



Faculty of Engineering and Technology
Electrical and Computer Engineering Department

Meals Online System

Group: S1_G5 (EA)

Prepared by:

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Sec: 01

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Abstract

This document includes the latest modified version of all our work. We are developer group for a meals online system. This document is structured to include the sections project planning and management, requirement elicitation and analysis, system modeling, system design and assessment.

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1. Project Planning and Management :

1.1 Group name: X-Factor.

1.2 Name of members:

Ehab Amriah (1120871)

Ahmad Dar Khalil (1120443)

Rinad Lahlooh (1120465)

Ahmad Salameh (1110217)

1.3 Role of each member:

Project Manager: Ehab Amriah

Technical Architect: Ahmad Dar Khalil

Programmer: Ahmad Salameh

Secretary: Rinad Lahlooh

1.4 Management strategy: Taking decisions by voting.

1.5 Software process model: Agile.

1.6 Contribution of each member:

❖ The Manager:

As a manager for this project I have to illustrate the great collaboration between our group members. Every task was achieved after discussion with our customer group to make the system met their business needs. So we used to make meetings to discuss the main points before the submission of the draft copy. Then, we divided the diagrams to be drawn using specific tool between us.

The assessments were filled according to our notes. And each time one of the members was responsible to type the form.

In general we worked together through all phases by holding meetings. We sketched the diagrams together and agreed on the description of use cases, actors and classes together. Each member **took a task to type it or draw it on computer** as shown in next page.

Task	Member/s who write/draw it
User Requirements and System Requirements	Ahmad Dar Khalil and Ahmad Salameh
Actors' analysis and description	Ehab Amriah and Ahmad Dar Khalil
Use Case Diagram and use cases analysis	Ehab Amriah , Ahmad Dar Khalil ,Rinad Lahlooh and Ahmad Salameh
SCENARIO, that has a normal, alternative, error flows and ACTIVITY DIAGRAM for Make a reservation use case	Ahmad Salameh
SCENARIO, that has a normal, alternative , error flows and ACTIVITY DIAGRAM for login use case	Ahmad Dar Khalil
SCENARIO, that has a normal, alternative , error flows and ACTIVITY DIAGRAM for modify meal information use case	Ehab Amriah
SCENARIO, that has a normal, alternative, error flows and ACTIVITY DIAGRAM for add and remove meal use cases	Rinad Lahlooh
General Activity Diagram	Ahmad Dar Khalil
Class Diagram and Classes description	Ehab Amriah , Ahmad Dar Khalil and Ahmad Salameh
Object Diagram	Ehab Amriah
Sequence Diagram for Make a reservation use case	Ahmad Salameh
Sequence Diagram for login use case	Ahmad Dar Khalil
Sequence Diagram for add meal use case	Rinad Lahlooh

Sequence Diagram for modify meal information use case	Ehab Amriah
State Diagram	Rinad Lahlooh
Two Component Diagrams	Ahmad Dar Khalil , Rinad Lahlooh and Ehab Amriah
Description of chosen Design Goals (choose at least THREE)	Ehab Amriah and Ahmad Dar Khalil
Deployment Diagram	Ehab Amriah

Ehab Amriah << Project manager >> :

- As a manager I was responsible to make sure that every step was done after all members of the group agreed on it. After distributing the tasks I got to analyze the user requirements with Ahmad Dar Khalil and Ahmad Salameh to get a final version.
- After that ,me and Ahmad Dar Khalil analyzed the activity diagram and draw it. Next task for me was to analyze and draw the activity diagram for modify meal information use case. and I draw the class diagram after worked on typing the classes of the system and their description with all members .
- In phase three we first met to discuss all of the diagrams and after agreeing on it, I draw the sequence diagram for modify meal information use case .
- For the last phase me and Rinad Lahlooh and Ahmad Dar Khalil implement and draw the component diagrams and I also draw the deployment diagram.

Ahmad Dar Khalil << Technical Architect >> :

- Working on this project was very interesting, our group members were collaborative we divided the tasks between us and this facilitates the work completion. We all worked on all parts and shared our ideas. My work was to type the user requirements functional and non-functional with the help of Ahmad Salameh.
- Also, I typed the actors' analysis and description. Then, I analyzed the use cases description and typed them in final version and drew the general activity diagram with Ehab Amriah.
- Also, I worked on typing the classes of the system and their description with Ehab and Rinad and Ahmad Salameh. During the meetings we discussed the main ideas and we were all active members. Also, I worked with Ehab and Rinad on the draft copy of the component and deployment diagram.

Ahmad Salameh << Programmer >> :

- First of all, I wrote the user and system requirements for our system to achieve the functional and non-functional requirements of the system to be designed.
- Second, I worked with all the partners in doing the use case analysis and description where we discussed what use cases we want to assign for each actor and how they are related. Then I drew the activity diagram for make a reservation use case.
- After that, I draw the activity diagram and the sequence diagram for make a reservation use case. I discussed with Ehab, Rinad and Ahmad Dar Khalil what are the major components in our system and assigned the related classes to each component.
- As for my last task, it was to set the design goals of our system that would achieve the non-functional requirements that were set from the beginning.

Rinad Lahlooh << Secretary >> :

- I worked with the help of all the partners on the use cases analysis and description in a way that reflects the project's description.
- Also, I wrote a scenario that shows the normal process when using the software, gave an alternative that might happen and an error may occur. and I discussed activity diagram with all the partners in my group. Then to describe the transmission between a state and another, I used state diagram to show the initial status of the project and how the system flows due to changing of events.
- Finally, to choose the main three goals of our Design, I contributed with Ehab to analyze the design and figure out the best features that defines our design.

2. Requirement Elicitation and Analysis :

2.1 Requirement statement/Business description :

- Our major way to users is through a website. It allows a user to view any available meals and choose a meal. the system shall accept the payment via (visa card) or (internet shopping card).
- In order to complete a reservation, If the user chooses to pay using Visa card , he shall enter a valid visa card number.
- In the system, there are a manager and waiters.
- The manager can update meal's information, add meals and remove meals.
- The waiter can update meal status and deal with problems.

2.2 User Requirements :

1. Website shall has four categories that are for :

A. Breakfast meals.

B. Lunch meals.

C. Dinner meals.

D. All other dishes we have including sandwiches with Drinks, dessert and snacks.

2. The site shall give the user search field to search about any meal easily.

3. Each meal in each category shall be with its price, a brief description and offers it may has (for school, employee etc.).

4. The website shall ask people who will use it to sign up before starting their visit.

5. The payment methods are A. When we deliver their orders to them not before that. B. Pay online.

6. The order form will ask user to enter his name, phone number, his identity and the address the user wants us to deliver meals. In the home page, we want a brief description about us and some contacts details.

2.3 System requirements :

- 1.1 The main meal will be displayed based on the time of the day.
- 1.2 From 8-12 Am breakfast meals will be shown on the main page, from 12-5 pm lunch meals will be shown on the main page, from 5-9 pm dinner meals will be shown on the main page and the other time the drinks shall be shown in the main page.
- 1.3 User can choose any category and then the system shall suggest all available meals in that category.

- 2.1 The system shall contain autocomplete property for the search field.
- 2.2 The system shall provide the user with past search queries.
- 2.3 The system should support searching for categories.

- 3.1 The user can suggest a modification for the description shown.
- 3.2 The user can make a review on any meal in the site.

- 4.1 The system shall provide a form includes username, password, email and phone to complete the registration of the user.
- 4.2 The system should verify the entered information by sending a verification email for the entered email.

- 5.1 The system shall accept the payment via (visa card) or (internet shopping card).
- 5.2 If the payment was not using online card, the system shall send verification code to the phone number and user shall enter it into a specific field to complete the order.

- 6.1 Once someone wants to order some meal, he should provide his phone, name and address to submit the order.
- 6.2 For users who are registered on the site, the information related the phone, name and address should be filled automatically for that order.
- 6.3 If any user has a problem with the order submission, system shall provide contact information to fix the problem by the IT stuff.

2.4 ACTORS analysis and their description :

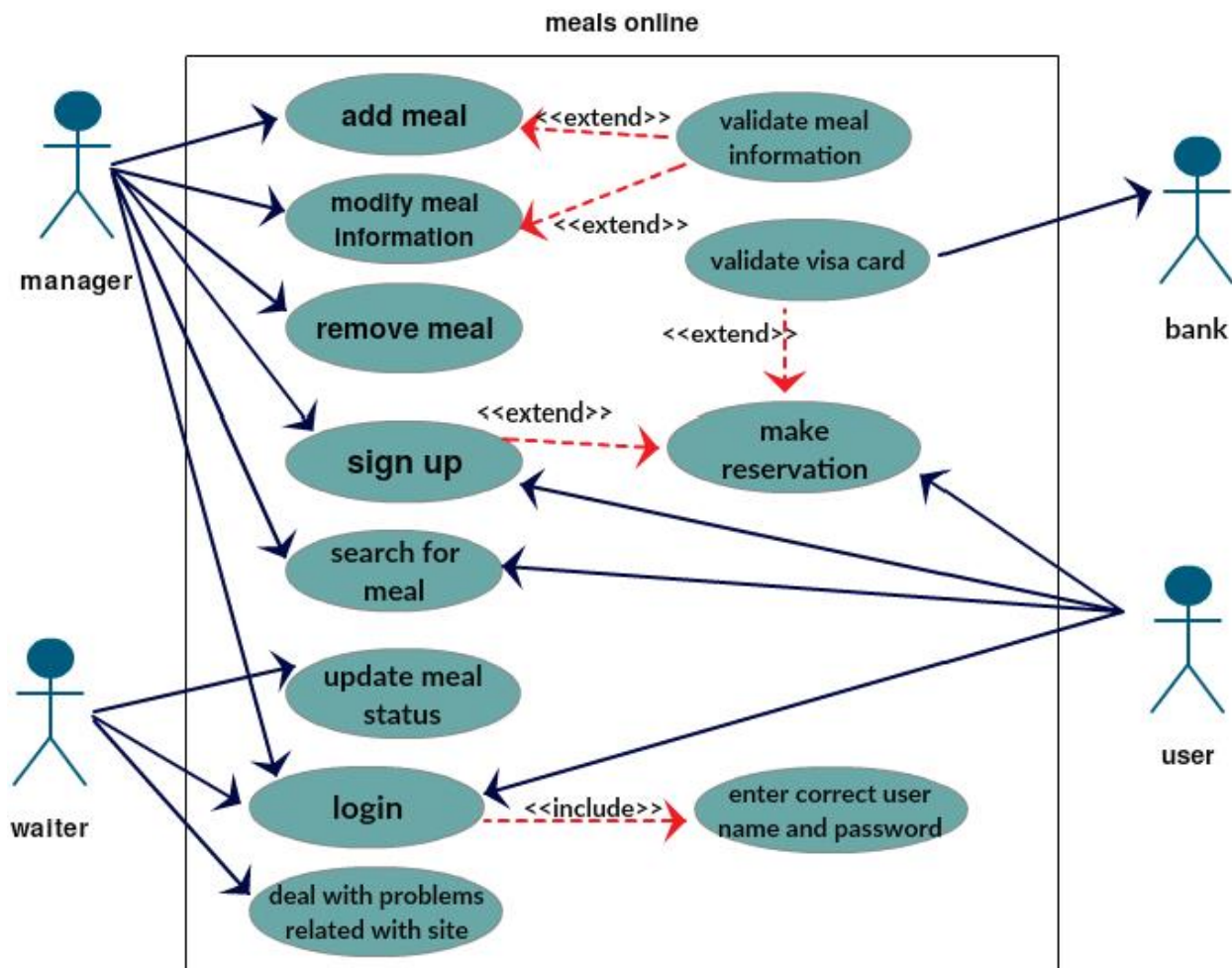
Manager: This actor represents someone who can access the whole system with user name and password, add meal , remove meal, and modify meal information.

