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The Accelerators

PROJECT DOCUMANTATION

The accelerators
EASYFOOD

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Scope Definition

Background

Problem, opportunity or directive statement

The Accelerators is an organization that offers communication, collaborative online food ordering system. It enables an effective communication between owners, employees, partners and suppliers to maximize their ability to collaborate. Our system known as EasyFood will make people's lives more convenient, easier and safer, restaurants will be able to sell their food online. We would not like to keep our customers waiting long for their food therefore we deliver on time and our system is user friendly and fun to interact with. Basically, we are service providers and create jobs for people around those townships that will be having access to our EasyFood food ordering system.

History leading to the project (problems to be solved)

The accelerators are an organization that I responsible for developing an online food ordering system and the system will be rendered and maintained to local restaurant and café owners. Urbanization in our growing has since been growing the past years which has also contributed to the increase of the rate of crime across townships. Townships are known not to be safe at night times which founds a problem whereby people tend to be reluctant to go out at night and go to their favorite restaurant to buy food because of safety reasons, therefore our EasyFood system again will serve to solve this problem. The middle class in our country as it grows, we want local commuters to also spend their money in local townships restaurant and cafes thus growing the market of local restaurants and cafés.

We also like to tackle the queue in the local townships especially during month end periods whereby customers who work come back late from work and are lazy to cook now they can order on our EasyFood instead.

Project Goal and Objectives

Our goal and objectives with the EasyFood system is to capitalize the opportunity we saw in the market to improve lives of people living on townships. We want to boost and improve the economy around restaurants, cafés and other food business around townships to a higher level. We want to help community members to be able to order their local favorite food without having to go out of their residences thus avoiding disturbing activities such as the crime around the townships and again queue in restaurants and save their time. The customers shall receive their food fast and safe at reasonable prizes, same way as ordering food from well-known restaurant.

Product Description

We offer a simple convenient computerized online food ordering system. It will be supplied to local restaurant owners so that their customers around the townships can order food on the system. The restaurant will prepare the order chosen by the user(customer) you will first have to be registered to our EasyFood system. Their food choice will be dictated by what is available on the restaurant menu at time current time. Once the food is order is processed it will be delivered to the customer's specified address. EasyFood is targeted at local townships restaurants and café owners. The employees of any of the stores will interact with the system to ensure the customers' order(s) are received on time and their food order is processed without any delay once it is on the assembly line.

PROBLEM STATEMENT MATRIX

PROJECT: <EasyFood>	**PROJECT MANAGER: <instructor's name>**
CREATED BY: <Mpho Mokena>	**LAST UPDATED BY: <student name>**
DATE CREATED: 03/06/2020	**DATE LAST UPDATED: 03/06/2020**

Brief Statements of Problem, Opportunity, or Directive	Urgency	Visibility	Annual Benefits	Priority or Rank	Proposed Solution
EXAMPLE: 1. The rand amount of lost, stolen, or damaged tools has exceeded R125,000 per year.	6 months	High (Physical Plant Management)	In the thousands.	1	New Development
2. At local restaurants people tend to wait long hours on the queues before receiving their orders.	6 Months	High	R 20.000	5	Replace queues with order number from online delivery
3. A lot of potential customers sometimes are reluctant to drive or walk to the café.	6 months	high	R 15.000	5	Create an online platform for customers to buy food from in the internet

4. There is generally a lack of order management in township cafes.	6 months	Med	R 10.000	3	Give each customer a unique order number to identify them easily for employee.
5. Mishandling of stock in the café by employees	6 months	Med	R 10.000	2	New Development
6. There is an opportunity to make an online café in the internet.	6 months	High	R20.000	5	Future version of newly developed system.
7. Deliver at specified location in the local area.	6 months	Med	R10.000	4	Quick fix; the new development .

1. Introduction

The designated stakeholders in our project plays a crucial role. Stakeholders are persons of interest in an existing or proposed information system. They can either be technical or nontechnical workers. We have a project manager, system builder, system analyst and system designer in our project's system.

They will be working together many different aspects of the system such as arrangement of

people, data, process and information technology that will interact to collect data from users of the system, it will then provide the desired output.

2. Project Manager

❖ Molelo TA 28969588

❖ The Project manager in this case will be the person who is experienced who accepts responsibility for planning, monitoring, and controlling the project with respect to schedule, budget, deliverables, customer satisfaction, technical standards and system quality.

❖ His function basically will be scoping, planning, estimating, scheduling, organizing, directing, controlling and closing as to asses' success and failure.

3. System Designer

❖ Setlatjile M 31281613

❖ The system designer will be our specialist who will translate system user's business requirements and constraints into technical solution. He will design the computer database, input, outputs, screens, networks and software that will meet our system user's or customer's requirements

4. System Builder

❖ Mokoena MS 26913860

❖ The system builder will be our technical specialist who constructs information system and components based on the design specifications generated by our system designer. 5. System Analyst

❖ A system analyst is a specialist who studies problems and needs of an organization to determine how people, data, processes and information technology can best accomplish improvements of our business

❖ In our case we have a programmer analyst and business analyst to counteract both technical and nontechnical

❖

6. Summary

❖ The stakeholders will work hand in hand to achieve one goal which is a successful working system. Appropriate procedures have been adapted to the project by all the stakeholders to ensure a standardized well working system

Project management

Activity 1 – Negotiate scope

1. Product.
    - The product that will automate the food ordering system to be online and help local cafes to reach out to more audience and system that will be user friendly.
2. Quality

- It must be good in a way that it will be easy to use and to handle orders and will also provide the users who are not exposed to technology with options in what to choose and must be user friendly.

3. Time
    - Within the period of 4 months.
4. Cost
    - The amount of R150 000.00
5. Resources
    - Software that can be used to build the system.
    - Hardware that is required to build the system.

Activity 2 – identify task

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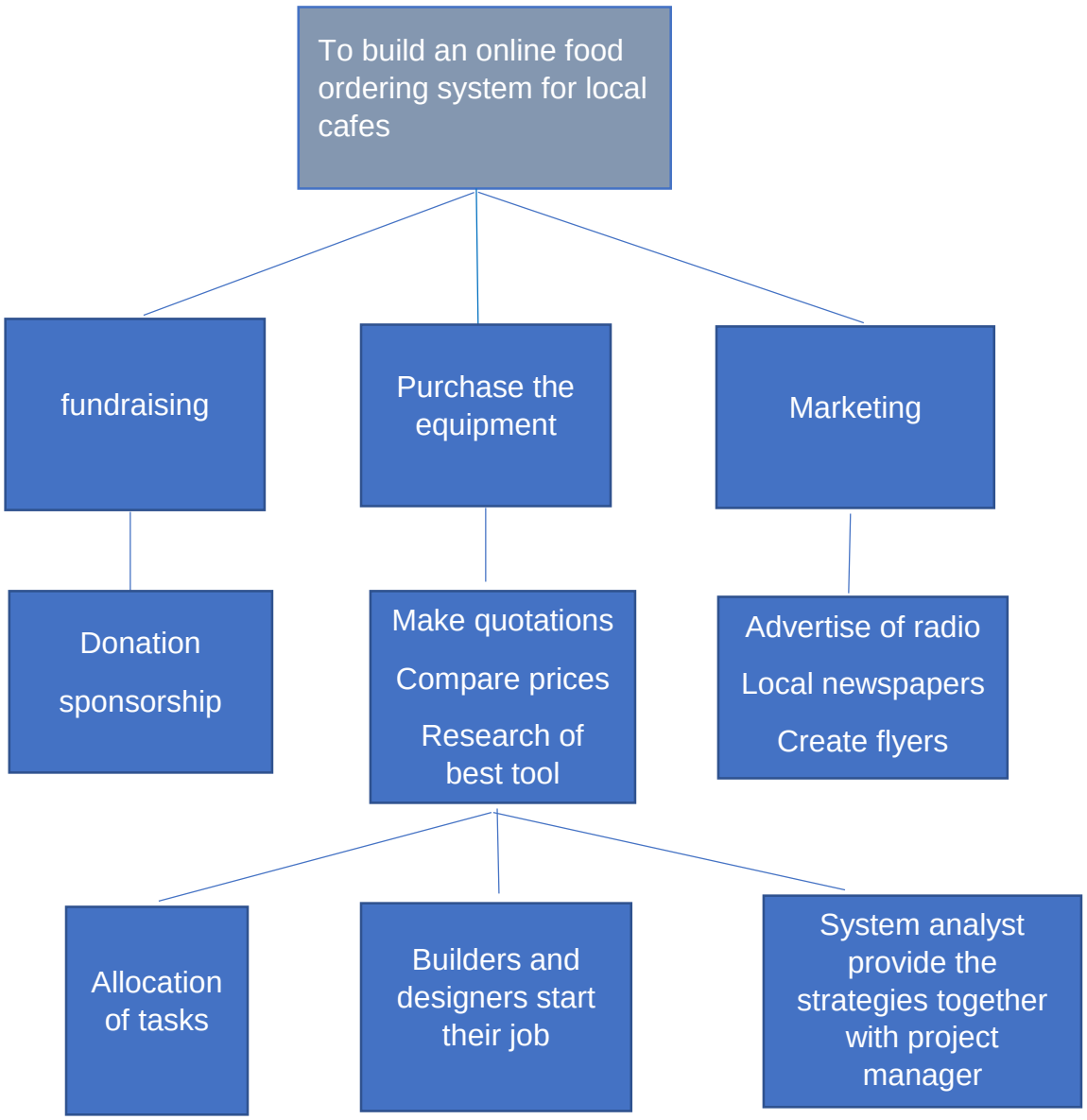

Activity 3 Estimate task duration.

