is set from 16 May - 29 May, and the view is set to '2 Weeks by Area'. The interface displays three sections: Management, Sommeliers, and Polishes, each with a grid of shift assignments for various staff members.

Management:

Shift	Staff 1	Staff 2	Staff 3	Staff 4	Staff 5	Staff 6	Staff 7	Staff 8	Staff 9	Staff 10	Staff 11	Staff 12
3pm - 12am	Gilberto Giorganni	Laura Crouch	Laura Crouch	Gilberto Giorganni	Laura Crouch							
4pm - 12am	Gilberto Giorganni	Yin Chou	Yin Chou	Yin Chou	Yin Chou	Yin Chou	Yin Chou	Yin Chou	Yin Chou	Yin Chou	Yin Chou	Yin Chou
4pm - 12am	Laura Crouch											

Sommeliers:

Shift	Staff 1	Staff 2	Staff 3	Staff 4	Staff 5	Staff 6	Staff 7	Staff 8	Staff 9	Staff 10	Staff 11	Staff 12
5pm - 1am	Jessica Cicconi	Calle Poole	Calle Poole	Calle Poole	Jessica Cicconi	Jessica Cicconi	Marie Pousse	Marie Pousse	Jessica Cicconi	Calle Poole	Calle Poole	Jessica Cicconi
4pm - 1am	Jessica Cicconi								Jessica Cicconi			
4pm - 1am												

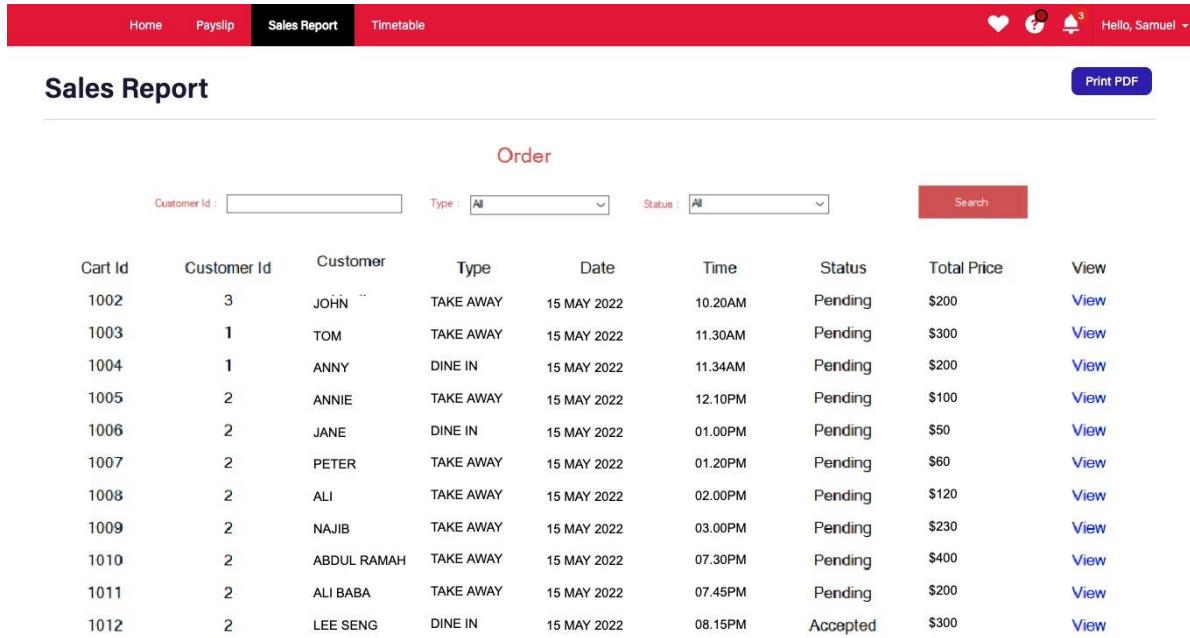
Polishes:

Shift	Staff 1	Staff 2	Staff 3	Staff 4	Staff 5	Staff 6	Staff 7	Staff 8	Staff 9	Staff 10	Staff 11	Staff 12
6pm - 12am	Chulipa Pechdees	Chulipa Pechdees	Phuong Nguyen	Chulipa Pechdees	Chen HsinErh	Chen HsinErh	Chulipa Pechdees	Chulipa Pechdees	Phuong Nguyen	Phuong Nguyen	Chen HsinErh	Chulipa Pechdees
6pm - 12am							Chulipa Pechdees					
6pm - 12am												

Open Shifts: 2 Open Shifts

8.9 Sales Report

Manger can run the sales report



The screenshot shows the 'Sales Report' section of the Yeti Online RMS application. At the top, there is a navigation bar with links for Home, Payslip, Sales Report (which is currently selected), and Timetable. On the right side of the header, there are icons for heart, message, and notifications, along with a greeting 'Hello, Samuel'.