User: This actor represents someone who can access the whole system with user name and password, view available meals, search for meal , and reserve any meal .

Waiter : this actor represents someone who is added to the system by the manager , displays all his reservations, every meal is sent, it puts it received, update status for any meal (This meal reserved or not), and he also deal with any reported problems related with the system and redirect them to IT stuff.

Bank: if the user choose payment through Visa Card,, this actor validate vise card .

2.5 USE-CASE diagram :



➔ Drawn using Creately (<http://creately.com/diagram-type/use-case>).

2.6 USE-CASES and their description, scenario and activity diagram:

Use-case (LOGIN):

DESCRIPTION:

Actors	Manager , user , waiter
Description	A <u>manager, user or waiter</u> may login to the system, each one of them will enter to different profile, that depends on it's position on the company .
Pre-conditions	Manager, user and waiter must be signed up on the system to be able to enter into his profile.
Sequence/flow of event	<ol style="list-style-type: none">1. Once one of the Actors above enter the site of the business, the system will show an interface to enter.2. if the username and password matches then the system shall automatically allow the user to see his profile .3. if there is a mistake in the password system shall show the option of changing the password via his email by sending a verification code and display a window to enter it .
Data	Username, password, verification code (if was an error).
Trigger	User, manager or waiter want to enter to his profile.
Post-conditions	Display his profile interface. Store the date of entrance.
Comments	manager must have appropriate security permissions to access meals and waiter information

Scenario:

- **Normal:**

Someone access the website of the business and enter his username and password('ahmad','123123') in username, password boxes, this person 'Ahmad' was already signed up in the site, and the information that entered were correct so it enters to his account and shows things belong to Ahmad (main meals in the website).

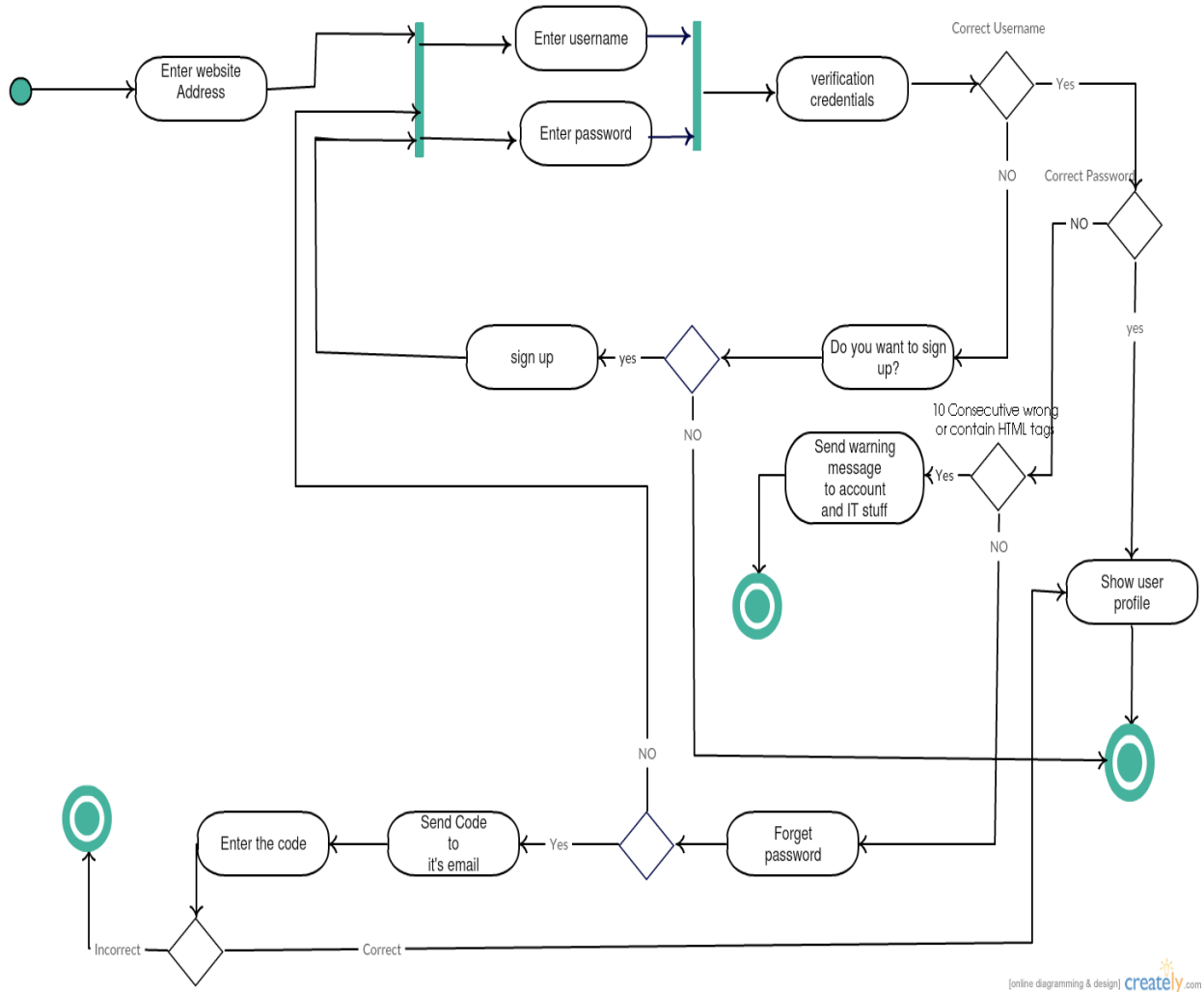
- **Alternative:**

1. Person (either manager, waiter or user) enters username and password and his username does not exist in the database (does not exist), then the system will show a message to sign up as a customer user (not manager or waiter) then he can enter as a new user.
2. User 'Ahmad' enters incorrect password, then the system will ask him if he forgot the password and will send a verification code to his email, then his password will appear to him to login successfully.

- **Error:**

1. User 'Ahmad' makes 10 consecutive wrong passwords, the system will prevent the browser from entering the system for 1 day and send a message to the account to say that someone tried to access your account 'please change the password'.
2. User enters more than 32 digit username and password. (The system holds until 32).
3. Username or password are '<' or '>' or any HTML tag' the system will discard them and send a message to the IT staff to make a security verification.

Activity Diagram:



➔ Drawn using Creately (<http://creately.com/>)

Use case: (Make a reservation):

DESCRIPTION:

Actors	User, waiter.
Description	The user surfs the website in order to find a meal to order, the meal must be available before being added to the reservation list. If the order is ready and submitted, then the waiter takes the order and the process of getting the order done starts.
Pre-conditions	<ol style="list-style-type: none">1. The user is registered on the system.2. The user must be logged in the system.3. The user must have a sufficient amount of money in his account if the payment is online.
Sequence/Flow of events	<ol style="list-style-type: none">1. The user chooses the meals to be listed in the order.2. The user presses the submit button.3. The system checks if the user is logged in.4. If he/she is not logged in, the system asks him/her to log in if he/she is registered on the system.5. If he/she isn't registered on the system, he/she must fill the registration form.6. The system checks if the user has a sufficient amount of money in his/her account.7. If yes, it places the order and it reaches the waiter.8. If no, it asks the user if he wants to pay when the order is delivered to him/her or to deposit the needed amount of money in his/her account.
Data	The order details, The user information.
Stimulus/Trigger	The pressing of the submit order button.
Post-conditions/Response	<ol style="list-style-type: none">1. The order's cost will be deducted from the user's account (if the payment was online).2. The order will be delivered once it's ready.

Scenario:

Normal:

Ahmad chooses chicken breast in white sauce in addition to Greek salad, with total price 50\$. Then he submits the order by pressing the submit order button. The system asks Ahmad to log in since he has an account, in order to check the type of payment Ahmad is used. Ahmad is using VISA to pay online, so the system deducts 50\$ from Ahmad's account. The waiter then takes the online submitted order to the chief to get it done and deliver it to Ahmad.

Alternative:

1. Ahmad chooses chicken breast in white sauce in addition to Greek salad, with total price 50\$. Then he submits the order by pressing the submit order button. The system asks Ahmad to log in since he has an account, in order to check the type of payment Ahmad is used. Ahmad pays when the order is delivered to him, so the delivery worker will take the 50\$ in cash from Ahmad. The waiter then takes the online submitted order to the chief to get it done and deliver it to Ahmad.