1. Efficiency
    - No worker will be 100 % efficient, since there will be time they go out for lunch, coffee breaks and other will be engaging in non-project task, that will affect the efficiency. The efficiency will be on average of 80 %.
2. Interruptions
    - Phone calls, visitors and other unplanned interruptions will consume time and it will affect project. Interruptions will be on average of 20 % of a workday.

3. Formula.

OD = 1 day.
ED = 20 days PD
= 70 days.

$$D = \frac{\left((1*OD)+(4*ED)+(1*70)\right)}{6}$$

$$= \frac{\left((1*1)+(4*20)+(1*70)\right)}{6}$$

= 28.5 Days.

Activity 4 specify task dependencies.

Task	Duration	Predecessor
Assign stakeholders (A)	1 day	0
Distribute tasks to stakeholders(B)	2 days	A

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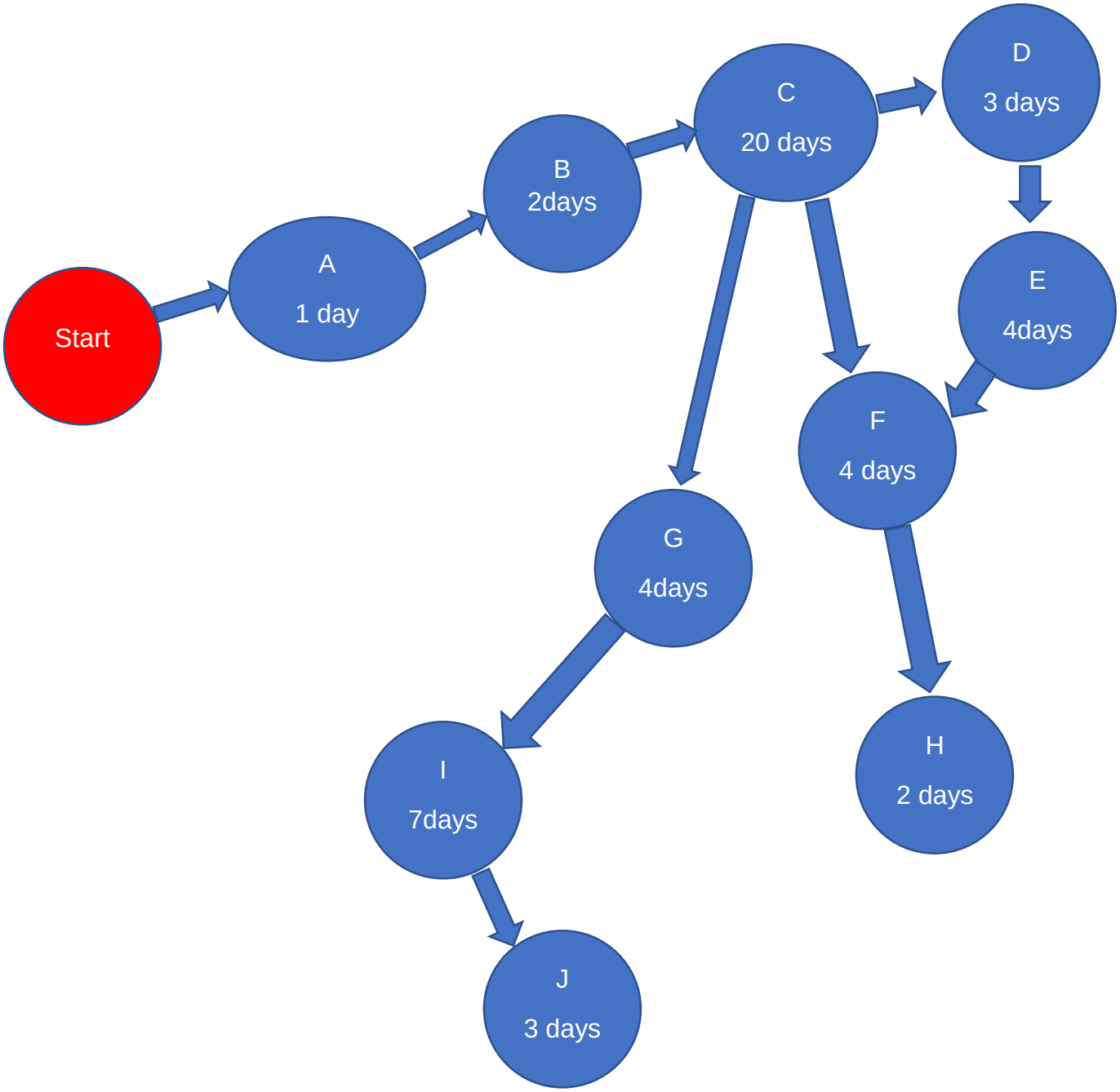
Start documentation(C)	20days	B
Gathering of resources (D)	3 days	C
Build database(E)	4 days	D
Build prototype (F)	4 days	C, E
documentation update based on feedback(G)	4 days	C
Improvement on prototype(H)	2 days	F
Finalize documentation(I)	days	G
Prepare presentation(J)	5 days	I

PERT CHART



Activity 5 – Assign resources.

1. Molelo TA (Project manager).
    - Project manager will be responsible for assigning tasks, supervision and motivating other stakeholders. Project manager will also direct the team and make sure that they finish their job within given deadline, must have a room, computer and other resources that are required for project management and should also keep all records. The budget estimated for project manager is amount of $ 120.
2. Mtimkulu SGN (Systems analyst).
    - System analyst assesses how user interact with technology and how business functions by examining the inputting and processing of data and outputting of information with the intent of improving organizational process. The facilities and equipment required for system analyst are Microsoft office suite google docs, pencil, smart draw and Wrike. The budget estimated for system analyst is $100.
3. Setlatjile MM (System designer).
    - The system builder is responsible for developing comprehensive plan and instructions which can be given to the system builders (Programmers). Designing the specifications and system that will be user friendly. The system designer will need hardware and software required to design the system. The budget estimated for system builder is $400.
4. Mokoena M (System builder).
    - The system builder is responsible for implementing and building the system that will perform its function and purpose. The tools required for system builder are hardware and software, the estimated budget is $400.

Activity 6 – Direct the team effort.

Forming

Orientation stage

- Every member must comply with the rules.
- Good relationship amongst is key aspect for productivity.
- Every member must hand in their work with the given deadline and must do what is in their job description.
- A good plan must be implemented in order to achieve the desired results.

Storming

- Must make sure thar there is no interpersonal conflict that will affect productivity.
- Rules must be followed so that we work together in accomplishing the main goal of the project.
- Member must participate in every task that is crucial for the project.

Norming

Growth and productivity stage

- Crucial activities towards our main goal must be attended to immediately .
- Project manager will provide feed back and also get feedback from other stakeholders.
- There will be a platform where the ideas will be shared
- Member must have a good relationship so that they feel good about each other.

Performing

Evaluation and control stage

- More feedback and evaluation amongst the stakeholders.
- Members must adhere to team norms.
- Roles of team strengthened .
- Team must have strong motivation to share goals.

First Interviewee

First interviewee is a 23-year-old black male who is currently studying Bed (Sophomore). His name is Daniel Mokoena, and he is someone that I am super close with and we have been friends since 2012. I have decided to engage with him on this topic of Corona virus, and since we are of the same age group.