The main content area is titled 'Sales Report' and contains a sub-section titled 'Order'. Below this, there is a search bar with fields for Customer Id, Type (set to All), Status (set to All), and a 'Search' button. The main table displays 12 rows of order data:

Cart Id	Customer Id	Customer	Type	Date	Time	Status	Total Price	Action
1002	3	JOHN	TAKE AWAY	15 MAY 2022	10.20AM	Pending	\$200	View
1003	1	TOM	TAKE AWAY	15 MAY 2022	11.30AM	Pending	\$300	View
1004	1	ANNY	DINE IN	15 MAY 2022	11.34AM	Pending	\$200	View
1005	2	ANNIE	TAKE AWAY	15 MAY 2022	12.10PM	Pending	\$100	View
1006	2	JANE	DINE IN	15 MAY 2022	01.00PM	Pending	\$50	View
1007	2	PETER	TAKE AWAY	15 MAY 2022	01.20PM	Pending	\$60	View
1008	2	ALI	TAKE AWAY	15 MAY 2022	02.00PM	Pending	\$120	View
1009	2	NAJIB	TAKE AWAY	15 MAY 2022	03.00PM	Pending	\$230	View
1010	2	ABDUL RAMAH	TAKE AWAY	15 MAY 2022	07.30PM	Pending	\$400	View
1011	2	ALI BABA	TAKE AWAY	15 MAY 2022	07.45PM	Pending	\$200	View
1012	2	LEE SENG	DINE IN	15 MAY 2022	08.15PM	Accepted	\$300	View

8.10 Customer Loyalty Records

Manger can edit and manage customer loyalty accounts

Customer Loyalty Account

Customer ID	Name	Username	Card Number	Date Registered	Time	Point	Edit
1001	Robbert	Robbert102	1000 1000 1000 1000	01 May 2022	10.00am	200	Edit
1002	John	JohnJohn22	1000 1000 1000 1001	11 June 2022	11.00am	100	Edit
1003	Peter	PeterPan22	1000 1000 1000 1002	22 July 2022	12.00am	0	Edit
1004	Anne	Anne11	1000 1000 1000 1003	23 July 2022	01.00pm	80	Edit
1005	Kevin	KEvinnnn2	1000 1000 1000 1004	16 August 2022	02.00pm	500	Edit
1006	Joey	Joooey22	1000 1000 1000 1005	17 August 2022	03.02pm	300	Edit
1007	Caty	Cattrr111	1000 1000 1000 1006	18 August 2022	05.03pm	400	Edit
1008	Eric	Ericccea12	1000 1000 1000 1007	19 August 2022	06.04pm	500	Edit
1009	James	Jamesss222	1000 1000 1000 1008	20 August 2022	07.00pm	70	Edit
1010	Sam	SAm2222	1000 1000 1000 1009	21 August 2022	08.00pm	230	Edit

8.11 Inventory

Manager and Head Chef can access into inventory



Inventory



Inventory ID	Name	Description	Unit Price (\$)	Quantity in Stock	Inventory Value (\$)	Reorder Level	Quantity in Reorder	Comments
IN0001	Item 1	Desc 1	\$56	25	\$8607	3	50	Add Text Here
IN0002	Item 2	Desc 2	\$38	132	\$1872	15	100	Add Text Here
IN0003	Item 3	Desc 3	\$59	176	\$10384	2	50	Add Text Here
IN0004	Item 4	Desc 4	\$53	122	\$8750	9	100	Add Text Here
IN0005	Item 5	Desc 5	\$28	62	\$396	12	50	Add Text Here
IN0006	Item 6	Desc 6	\$26	46	\$4650	13	150	Add Text Here
IN0007	Item 7	Desc 7	\$42	96	\$7198	11	50	Add Text Here
IN0008	Item 8	Desc 8	\$32	186	\$8640	6	150	Add Text Here
IN0009	Item 9	Desc 9	\$90	151	\$12216	4	50	Add Text Here

9.0 Budget

There needs to be a detailed staffing cost analysis with time and cost considerations; this includes the development of both the functional and non-functional requirements of the Web and CMS (Content Management System) of the Restaurant management system.

Furthermore, the licensing requirement of the CMS software, web hosting, domain name and SSL certificate for HTTPS is to be considered in the budget details (Lahn2022) (Ssltrust.com.au 2022) (Domainregistration.com.au 2022) (Craftcms.com 2022)

The overall breakdown is considered for the capital investment for the first year of the restaurant management system development. The software pricings are hence analysed for a one-year plan firstly.