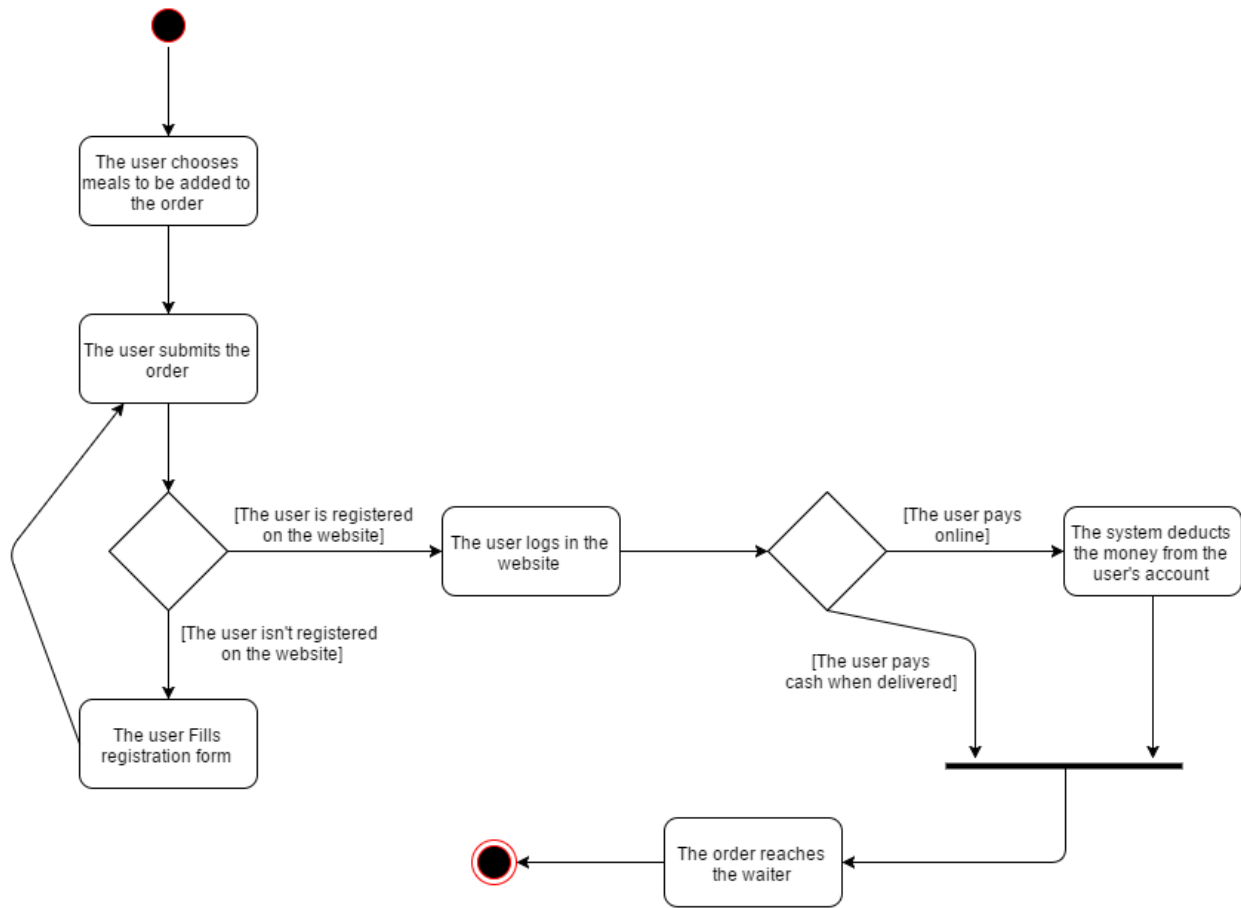
2. Ahmad chooses chicken breast in white sauce in addition to Greek salad, with total price 50\$. Then he submits the order by pressing the submit order button. The system asks Ahmad to register since he doesn't have an account, in order to check the type of payment Ahmad is used. Ahmad then registered on the system and chooses to pay online using VISA, so the system deducts 50\$ from Ahmad's account. The waiter then takes the online submitted order to the chief to get it done and deliver it to Ahmad.

Error:

1. Ahmad chooses chicken breast in white sauce in addition to Greek salad, with total price 50\$. Then he submits the order by pressing the submit order button. The system asks Ahmad to log in since he has an account, in order to check the type of payment Ahmad is used. Ahmad is using VISA to pay online, so the system tries to deduct 50\$ from Ahmad's account. But Ahmad doesn't have that amount of money in his VISA, so the system asks him to deposit a sufficient amount of money in his VISA and then try to submit the order again.

2. Ahmad chooses chicken breast in white sauce in addition to Greek salad, with total price 50\$. Then he submits the order by pressing the submit order button. The system asks Ahmad to log in since he has an account, in order to check the type of payment Ahmad is used. Ahmad pays when the order is delivered to him. But Ahmad doesn't verify his mobile number using the verification code generator that's used by the system. So the order will not be submitted to prevent fraudulence.

Activity Diagram:



→ Drawn using draw.io (<https://www.draw.io/>)

Use case: (Modify meal information):

DESCRIPTION:

Actors	Manager
Description	Manager enter username and password and see categories on his restaurant and adjusts the information of any meal he wants.
Pre-conditions	Manager must enter his username and password correctly.
Sequence/flow of event	<ol style="list-style-type: none">1. Manager tries to get into system by entering his user name and password.2. Check if these are valid, if not then try again, and if yes then he gets into the system and he views categories of his restaurant.3. Choose meal that he wanted to update information of it and update this information.4. Check whether they are valid or not. If they are valid, then information is updated ,and if not then try to enter another information.
Data	Meal type , picture of this meal and old meal information.
Stimulus / Trigger	Manager wants to update information.
Post-conditions	Information updated successfully.

Scenario:

Normal:

manager enters username and password correctly ,then enters into your account .first, he shows modified option, when pressed it, he views all categories of his restaurant , he enters the category which contains the meal he wants to edit their information, then modifying information of this meal, and shows a message that has been modified successfully.

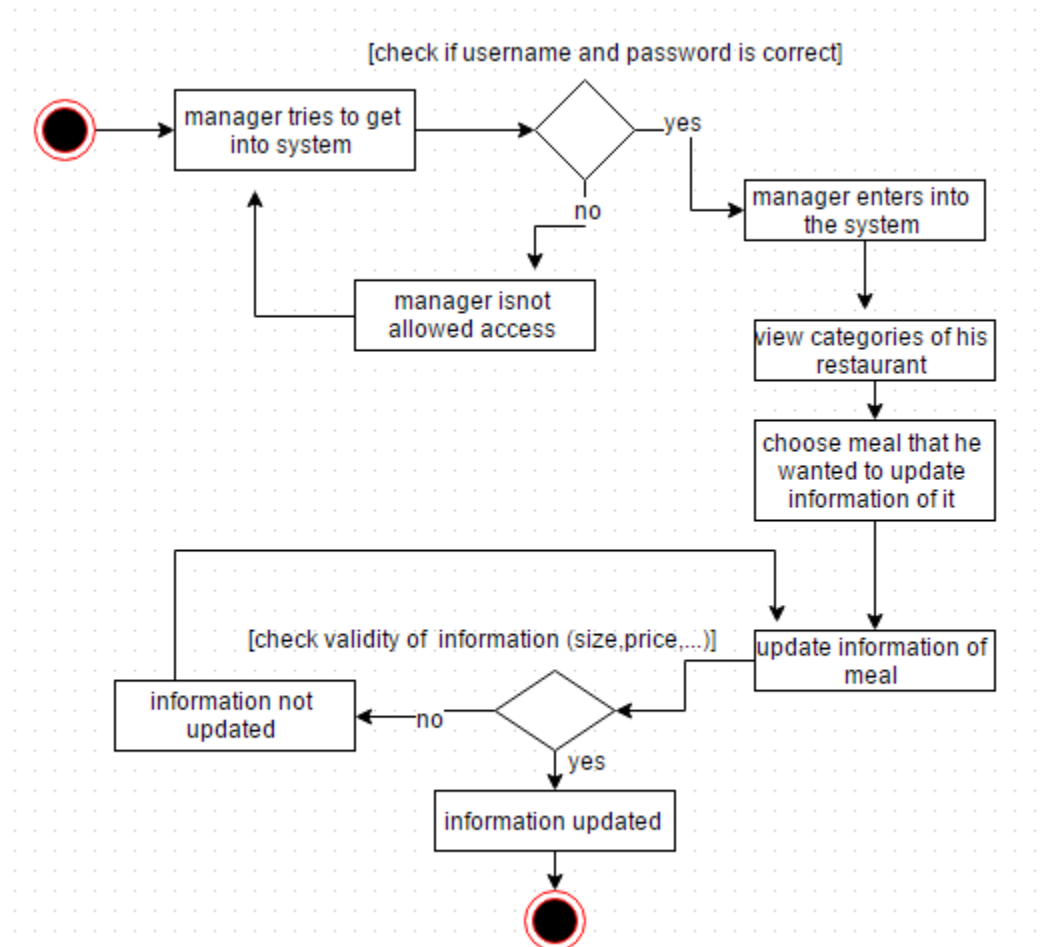
Alternative:

manager enters username and password correctly ,then enters into your account .first, he shows modified option, when pressed it, he views all categories of his restaurant , he enters the category which contains the meal he wants to edit their information, he did not find a meal in this category, so the system provides the option to search the public for meals by its name, if misspelled happened enter your name in for the meal, the system displays the names of meals near the entrance of the name in the search box, then modifying information of this meal, and shows a message that has been modified successfully.

Error:

manager enters username and password correctly ,then enters into your account .first, he shows modified option, when pressed it, he views all categories of his restaurant , he enters the category which contains the meal he wants to edit their information, then modifying information of this meal, waits to the system to validate it, The system shows a message that the information to not be modified and that there is an error, this is caused by that the manager did not put a logical price in box price (the price is negative), or that the name of the meal was very long (more than 50 characters), or leave one of the boxes empty.

Activity Diagram:



→ Drawn using draw.io (<https://www.draw.io/>)

Use case: (Add meal):

DESCRIPTION:

Actors	Manager
Description	The manager want to add new meal to the system list , this meal should not allocated before in the system . When the administrator add new meal it should also contain the complete information like the price , quantity of meal and the description .
Pre conditions	The meal that is wanted to add should not be exist before in the system
Sequence /flow of events	1- Manager put the user and password to the own account 2- Manager have access to add new meal 3- Manager have new meal to add it . 4- Checks if the meal I exist or not . 5- If the meal I exist then the manager can not add it , but if the meal isn't exist then add it to the system list .
Data	New meal information , all meals information in the system in the system
Trigger	Manager wants to add new meals to the system .
Post conditions/ response	Store the date of entrance and Confirmation that meal has been added or not .
Comments	The managers have appropriate security permissions to access the meal information

Scenario:

Normal :

The manager Ali wants to add new meal (lasagna) to the system which it checks that is no same meal before in it . After this , the administrators add the meal and the system is updated accordingly .