Second Interviewee

My second interviewee is Mahlatse Lephalala, she is a 22-year-old female. I have known him through a greet and meet event in our respective residence last year (2019), first semester. First interviewee we know each very well, in fact we very close, so he was not shy to express to

	Interviewee: Daniel Mokoena, BEd Student Date: 16 March 2020 Time: 14:00 Place: Thuthuka Residence, thuthuka hall. Topic: Online food ordering	
Time allocated	**Interviewer Questions / Objective**	**Response**
10 min.	**Objectives:** - We formally introduce ourselves. - gratefully thank Daniel for making time for the interview session. - Clarify the purpose of this interview and start the TOPIC.	
5 min.	**Question I** Would you like to take your business to online? Followup	**"Yes, I think it will grow my business and create new opportunities"**

5 min.	**Question 2** How would online order service be impactful to your business? Follow-up	"It would help me manage orders, have small staff, and also cut costs".
5min.	**Question 3** What do you think is a challenge about online order for township owners? Follow-up	**"I think it is the fact that you have to implement an IT infrastructure, which is costly".**
5 min.	**Question 4** Do you think online ordering would generate money together with walk-in? Follow-up	**"Yes, it is a two-way stream to generate income, definitely make more money than one stream".**
10min.	**Question 5** Would you like to develop your own system or have someone to host you? Follow-up	"I prefer having someone host me, I think it would be easy to work like that".
10min.	**Objectives: -** Thankful appreciation to Daniel for honest answers and fair Conclusion of the interview.	
50 min.	Time allocated for questions and objectives	
5 min.	Time allocated for follow- up.	
55 min.	Time allocated for the interview (14:00 – 14:55)	

	General comments and Notes: **The interview went quite well: 8/10**	

	Interviewee: Mahlatse Lephalala, housemate. Date: 17 March 2020 Time: 13:00 Place: NWU, student centre. Topic: Online food ordering	
Time allocated	**Interviewer** **Questions / Objective**	**Response**
10 min.	**Objectives:** - We formally introduce ourselves. - gratefully thank Daniel for making time for the interview session. - Clarify the purpose of this interview and start the TOPIC.	

5 min.	**Question I** Do you think it's cool to buy food online? Follow-up	"Yes, it saves time and money".
5 min.	**Question 2** What are you fears about buying online? Follow-up	**"When you place an order, and then they don't receive it "** .
5min.	**Question 3** What is worse about online ordering compared to walk-in? Follow-up	"I think with online you wait a bit longer than offline"
5 min.	**Question 4** What do you think is can possibly be faulty about online ordering? Follow-up	**"It would be receiving something that I didn't buy".**
10min.	**Question 5** What do you think is outstanding about online ordering? Follow-up	**"It's always available on the internet".**
10min.	**Objectives: -** Thankful appreciation to Mahlatse for honest answers and fair Conclusion of the interview.	
50 min.	Time allocated for questions and objectives	
5 min.	Time allocated for follow- up.	
55 min.	Time allocated for the interview (11:00 – 11:55)	
	Notes and comments: It was okay: **4.5/10**	

Interviewee: Mahlatse Lephalala, housemate.

Date: 17 March 2020

Time: 13:00

Place: NWU, student centre. Topic:

Online food ordering

Time allocated	**Interviewer** **Questions / Objective**	**Response**
10 min.	**Objectives:** - We formally introduce ourselves. - gratefully thank Daniel for making time for the interview session. - Clarify the purpose of this interview and start the TOPIC.	
5 min.	**Question I** Would you like take orders offline or online? Follow-up	"As an employee, I would like to take them online, I think it would be easy to manage them, unlike offline"
5 min.	**Question 2** What do you think is would be challenge for you as a worker to orders online? Follow-up	**"I think it can be making sure that the customer placed their orders correctly".**
5min.	**Question 3** Do you think online ordering is too much to work with? Follow-up	"Yes, I'm not familiar on working with computers".

5 min.	**Question 4** How can you reflect online ordering on your personality? Follow-up	**"I'm not a people's person, so it would be nice to take orders from the screen than seeing the actual person".**
10min.	**Question 5** Do you think online ordering reduces employment? Follow-up	**"No, I don't think so, as long as there's walk-ins to a restaurant"**.
10min.	**Objectives: -** Thankful appreciation to Mahlatse for honest answers and fair Conclusion of the interview.	
50 min.	Time allocated for questions and objectives	
5 min.	Time allocated for follow- up.	
55 min.	Time allocated for the interview (11:00 – 11:55)	
	Notes and comments: It was okay: **4.5/10**	

Requirement: Navigate through the restaurant menu	Requirement Type: Functional	Event/BUC/PUC#: 1

Description: This feature allows the active users to have access to the options of the menu offered by the restaurant.	
Rationale: Most customers love to see what is offered to them, what options do they have in the restaurant food menu.	
Fit Criteria: This feature is primarily handled by the system developers, but it is the responsibility of the restaurant owners to upload pictures or list items on the menu.	
Customer satisfaction: 5	Customer dissatisfaction: 0
Priority: 10	Conflicts: N/A
Supporting material: N/A	
History: Most local restaurant do not offer menus that are updated or available to the customer during order, so this system will allow the employees to update the menu anytime.	

Requirement: Create account	Requirement Type: Functional	Event/BUC/PUC#: 2

Description: Local business owners should create their account on the system, so that they can have their business available to the system as well as to the customers.	
Rationale: Business owners can't open a business on the system without creating the account.	
Fit Criteria: To make the business available to the customers as well as charging fee for service rendered by the system developers.	
Customer satisfaction: 5	Customer dissatisfaction: 0
Priority: 10	Conflicts: Availability of computer or smartphone
Supporting material: N/A	

Requirement: Confirmation of order	Requirement Type: Functional	Event/BUC/PUC#: 3

Description: Notifications of a matching item the user has lost. This function allows the customers to have a specified feedback about their order, whether it has been received or not, and this ultimately allows the employee to get notified about an order being placed.
Rationale: If a user looks for an item on the system and does not find it but it is later entered into the system as lost, they will be notified of the potential match. Once the customer has selected their food on the menu, and are ready to place an order, they definitely like to know whether their order has been placed and receive order number as positive feedback.
Fit Criteria: Each order placed will have a unique order number on it for each customer.

Customer satisfaction: 5	Customer dissatisfaction: 0
Priority: 10	Conflicts: N/A
Supporting material: N/A	

History: In most local restaurants in townships, orders received are not being addressed in form of unique order number, which makes it difficult for customers to get hold of their order as well as employee handling orders.

Requirement: Remove an item or items from their present order	Requirement Type: Functional	Event/BUC/PUC#: 4
Description: This allows customers to have flexibility on the menu.		
Rationale: Limited disk space will mean that only 200px by 200px images should be uploaded. Once the customer has placed an order, it cannot be reversed on the system.		
Fit Criteria: Functions such as delete and add are placed in case of this problem during the ordering process.		
Customer satisfaction: 5	Customer dissatisfaction: 3	
Priority: 9	Conflicts: Non-functionality of the system to activate the reversal	
Supporting material: N/A		

History: When customers do walk-in orders, it is easy for them to cancel orders, or add orders on top of current orders, so it is part of the system to inherit that style.

Requirement: Select an item from the menu	Requirement Type: Functional	Event/BUC/PUC#: 5
Description: This is the food item that is presented by the restaurant to the customer and is actively available for customer to buy, by selecting it.		
Rationale: This will eventually lead to the customer placing an order and the employee receiving an order with order number.		
Fit Criteria: Food item selecting is for customers only.		
Customer satisfaction: 5	Customer dissatisfaction: 2	
Priority: 9	Conflicts: N/A	

Supporting material: N/A
History: In local restaurants customers are presented with menu on walls, and customers selecting their desired items, with online it is definitely important for allow buyers to select food item.

Requirement: Menu management	Requirement Type: Functional	Event/BUC/PUC#: 6
Description: This package is the foundation of all business. It is available to the business owners or employee.		
Rationale: This is mostly for administration, to perform activities such as _ menu update, item delete, food item addition or insert.		
Fit Criteria: Adjusting the food items on the menu.		
Customer satisfaction: 5	Customer dissatisfaction: 2	
Priority: 10	Conflicts: N/A	

Supporting material: N/A
History: All businesses have different kinds of adjustments to make on their production and inventory. This feature is inspired by handling menu management.