The budget for the Yeti Restaurant management system will be breakdown into the cost of Web and the Content Management System (CMS) table. While building a website, we need a content management system (CMS) for settings and maintenance of the restaurant management system (Dafei 2020). The hourly rate of each table is base of wages by hours.

9.1 Breakdown of the time and cost

Functional Requirements (Web)	Time (Hour)	Cost (AUD)	\$100 P.H
Scan QR code to website	16	\$	1,600.00
Take away	16	\$	1,600.00
Dine in (able to select & update table number)	32	\$	3,200.00
Display Food image, detail and price	48	\$	4,800.00
Cart	32	\$	3,200.00
Checkout	48	\$	4,800.00
Payment (apple pay, google pay, credit card)	48	\$	4,800.00
Order confirmation	16	\$	1,600.00
Notification from CMS	48	\$	4,800.00
Total	304	\$	30,400.00
Functional Requirements (CMS)	Time (Hour)	Cost (AUD)	\$100 P.H
Inventory	36	\$	3,600.00
Product list and details (CRUD)	16	\$	1,600.00
Staff time table and payslip	56	\$	5,600.00
report (sales, inventory and order)	36	\$	3,600.00
Notification (less stock in inventory)	24	\$	2,400.00
orders	36	\$	3,600.00
Settings (payment, opening hours, tables etc)	48	\$	4,800.00
WebSocket (instant/ongoing update order)	56	\$	5,600.00
Total	308	\$	30,800.00
Non-Functional Requirements (Web)	Time (Hour)	Cost (AUD)	\$100 P.H
Loyalty program	48	\$	4,800.00
Browser support	24	\$	2,400.00
SMS and Email notification	36	\$	3,600.00
Total	108	\$	10,800.00
Non-Functional Requirements (CMS)	Time (Hour)	Cost (AUD)	\$100 P.H
Fully custom design report	56	\$	5,600.00
Loyalty program	48	\$	4,800.00
Role base access control (Waiter/Manager)	56	\$	5,600.00
Printer (receipt)	48	\$	4,800.00
Total	208	\$	20,800.00

9.2 Total cost time and cost analysis

Functions and others	Time (Hour)	Cost (AUD)
Functional	614	\$ 61,400.00
Web	306	\$ 30,600.00
CMS	308	\$ 30,800.00
Non-functional	316	\$ 31,600.00
Web	108	\$ 10,800.00
CMS	208	\$ 20,800.00
Meeting and brainstorming with Yeti stakeholders		
"Every 2 weeks meeting for the system progress, estimated 6 times meeting and feedback for the entire project duration"	48	\$ 9,600.00
6 meetings 8 hours Per day		
Each hour cost \$200		
Zoom meeting 6 hours per week	Free	\$ -
Total	978/40.75 Bussiness days	\$ 102,600.00

9.3 Total Budget

Requirements	Breakdown	Time (Hour)	Cost Breakdown (AUD)	Cost (AUD)
Staff salaries	Functional	614	\$ 61,400.00	\$102,600.00
	Web	306	\$ 30,600.00	
	CMS	308	\$ 30,800.00	
	Non-functional	316	\$ 31,600.00	
	Web	108	\$ 10,800.00	
	CMS	208	\$ 20,800.00	
	Meeting and brainstorming with Yeti stakeholders			
	"Every 2 weeks meeting for the system progress, estimated 6 times meeting and feedback for the entire project duration"	48	\$ 9,600.00	
	6 meetings 8 hours Per day			
	Each hour cost \$200			
	Zoom meeting 6 hours per week	Free	\$ -	\$ 104,030.00
Licence for software	Professional CMS license for the project			\$ 300.00
Web hosting	Standard ownership			\$ 1,000.00
Domain name	1st year			\$ 70.00
SSL certificate HTTPS	1s year			\$ 60.00

Therefore, as per the overall estimates, the development and set-up of the system would cost about A\$ 104,030 to the project team and the restaurant.

10 Conclusion

Yeti Restaurant Management System will be build based on Scrum a framework of agile method which able to provide high interaction during elicitation with Yeti stakeholders. Iteration and incremental enable the restaurant management system to be continuous improvement during the development cycle. The project timeline is captured by using Gantt chart to see the flow and milestone for every iteration progress. Showing the UML diagrams such as the use case diagram that has three functionality breakdowns into sequence diagrams such as the customer, manager and chef. Entity Relationship diagram for programming to design the website. Furthermore, we have design very quality of high-fidelity prototype to show the overall of the website will be designed in specific. Finally, the budget breakdown of all the requirements which is necessary after high requirement elicitation.

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