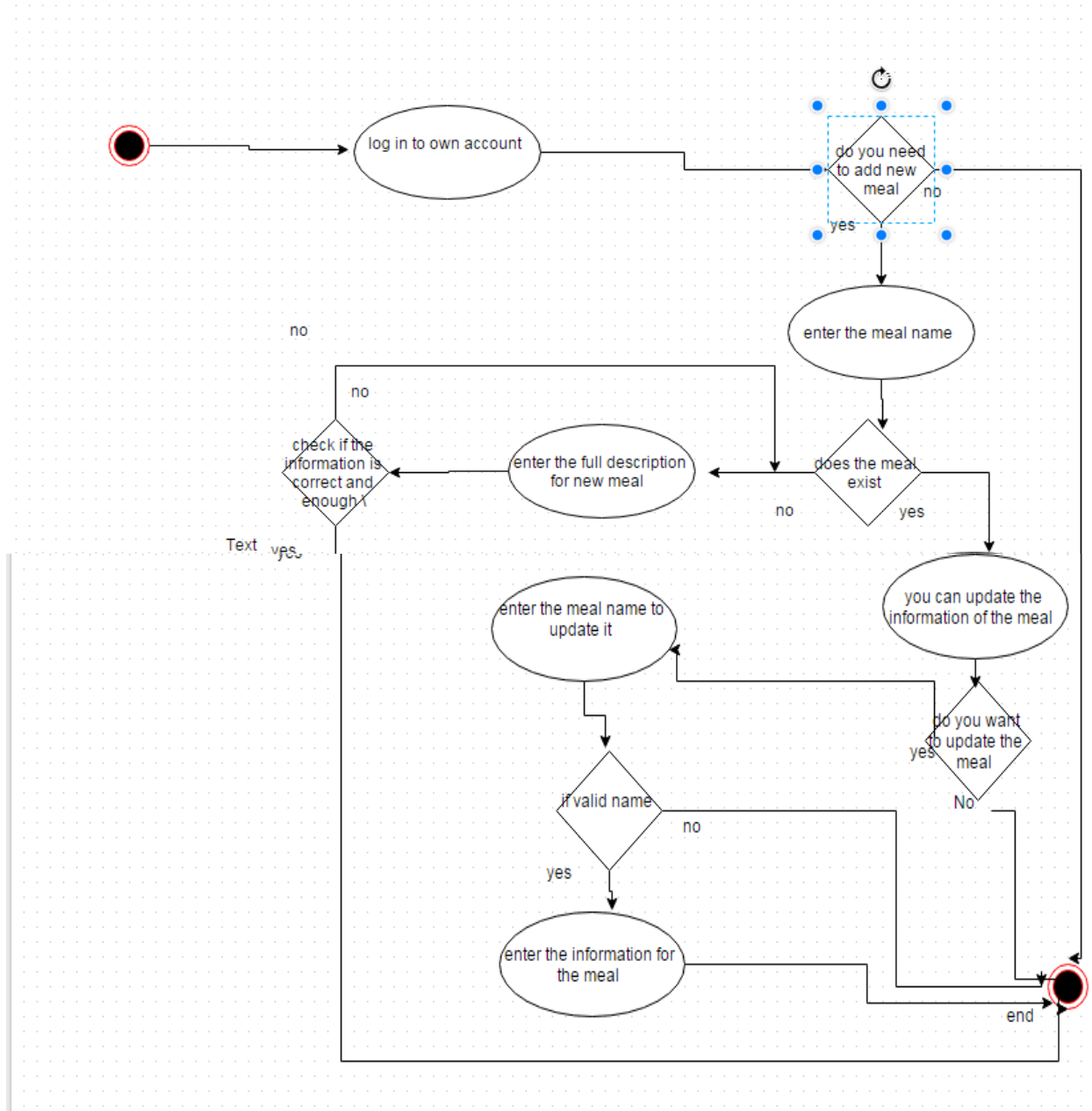
Alternative :

The manager Ali wants to add new meal to the system but the meal is exist before so the system point to it and if the administrators have new information , it have a choice to update it

Error :

- 1- The manager Ali want to add new meal(lasagna) to the system but this meal is exist before . so the manager is refused because the meal is found in the system .
- 2- The manager Ali want to add new meal (lasagna) , but he didn't put enough information for the meal like the price or the description . so the manager is refused because the meal is not have enough information .

Activity Diagram:



→ Drawn using draw.io (<https://www.draw.io/>)

Use case: (Remove meal):

DESCRIPTION:

Actors	Manager
Description	The manager may want to remove the meal , so the meals should exist in the system . managers use the name of the meal then remove it with all information about it .
Pre conditions	The meal should exist in the system so it can removed
Sequence /flow of events	<ol style="list-style-type: none">1- Manager put own correct user name and password to account in system2- Manager have access to delete the meal3- The manager decide what is the meal4- Checks the system if this meal is allocated or not5- If the meal I exist then remove it and also all information is related then update the system , if the meal I not exist then it gives error
Data	All meals in the system , the meal that I wanted to remove
Trigger	Manager wants to remove new meals to the system
Post conditions	Store the date of entrance and Confirmation that the meal is removed
Comments	The managers have appropriate security permissions to access the meal information

Scenario:

Normal :

The manager Ali wants to remove (lasagna) from the system , so the system check if the lasagna meal is exit in the system then after confirm that it exist , so here remove the meal from the list . After this , the manager add the meal and the system is updated accordingly .

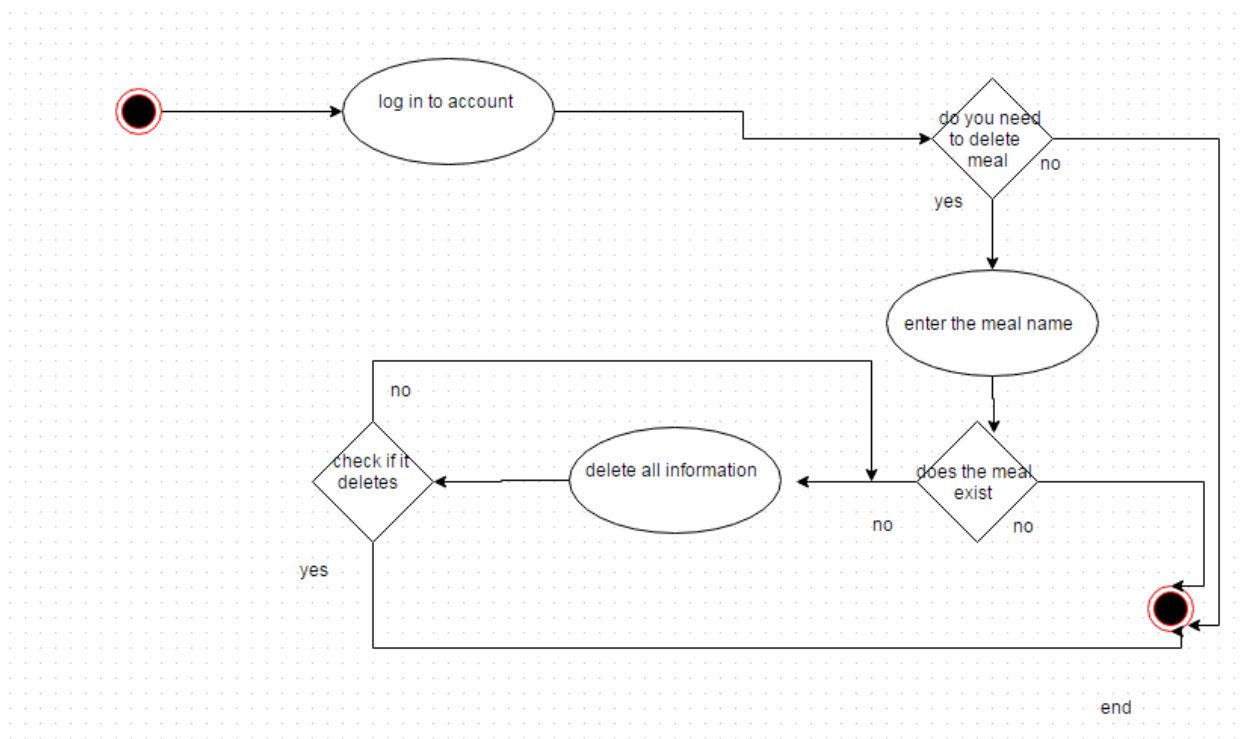
Alternative :

- No alternative

Error :

The manager Ali wants to remove the lasagna from the system , and this meal is not found in the system so here it gives an error “ you can not remove the meal you don’t have it “

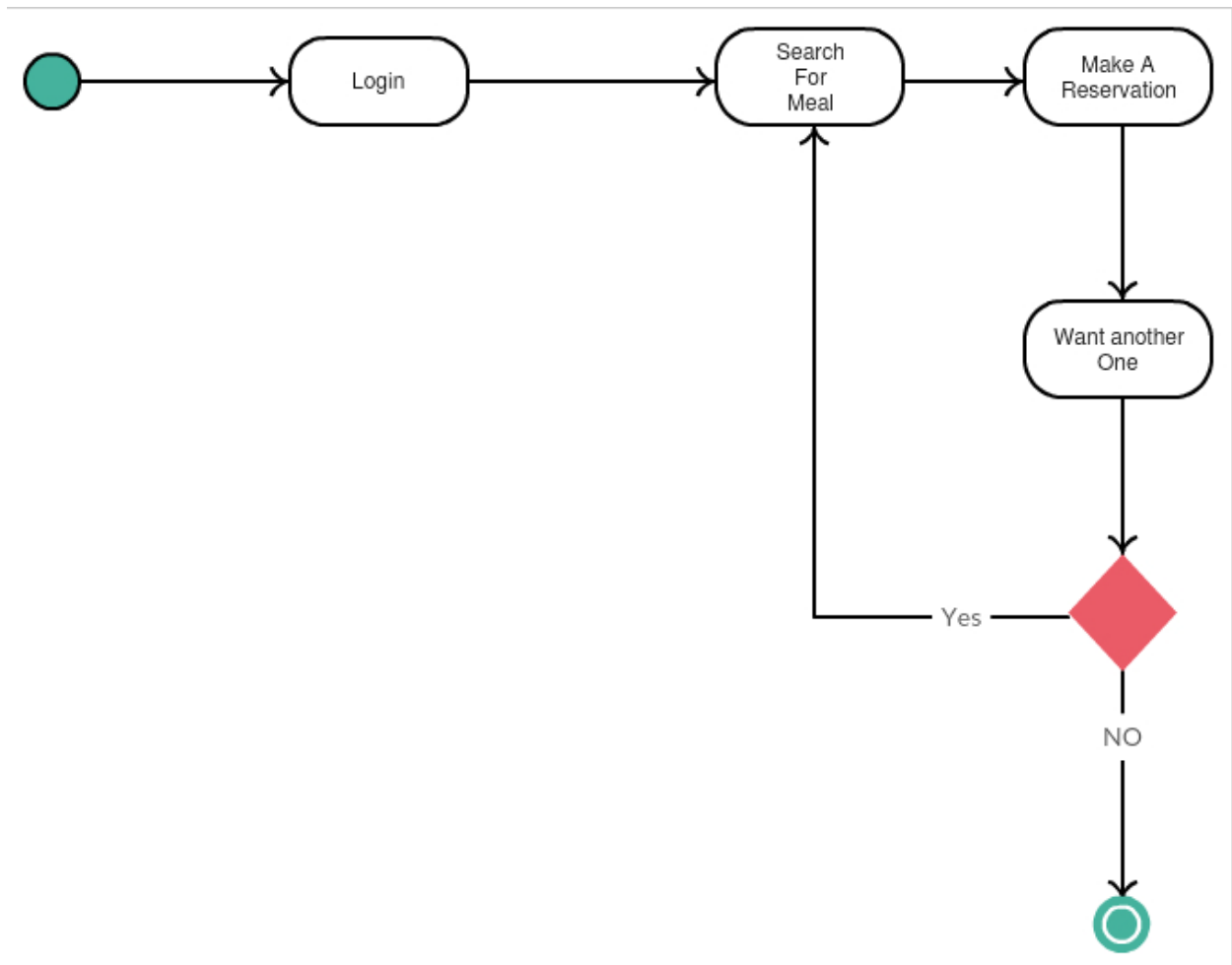
Activity Diagram:



→ Drawn using draw.io (<https://www.draw.io/>)

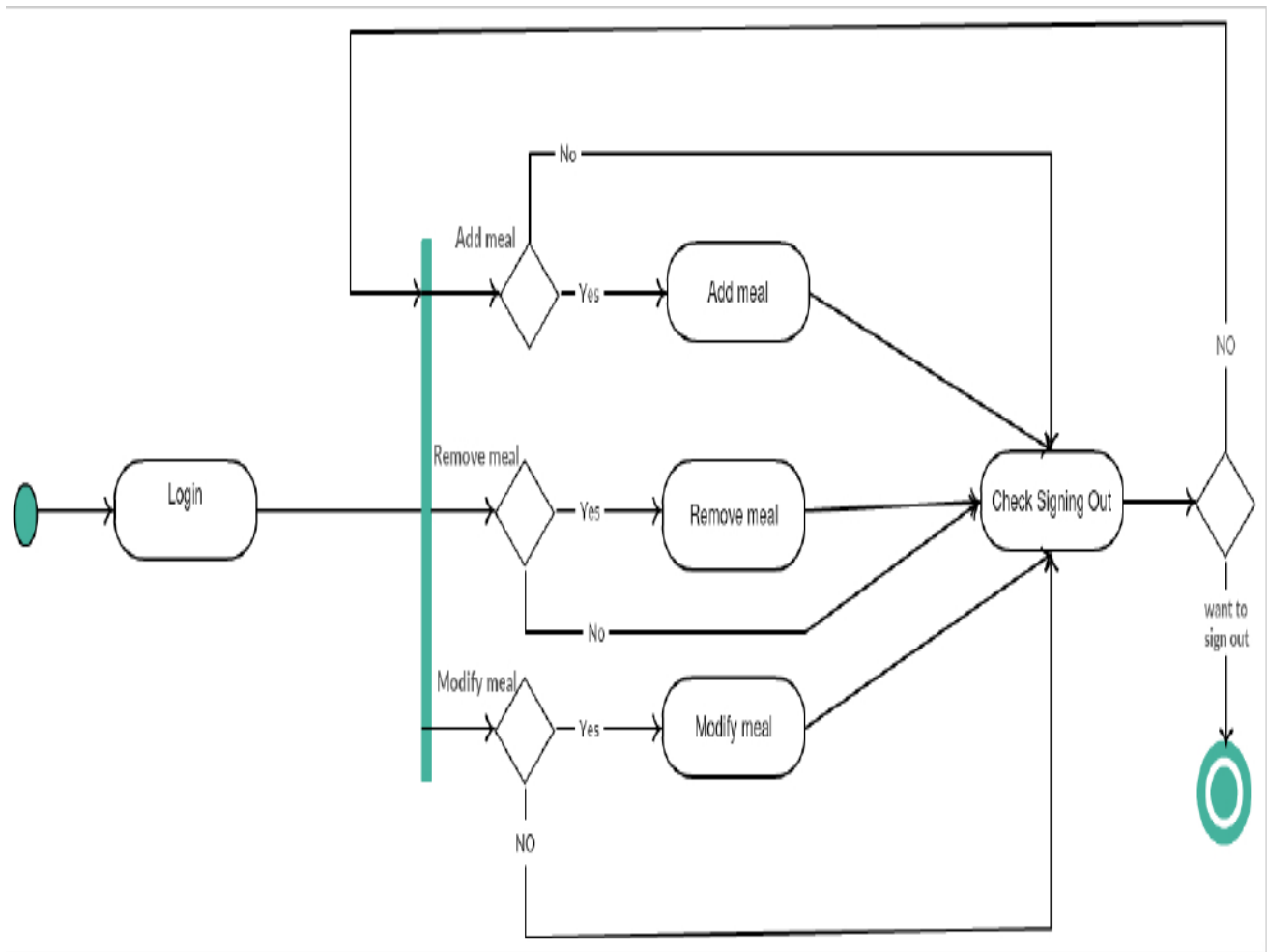
Overall\main activity diagram

For user:



→ Drawn using Creately (<http://creately.com/>)

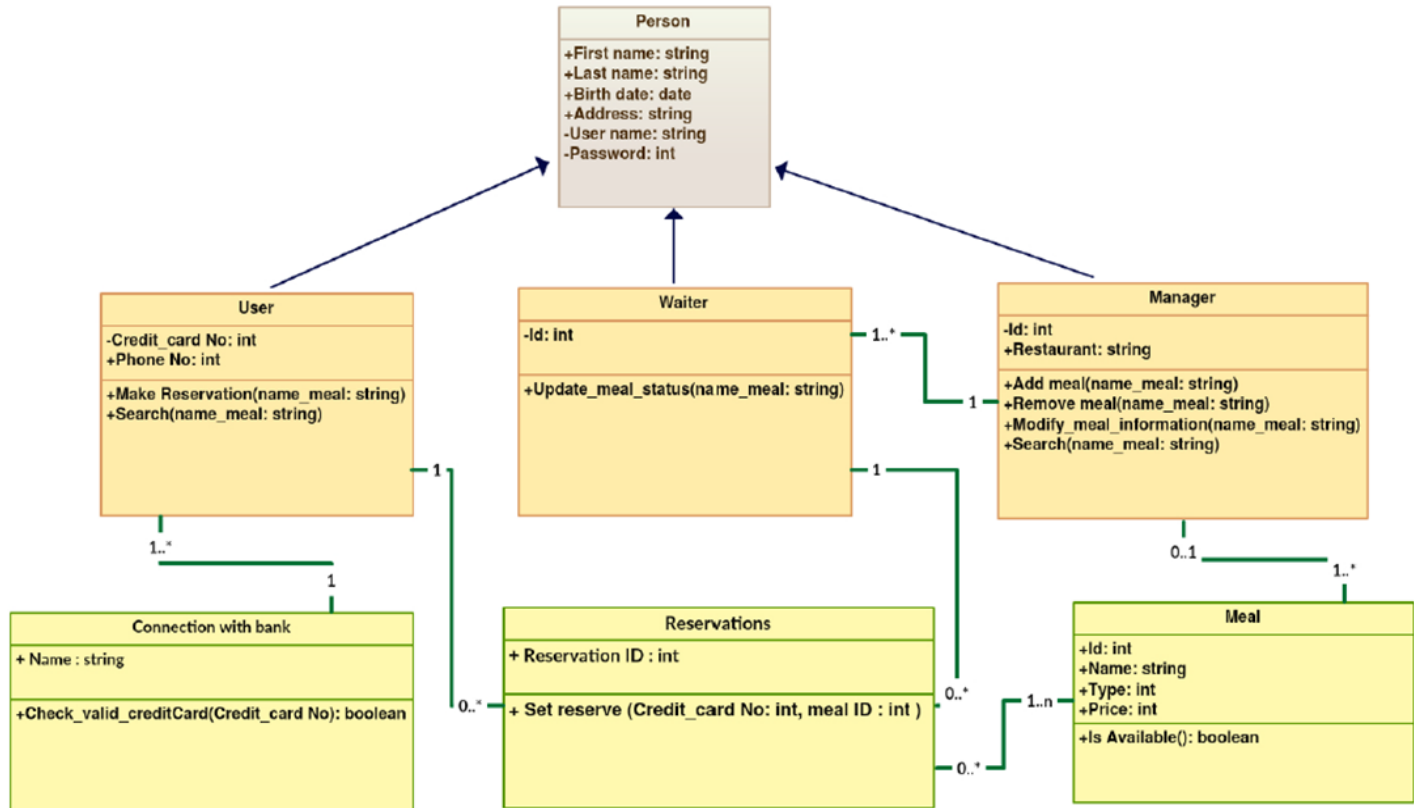
For manager :



→ Drawn using Creately (<http://creately.com/>)

3. System Modeling :

3.1 System CLASS Diagram :



➔ Drawn using Creately (<http://creately.com>)

3.2 Classes Description:

Person : identifies an entity that generalizes all users of the system.

user : identifies the user of the system that want to reserve a meal.

Waiter: identifies the person who will check the meals demand and change the status.