Requirement: Order notification	Requirement Type: Non-Functional	Event/BUC/PUC#: 7
Description: This feature is for restaurant owners or staff. It is primarily integrated for staff to receive and view orders with details from customers.		
Rationale: This is for staff or administration to provide service to the current order or to handle incoming orders online.		
Fit Criteria: Available only to staff or business owners.		
Customer satisfaction: 5	Customer dissatisfaction: 2	
Priority: 9	Conflicts: N/A	

Supporting material: N/A
History: Local restaurants take orders physically or verbally from customers, it is the duty of online services to provide the same style, but virtually.

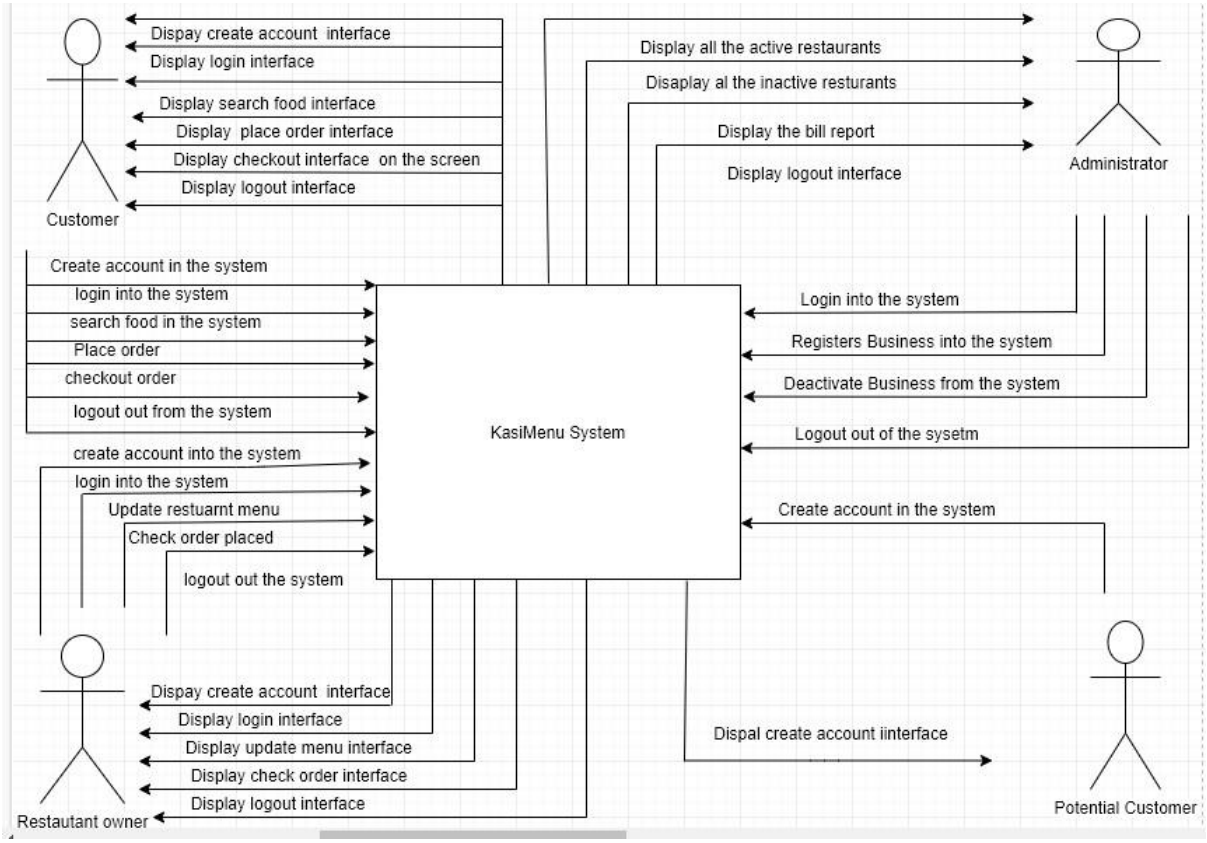
Requirement: Customer account	Requirement Type: functional	Event/BUC/PUC#: 8
Description: This requirement is basically for capturing customer details for specified location delivery		
Rationale: This is primarily needed for order holder identity; the customer has to give mostly contacts for delivery.		
Fit Criteria: Contacts that are active for instant messaging i.e. WhatsApp		
Customer satisfaction: 5	Customer dissatisfaction: 0	
Priority: 10	Conflicts: N/A	

Supporting material: N/A
History: Through the delivery of online orders, high-tech software maps are used, but for local townships which are not really recognized by well-known geographic information system software's, such as Google maps and iMaps, calling the customers for delivery is highly recommendable and efficient.

List of Actors

Term	Description
Potential customer	An individual that wish to have an account on the system
Administrator	An individual or group of individuals that are that responsible for maintaining the services provided to restaurants, maintaining the system as well as managing the entire system
Restaurant owner	An individual who owns a local restaurant and is participating on the system.
Customer	An individual that is an active member to local restaurants through purchasing food on the system

Context Diagram



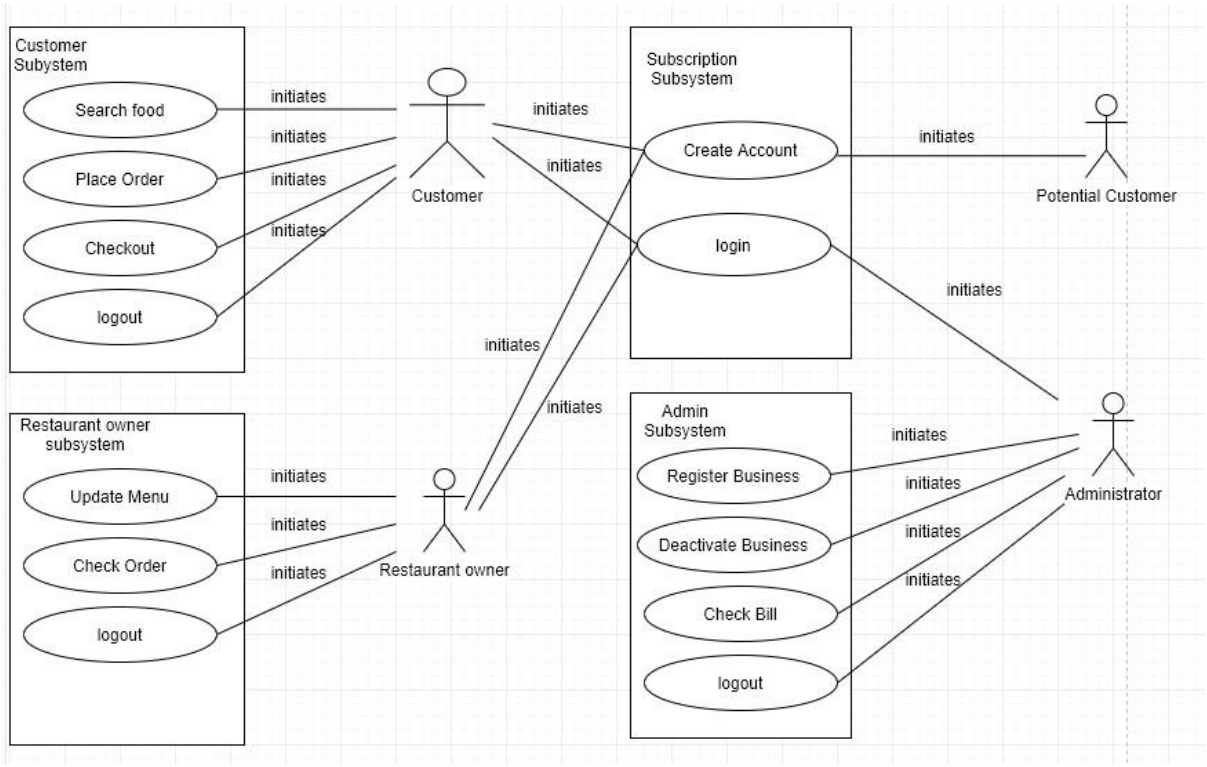
Use Case Glossary

UseCase Name	UseCase Description	Participating Actors
Create account	This use case describes the event of a potential customer and potential restaurant owner	• Potential member • Restaurant owner • Customer

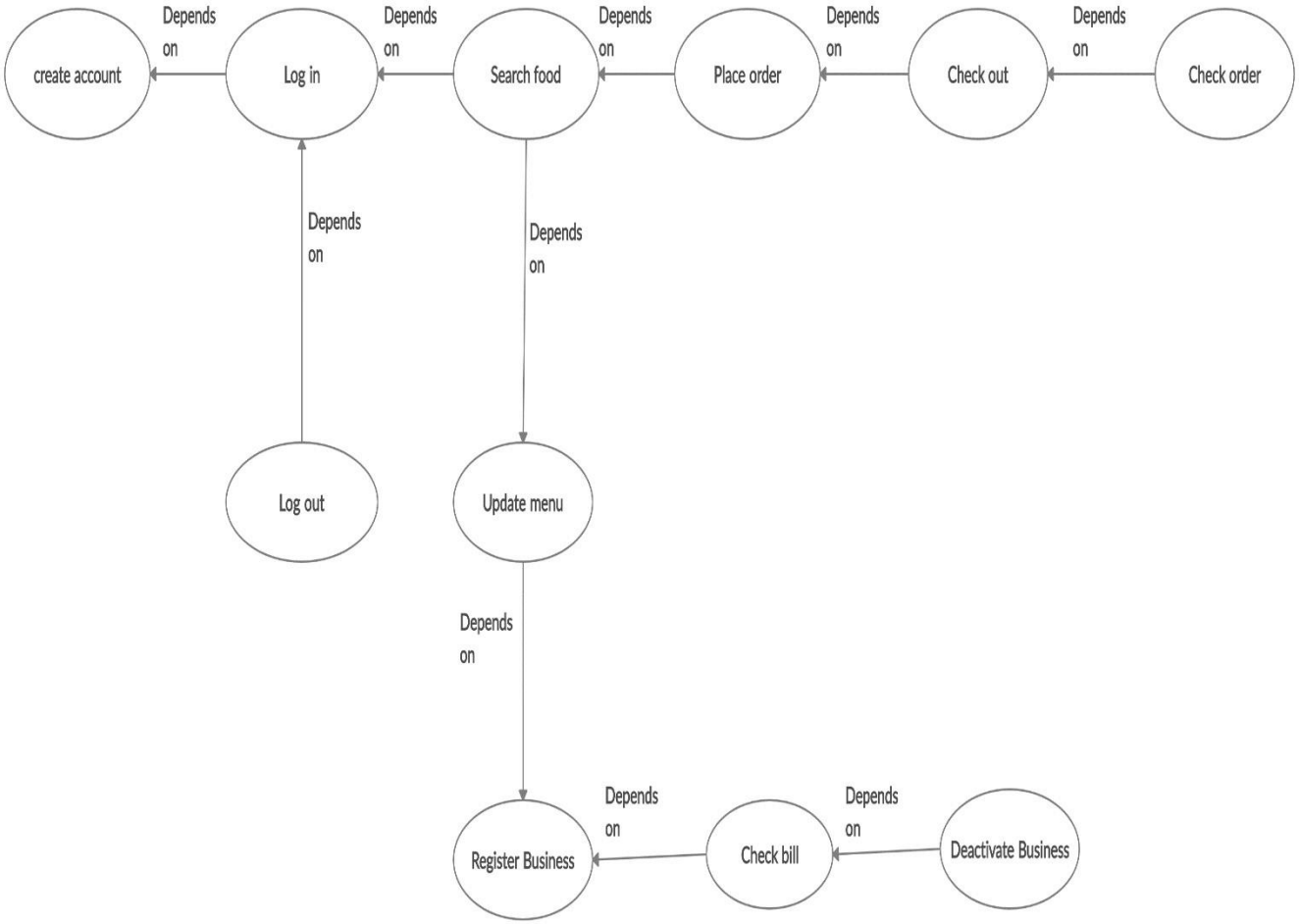
	requesting to be part of the business.	
login	This use case describes the event that eventually allows the active or potential member to have access to their specific system interface after creating their system.	• System Administrator • Restaurant owner • Customer
Search food	This use case describes the event which allows the customer to browse through the restaurant current menu, or to look at what they exactly what they want.	• Customer
Place order	This use case describes the event that allows the customer to have their food booked by their desired restaurant.	• Customer
Checko ut	This use case describes the event that is the final interface of ordering and will eventually place an order to the restaurant system.	• Customer
Update menu	This use case describes the event that allows the restaurant owners/staff to update their inventory offline and also this use case allows the customer to know what's available to them online	• Restaurant owner or staff

Check order	This use case describes the event which enables the restaurant owner or staff to receive the order that has been placed by the customer.	• Restaurant owner or staff
Register Business	This use case describes the event which allows the system administration to give potential restaurant owners to have their business recognized by our system and also to the targeted customer.	• System Administrator
Deactivate Business	This use case describes the event that enables the system administrator to remove or mute restaurant owners. Restaurant owners which are no longer interested or willing to cut ties with our business, or restaurants that have outstanding fees to us.	• System Administrator
Check Bill	This use case describes the event that gives the system administrator to view profit or loss by the service rendered.	• System Administrator
logout	This use case describes the event that gives all Actors to leave their current interface and to the system home page.	• Restaurant Owner • Customer • System Administrator
Customer		•

Use Case Model Diagram



Dependency Diagram



USECASE NARRATIVE for place order

Use-case Name:	Place order	Use-Case type Business Requirement: ☑
Priority:	High	
Primary business actor	Customer	
Other participating actors	• Restaurant owner • Administrator	
Other interested Stakeholders		

Description	This use-case describes the event where a customer places an order for food. The customer chooses food from the menu. If the customer checks out, then the order is submitted to the restaurant owners account and the charges of the order is added to the total bill(charges) to be payed to the system owners(administrators).	
Preconditions:	The person submitting the order must be a customer that is registered and logged in to the system.	
Trigger:	This use-case is initiated when the customer submits an order.	
Typical Course of Events:	Actor action	System Response
	Step 1: Customer provides their details to log in and order information by submitting.	Step 2: The system validates the customers' details. Step 3: The system then compares and verifies the customers details with those in the database of the system. Step 4: The system then verifies the order information from the menu. Step 5: Then the system adds the charges of the order to the total bill to be payed to the system owners(administrators) by restaurant owners. Step 6: The order is then submitted to the restaurant owner. Step 7: Confirmation of the order is sent back to the customer.
Alternative courses:	Alt-Step 2: If the customer provides invalid details, error message is sent that informs the customer what details are invalid and prompt them to resubmit. Alt-Step 3: If the customers' details do not reflect to any details on the database the customer is asked to enter the correct details.	
Conclusion	This use case concludes when the customer receives order confirmation.	
Post condition:	The order is therefore released. Then if the ordered food is finished restaurant owner updates the menu to show the food is no longer available.	
Business rules:	• Restaurant owner is charge per order. • System owners are not concerned with the food delivery.	

Implementations constraints and specifications:	A GUI for entering order details.
Open issues:	1. Finding locations.

Use-Case Narrative for Creating account

e celerators Use-e Name:	Create account **Group: 15**	Use -Case type **system EasyFood** Business Requirement: ☑
Priority:	High	
Primary business actor	Potential customer	
Other participating actors	• Administrator	
Other interested Stakeholders	Restaurant owner	
Description	This use-case describes the event where a potential customer creates an account to become a customer.	
Preconditions:	The person registering has to provide all information required in order for the registration to be successful.	
Trigger:	This use-case is initiated when the customer signs up.	
Typical Course of Events:	Actor action	System Response
	Step 1: Potential customer submits their sign-up details.	Step 2: The system validates potential customers' details. Step 3: The system then checks if potential customers' details does not reflect in the database of the system. Step 4: The system then stores potential customers details to the customers table in the database of the system. Step 5: Confirmation, of whether the creation of an account was successful or not, is send back to the customer.
Alternative courses:	Alt-Step 2: If potential customer provides invalid details, error message is sent that informs potential customer what details are invalid and prompt them to resubmit. Alt-Step 3: If potential customers' details reflect in the database potential customer is informed that the person has an account.	
Conclusion	This use case concludes when the customer receives confirmation.	

Post condition:	Potential customer then becomes a customer. That means they can now log in and place an order.
Business rules:	• Customer cannot have two accounts. • Potential customer has to provide valid details.
Implementations constraints and specifications:	There will be a GUI for potential customer to enter their details and button to sign up/ register.
Open issues:	1. Recognizing fake accounts.