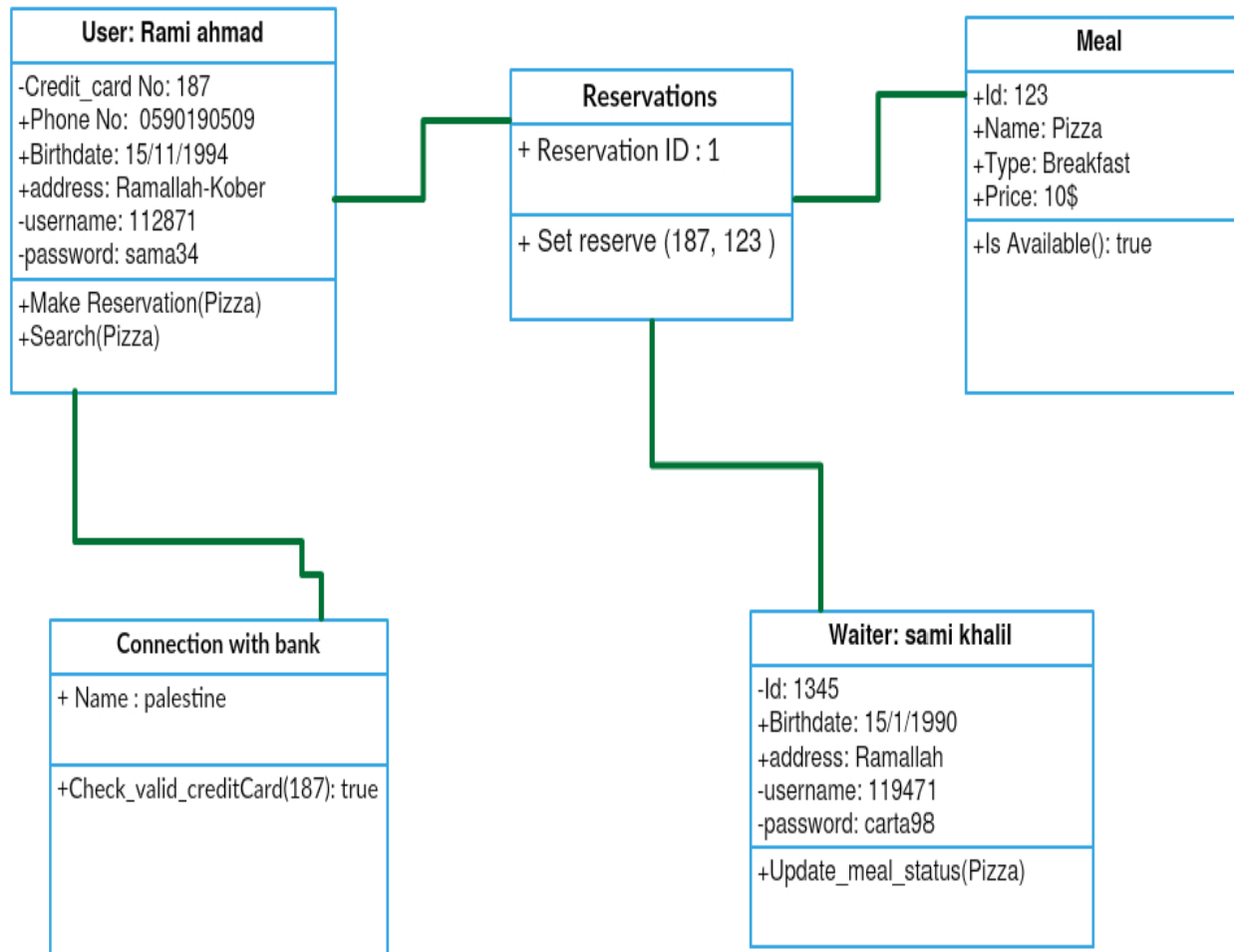
Manager: identifies the person who will organize all system activites.

Meal : identifies the meals that users want.

Connection with bank: identifies the credit card of user is valid or not.

Reservations: identifies the Meals reserved by the user.

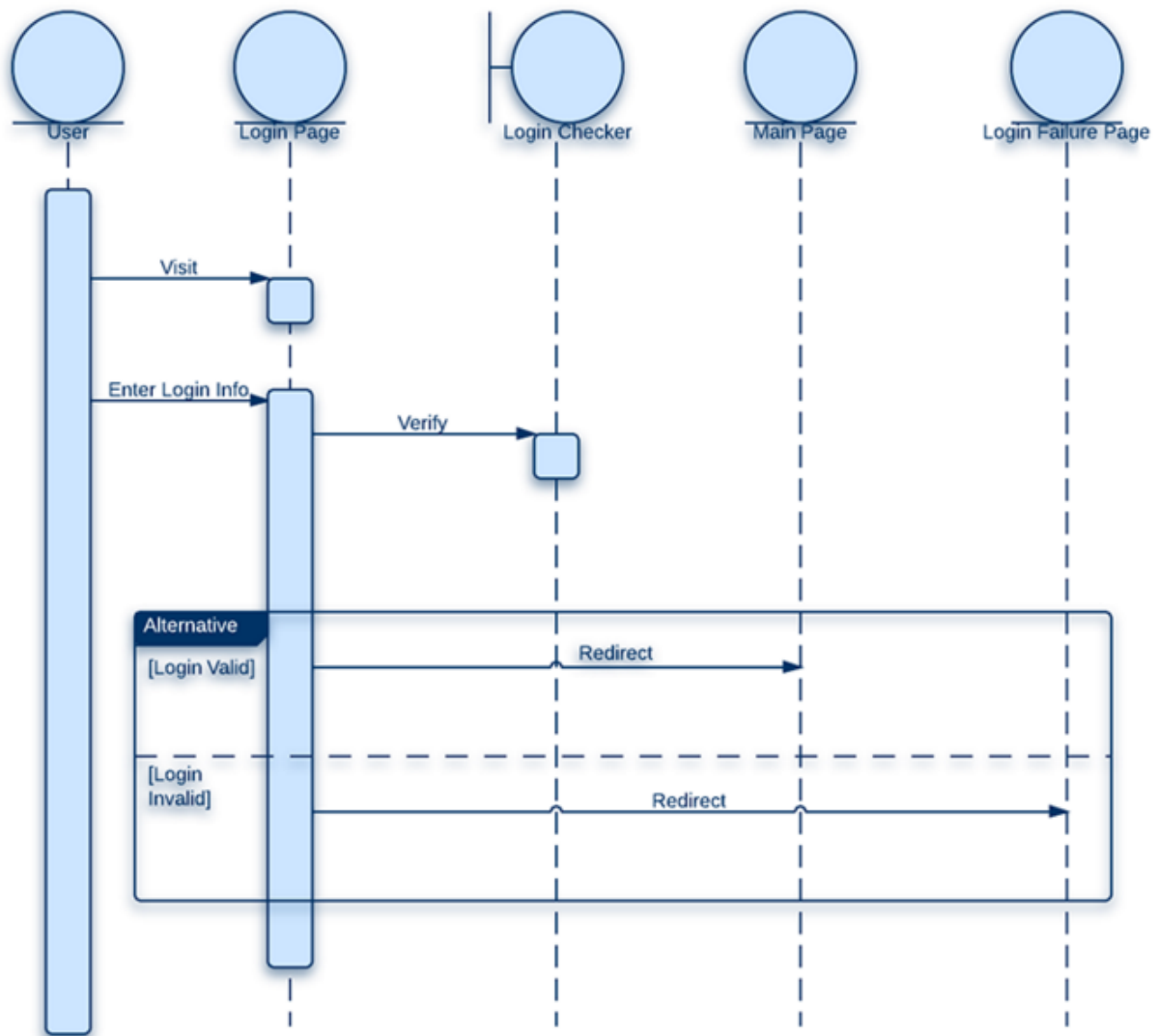
3.3 OBJECT Diagram :



➔ Drawn using Creately (<http://creately.com>)

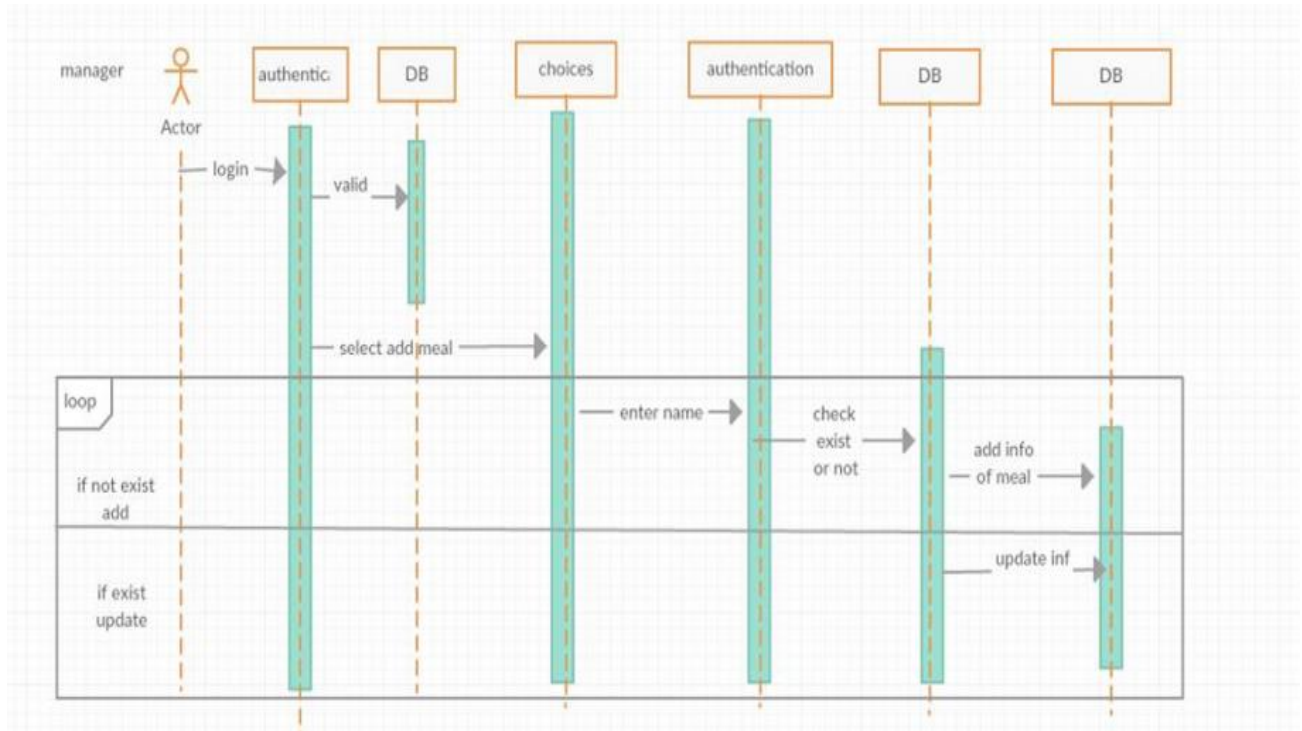
3.4 SEQUENCE Diagram :

Sequence Diagram for Login Use Case:



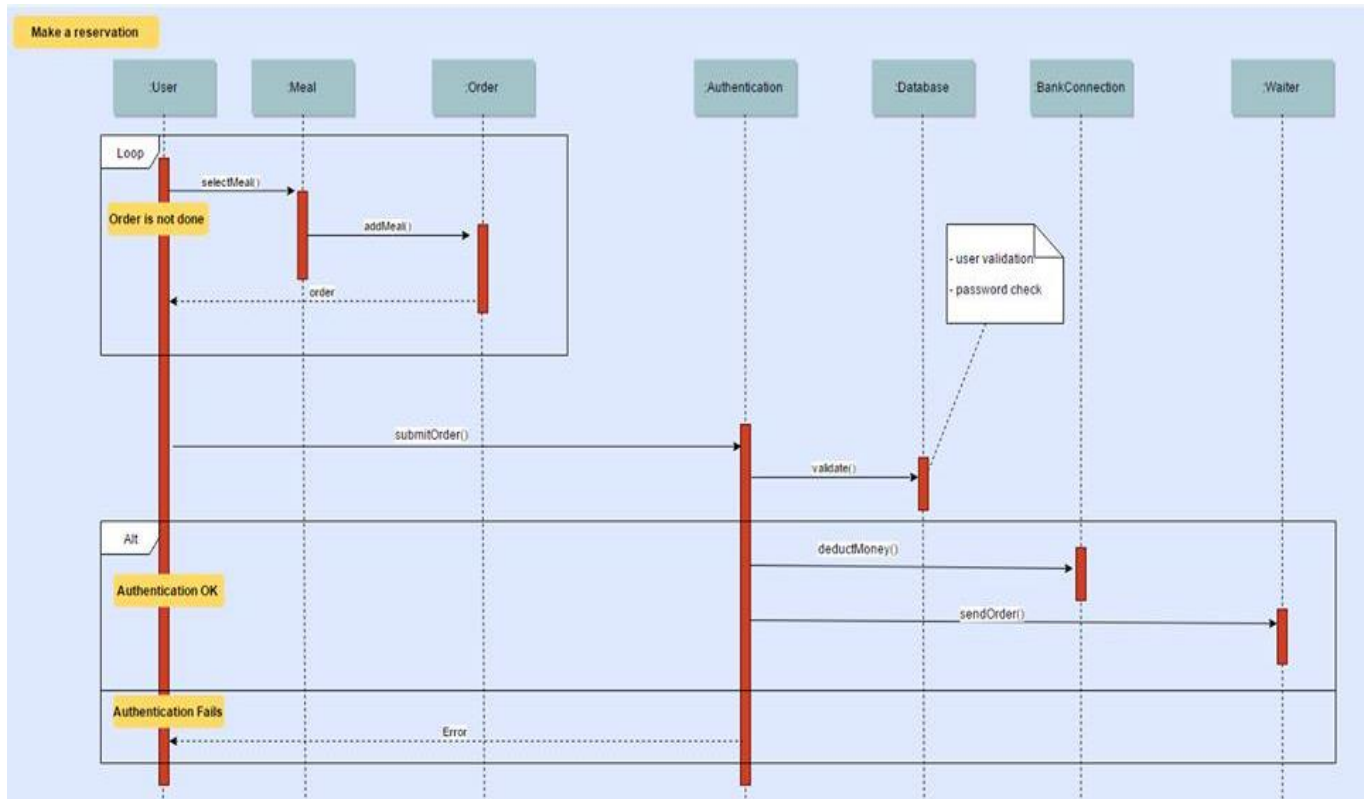
➔ Drawn using draw.io (<https://www.draw.io>)

Sequence Diagram for Add meal Use Case:



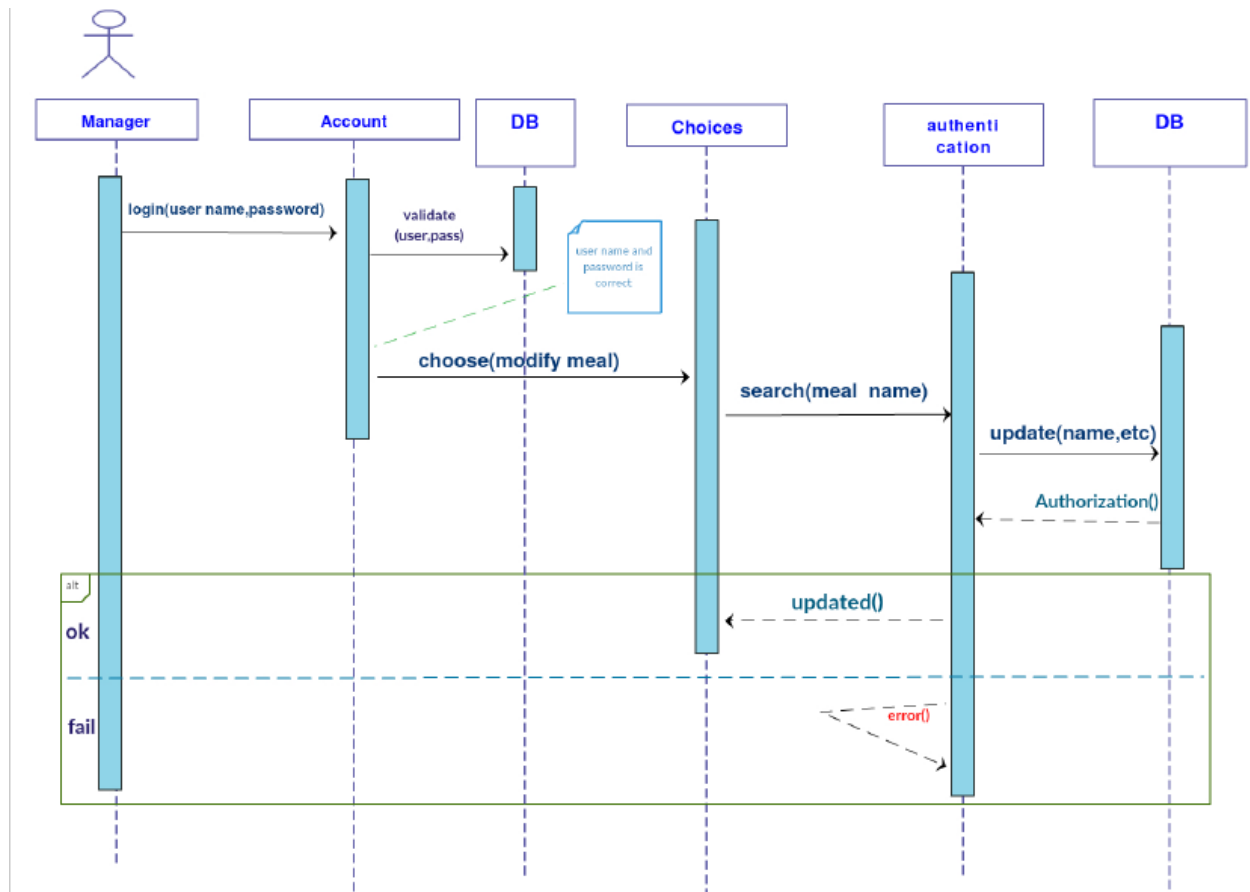
➔ Drawn using Creately (<http://creately.com>)

Sequence Diagram for Make reservation Use Case:



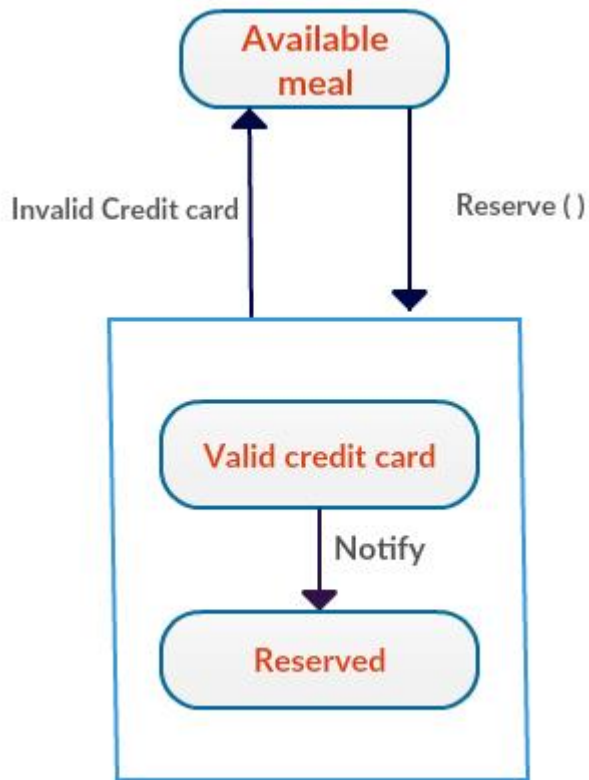
→ Drawn using draw.io (<https://www.draw.io>)

Sequence Diagram for Modify meal information Use Case:



→ Drawn using Creately (<http://creately.com>)

3.5 STATE diagram :



→ Drawn using Creately (<http://creately.com>)