Use-Case Narrative for Search Food

Use-case Name:	Search Food	Use-Case type Business Requirement: ☑
Priority:	Low	
Primary business actor	Potential customer	
Other participating actors		
Other interested Stakeholders	Restaurant owner Administrator	
Description	This use-case describes the event that allows the customer to browse through the restaurant menu.	
Preconditions:	The customer has to log in first.	
Trigger:	This use-case is initiated when the customer types in the search text box.	
Typical Course of Events:	Actor action	System Response
	Step 1: Customer types in the search text box.	Step 2: The system compares whatever the customer types with what is in the menu table of the database. Step 3: The system then displays whatever that is found in the menu table of the database.
Alternative courses:	Alt-Step 3: If what the customer typed does not reflect in the database customer is informed that what they typed is not available.	
Conclusion	This use case concludes when what the customer searched is displayed.	
Post condition:	The customer can therefor place an order.	
Business rules:	• Customers must type correct spellings.	
Implementations constraints and specifications:	There will be a text box on the GUI for searching food.	
Open issues:	1. Customers searching same food but with a different name from what it is named on the system.	

Use-Case Narrative for Checkout

Use-case Name:	Checkout	Use-Case type Business Requirement: ☑
Priority:	High	
Primary business actor	Customer	
Other participating actors	Restaurant owner	
Other interested Stakeholders	Administrator	
Description	This use-case describes the event where the customer finally places/submits an order to the restaurant.	
Preconditions:	The customer has to have orders in place.	
Trigger:	This use-case is initiated when the customer submits the final order.	
Typical Course of Events:	Actor action	System Response
	Step 1: Customer types submits orders.	Step 2: The system checks if the items ordered is not zero. Step 3: Confirmation is sent back to the customer.
Alternative courses:	Alt-Step 3: If there are no items ordered, the customer is informed that there are no items ordered and triggered to place orders.	
Conclusion	This use case concludes when the confirmation is sent back to the customer.	
Post condition:	The order is sent to the restaurant owner.	
Business rules:	• Customers must have items ordered.	
Implementations constraints and specifications:	The GUI will provide a button for the customer to check out.	
Open issues:	N/A	

Use-case for Update menu

Use-case Name:	Update menu	Use-Case type Business Requirement: ☑
Priority:	High	
Primary business actor	Restaurant owner	
Other participating actors		
Other interested Stakeholders	• Administrator • Customer	
Description	This use case describes the event that allows the restaurant owners/staff to update their inventory offline and also this use case allows the customer to know what's available to them online.	
Preconditions:	The restaurant has to log in as restaurant owner first.	
Trigger:	This use-case is initiated when restaurant owner presses the update button.	
Typical Course of Events:	Actor action	System Response
	Step 1: Restaurant owner enters the name, price and uploads the picture of the food then press update.	Step 2: The system verifies the entered details. Step 3: The details are then added to the systems database. Step 4: Confirmation is sent back to restaurant owner/staff.
Alternative courses:	Alt-Step 3: If the details are invalid, error message is sent, and restaurant owner/staff is triggered to re-enter valid details.	
Conclusion	This use case concludes when the confirmation is sent back to restaurant owner/staff.	
Post condition:	The menu on the system is updated, customers can now see the item.	
Business rules:	• The item must be available at the restaurant before it's added to the system.	
Implementations constraints and specifications:	The GUI will provide fields for restaurant owners/staff to enter the details of the food they want to add.	

Open issues:	1. Restaurant owner/staff might upload a large file, the picture.

Use-case narrative for Check order

Use-case Name:	Check order	Use-Case type Business Requirement: ☑
Priority:	High	
Primary business actor	Restaurant owner/staff	
Other participating actors		
Other interested Stakeholders	Customer	
Description	This use case describes the event which enables the restaurant owner or staff to receive the order that has been placed by the customer.	
Preconditions:	The customer must have checked out.	
Trigger:	This use-case is initiated when restaurant owner/staff opens order.	
Typical Course of Events:	Actor action	System Response
	Step 1: Restaurant owner opens the order received.	Step 2: The system displays the information about the order. Step 3: The order changes status to checked.
Alternative courses:	N/A	
Conclusion	This use case concludes when the order changes status to checked.	
Post condition:	This has to be shipped.	
Business rules:	• Only restaurant owner/staff can open this.	
Implementations constraints and specifications:	The button to check orders will be provided on the GUI.	
Open issues:	N/A	

Use-case Name:	Register Business	Use-Case type Business Requirement: ☑
Priority:	High	
Primary business actor	Administrator	

Other participating actors	Restaurant owner	
Other interested Stakeholders		
Description	This use case describes the event which allows the system administration to give potential restaurant owners to have their business recognized by our system and also to the targeted customer.	
Preconditions:	The restaurant owner must be new to the system and agrees with the terms & conditions.	
Trigger:	This use-case is initiated when administrator presses the Register business button.	
Typical Course of Events:	Actor action	System Response
	Step 1: Administrator provides the details of the business to log in and submits.	Step 2: The system validates the businesses' details. Step 3: The system then compares and verifies the businesses details with those in the database of the system, to check if the restaurant owners' details does not exist. Step 4: The business is added to the businesses table in the database. Step 5: Confirmation that the business is added is send back to the administrator
Alternative courses:	Alt-Step 2: If the administrator provides invalid details, error message is sent that informs the administrator what details are invalid and prompt them to re-enter. Alt-Step 3: If the businesses' details reflect in the database the administrator is informed that business is already registered.	
Conclusion	This use-case concludes when confirmation that the business is added is send back to the administrator.	
Post condition:	The restaurant owner changes the password for logging into their business account.	
Business rules:	• Restaurant owner must comply with the rules of paying the system owners/ administrators	
Implementations constraints and specifications:	A GUI for inputting business details will be provided.	
Open issues:	N/A	

Use-case narrative for Deactivate business

Use-case Name:	Deactivate business	Use-Case type Business Requirement: ☑
Priority:	Low	
Primary business actor	Administrator	
Other participating actors	Restaurant owner	
Other interested Stakeholders	Customer	
Description	This use case describes the event that enables the system administrator to remove or mute restaurant owners. Restaurant owners which are no longer interested or willing to cut ties with our business, or restaurants that have outstanding fees to us.	
Preconditions:	The administrator must check bills and consult with the restaurant owner.	
Trigger:	This use-case is initiated when the deactivate button is pressed.	
Typical Course of Events:	Actor action	System Response
	Step 1: Administrator presses the deactivate button. Step 3: Administrator presses yes.	Step 2: The system asks for confirmation to deactivate. Step 4: The details of the business are removed from the database. Step 5: Confirmation of the deactivation is sent to the administrator.
Alternative courses:	Step 3: Administrator presses no, the process is cancelled.	
Conclusion	This use case concludes when confirmation of the deactivation is sent to the administrator.	
Post condition:	The menu updates and the database.	
Business rules:	• Restaurant owner must be informed with the deactivation of their business.	
Implementations constraints and specifications:	Button for administrators to deactivate the business will be provided on the GUI.	
Open issues:	N/A	

Use-case narrative for Check bill

Use-case Name:	Check bill	Use-Case type Business Requirement: ☑
Priority:	Low	
Primary business actor	Administrator	
Other participating actors		
Other interested Stakeholders	Restaurant owner	
Description	This use case describes the event that gives the system administrator to view bills that each restaurant owner must pay.	
Preconditions:	There must be orders that were successful.	
Trigger:	This use-case is initiated when administrator selects the option to check the bills.	
Typical Course of Events:	Actor action	System Response
	Step 1: Administrator selects the option to check the bills.	Step 2: The system displays the bills.
Alternative courses:	N/A	
Conclusion	This use case concludes when the system displays bills.	
Post condition:	Administrator exists	
Business rules:	• If there were no successful orders the bill will be R0.00	
Implementations constraints and specifications:	The button checking bills will be part of the GUI.	
Open issues:	N/A	

use-case narrative for log out

Use-case Name:	Log out	Use-Case type Business Requirement: ☑
Priority:	High	

Primary business actor	Customer or restaurant owner	
Other participating actors		
Other interested Stakeholders	Administrator	
Description	This use case describes the event that gives all Actors to leave their current interface and to the system home page.	
Preconditions:	They must have logged in.	
Trigger:	This use-case is initiated when they press the log out button	
Typical Course of Events:	Actor action	System Response
	Step 1: Customer/Restaurant owner presses the log out button.	Step 2: The system goes to home page.
Alternative courses:	N/A	
Conclusion	This use case concludes when the system goes to home page.	
Post condition:	Customers/Restaurant owner leave the system or log in again.	
Business rules:	• If you are logged out, you will have no access to the functions for those who are logged in.	
Implementations constraints and specifications:	There will be a button for logging out on the GUI.	
Open issues:	N/A	

Priority Ranking Matrix

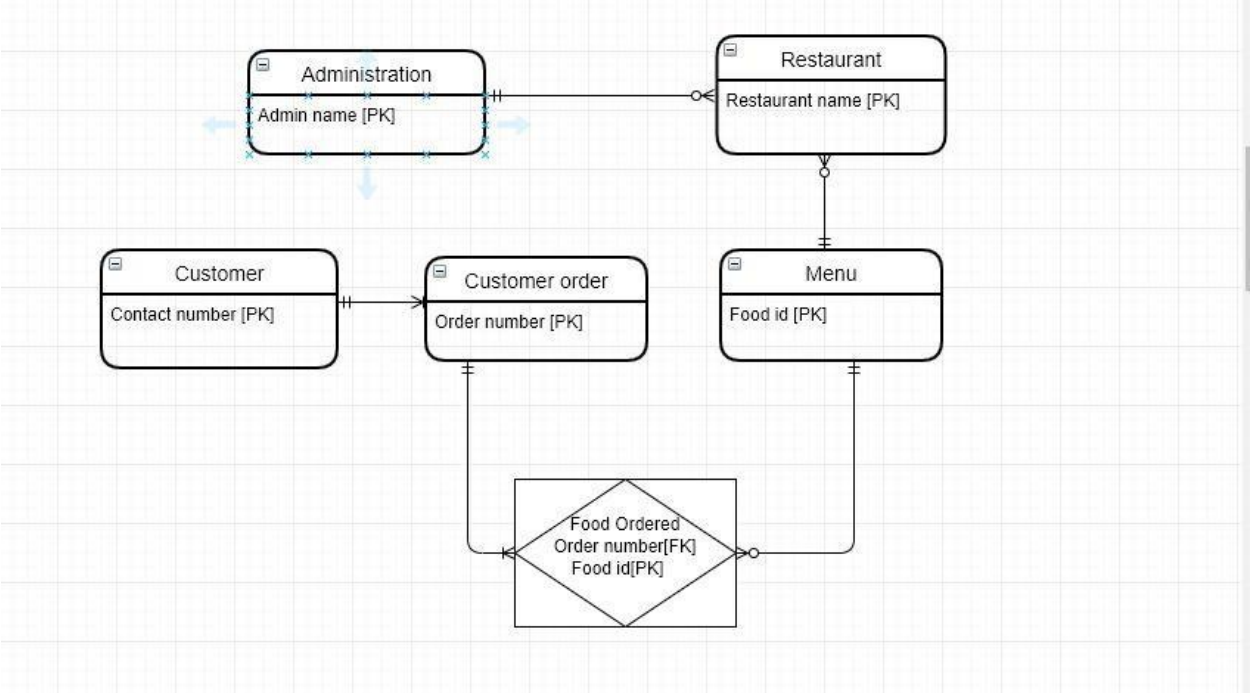
Use Case Priority Ranking Matrix

Use-case name	***Ranking Criteria,1 to 5***						***Total Score***	***Priority***	***Build Cycle***
	1	2	3	4	5	6			
Create account	3	1	4	2	5	3	18	high	3

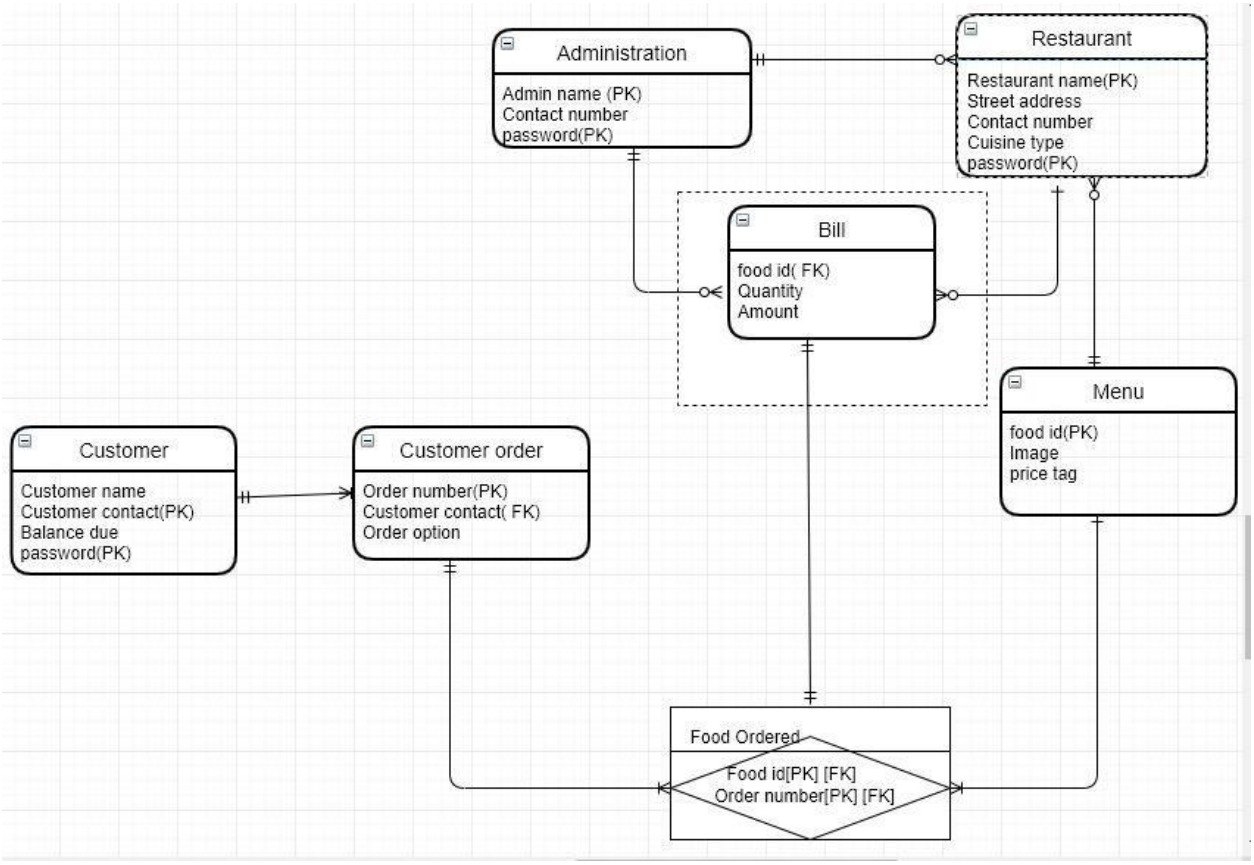
Login	5	3	5	1	5	2	21	High	2
Search food	4	3	5	2	1	4	19	Medium	3
Place order	2	5	4	4	5	4	24	High	2
Checkout	2	5	1		4	4	16	High	3
logout	2	3	4	5	2	1	17	Medium	2
Update menu	4	2	1	2	3	4	16	High	3
Check order	2	3	4	4	1	4	18	Medium	2
Register Business	1	5	2	1	1	2	12	High	3
Deactivate Business	4	4	4	3	2	4	21	High	2
Check Bill	4	4	4	3	2	4	21	High	2

Data modeling and analysis

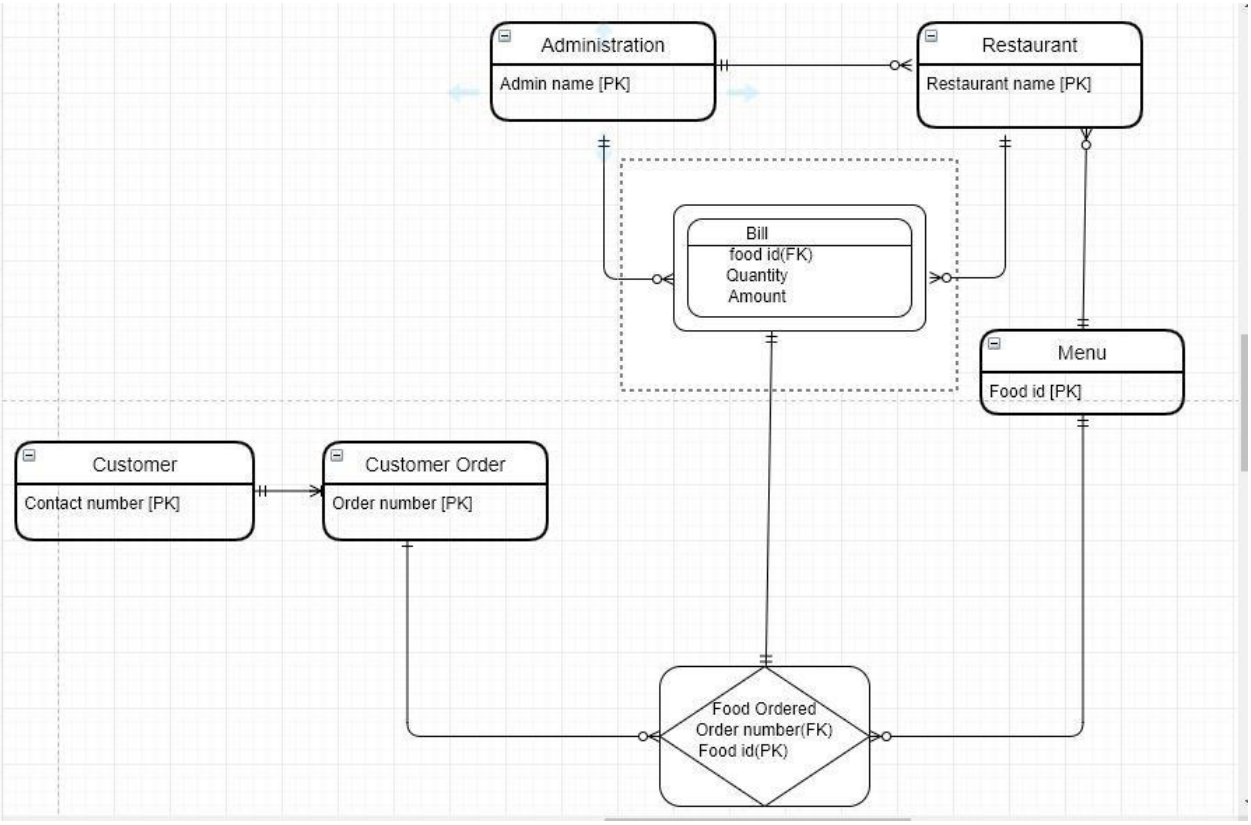
Key based ERD



- **Fully attributed ERD**



- Key based with generalization



Data-To-Location CRUDE Matrix

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Location **Entity, Attributes**	**Customer**	**Restaurant**
Customer		
. Customer number	R	R
. Name	CRU	R
. Phone	CRU	R
. Address	CRU	R
. Password	CRU	X
Administrator		
. Administrator number	X	X
. Name	X	R
. Password	X	X
Restaurant owner		
. Restaurant number	X	R
. Name	R	CRU
. Phone	R	CRU
. Location	R	CRU
. Password	X	CRU
Order		
. Order number	SR	R
. Customer name	SCRU	R
. Ordered food	SCRU	R
. Order date	R	R
. delivery status	R	RU
Menu		
. Food Id	X	R
. Food name	R	SCRUD
. Food description	R	SCRUD

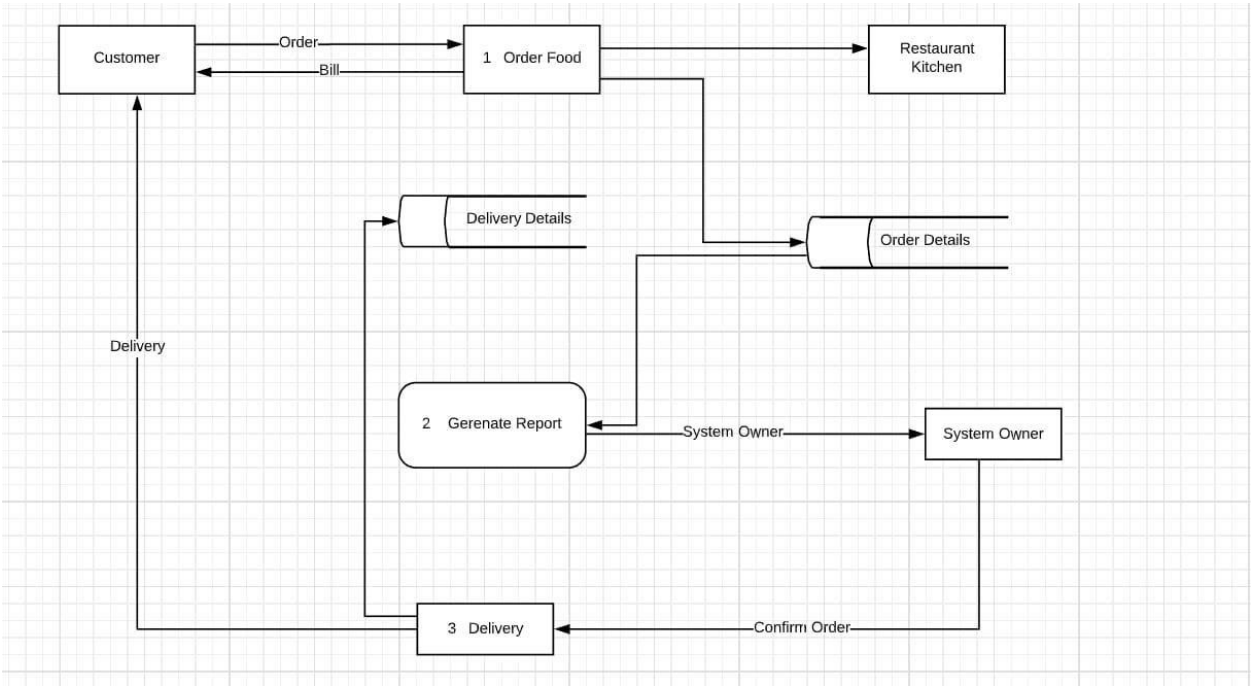
. Image	R	SCRUD

- S = SUBMIT
- C = CREAE

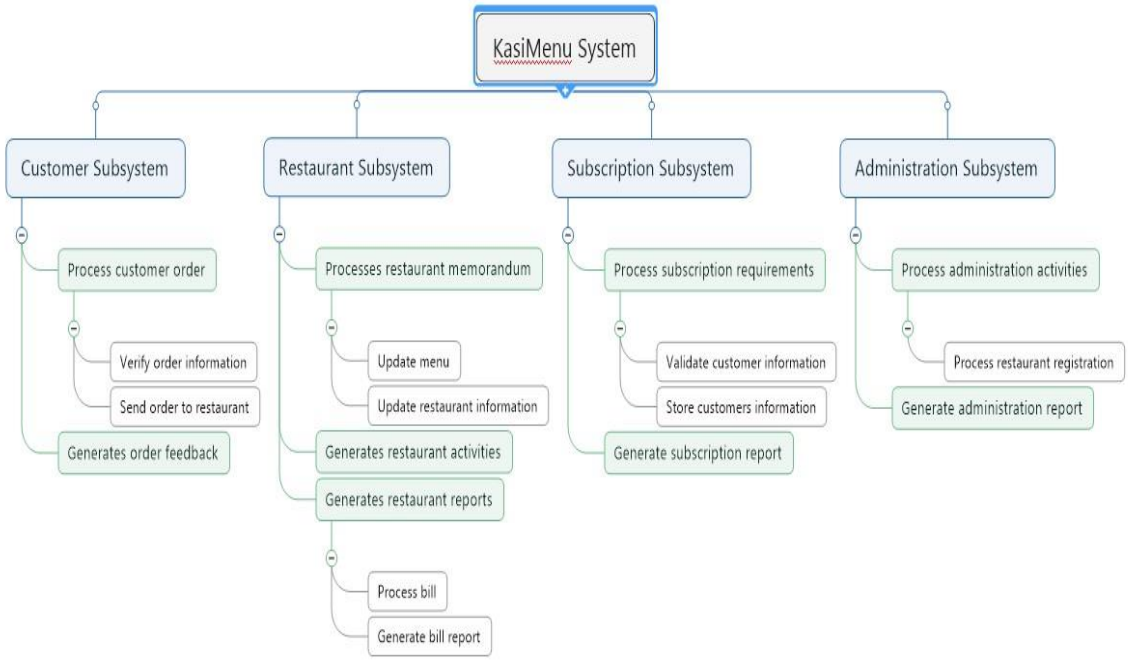
- R = READ
- U = UPDATE
- D = DELETE
- X = NO ACCESS

Process data modeling.

- Data flow diagram



- Decomposition diagram.



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