4. System Design :

4.1 Description of chosen Design Goals :

❖ TWO general design goals

1. high cohesion
2. low coupling

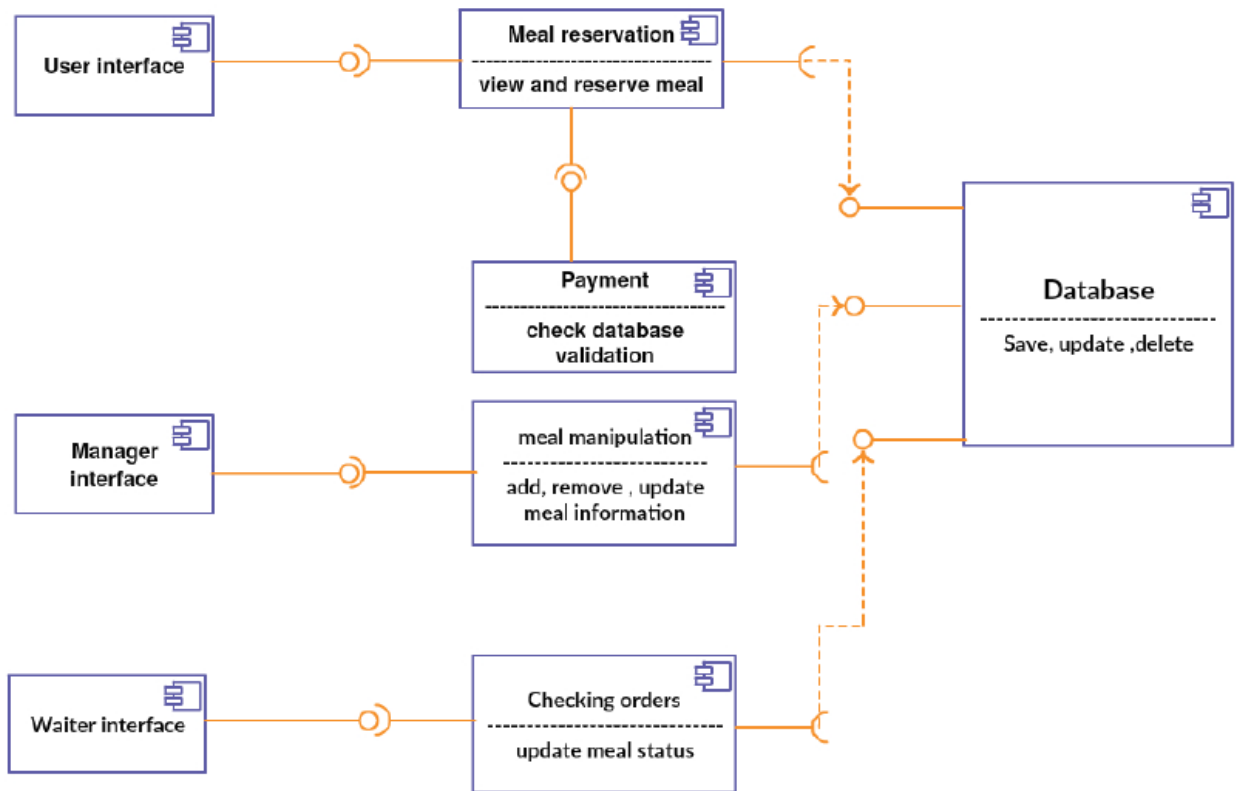
❖ TWO specific system design goals, derived from your business non-functional requirements

1. **Usability**: Usability is a quality attribute that assesses how easy user interfaces are to use, it also refers to methods for improving ease-of-use during the design process. Our system therefore aims to be an easy-to-use system for the end user; this was achieved by making different interfaces for each type of end users (an interface for the manager , an interfaces for the waiters and interfaces for the customers).
2. **Efficiency**: Efficiency relates to the use of all inputs in producing any given output, including personal time . Our system is designed to be efficient by the manager and the waiters have their own interfaces, this increases the efficiency of the system, reduces the possibility of errors and makes the communication much easier .

4.2 Component Diagram of your system components :

- ❖ Describe how and in which components the chosen Design goals have been addressed:

The different interfaces for each type of end users (an interface for the manager , an interfaces for the waiters and interfaces for the customers)
Increase the Usability and Efficiency .

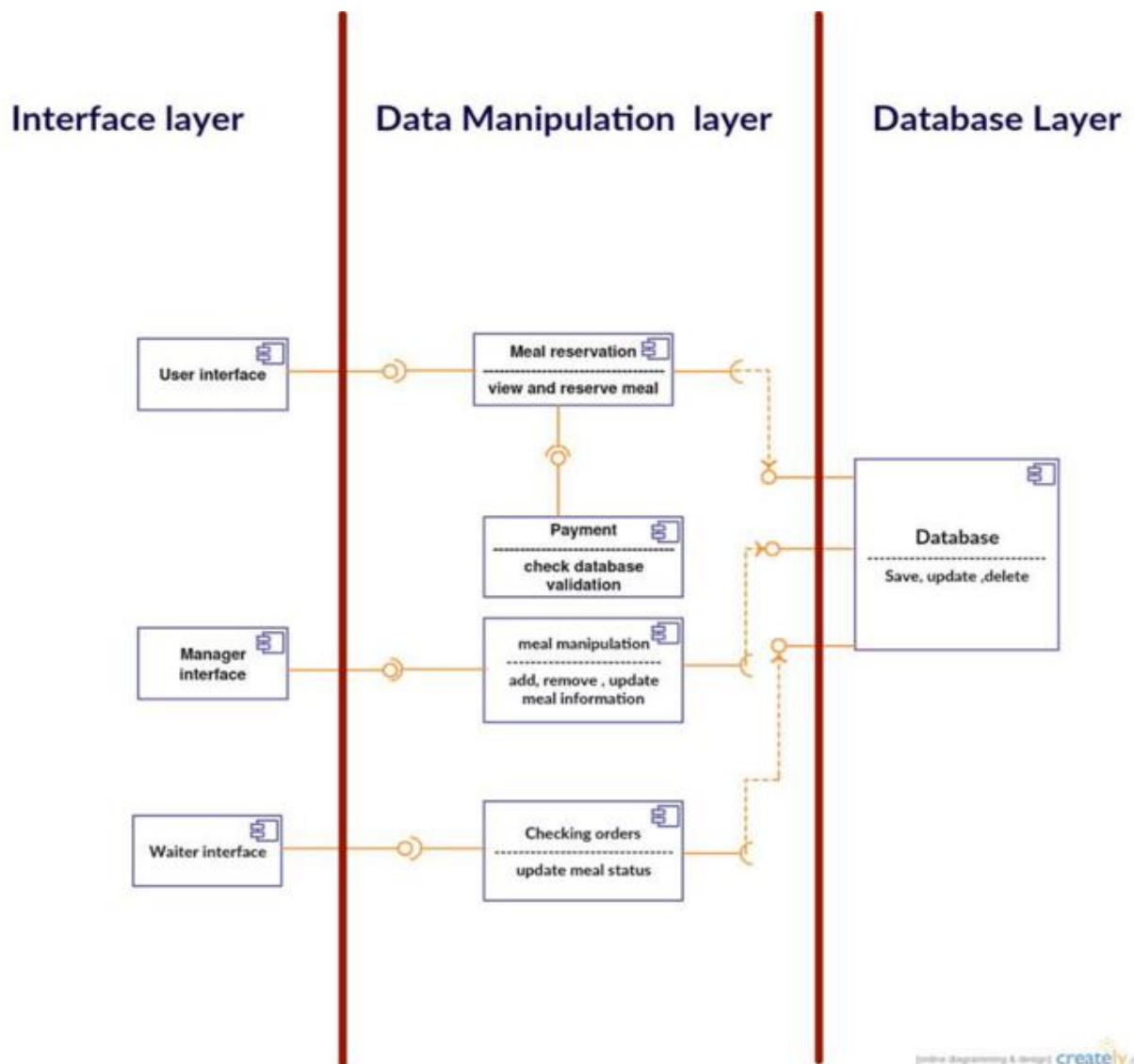


→ Drawn using Creately (<http://creately.com>)

4.3 Overall architecture diagram - mapping your components on your architecture layout :

- ❖ Write a justification why did you choose a particular software architecture (e.g. client/server, peer-to-peer) in meeting your design goals and system non-functional requirements:

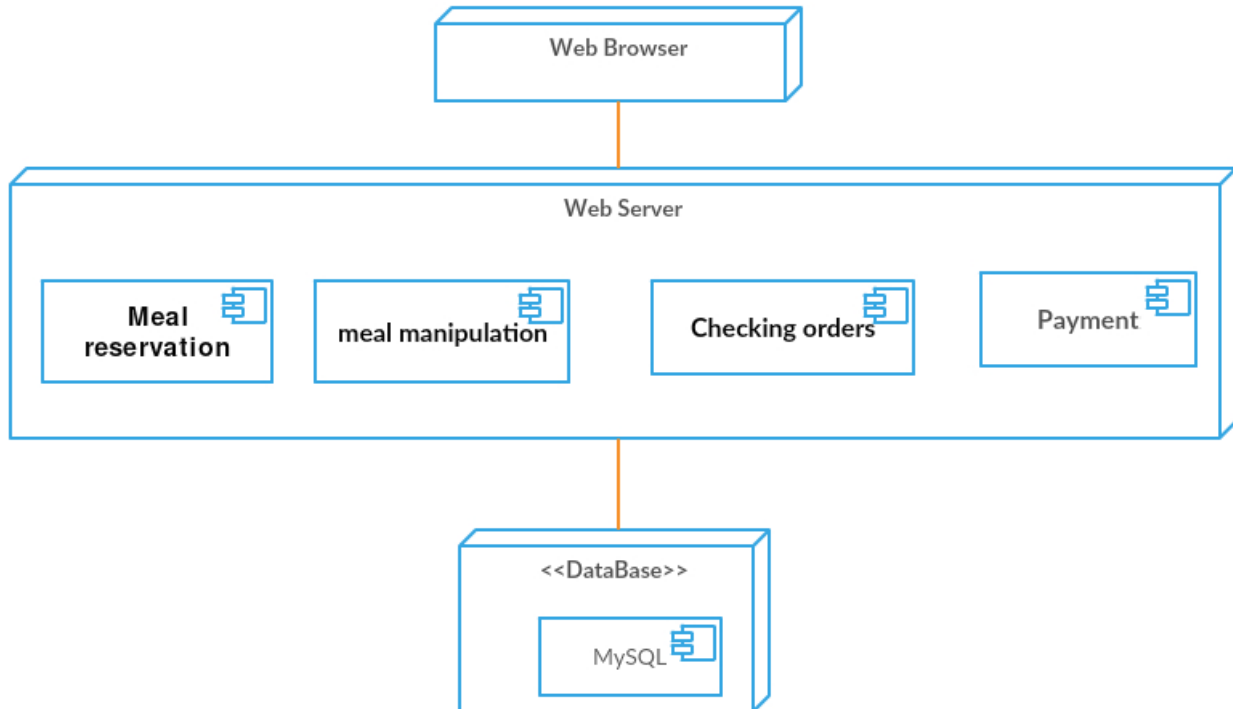
We use Client server architecture in our project to make the system itself more consistent and easier to maintenance . Moreover , the overall system performance will be higher that peer-peer because we are talking about web application.



→ Drawn using Creately (<http://creately.com>)

4.4 Deployment diagram: mapping Software components on hardware nodes :

- We make separated database in our system in order to achieve the maximum Efficiency which is one of our design goals.



➔ Drawn using Creately (<http://creately.com>)

5. Assessment :

5.1 Three assessment forms in your role as a DEVELOPER (i.e. assessing your customer group): one at User requirement approval, one at Requirement analysis, and one at System modeling and Design :

Developer Groups: This exercise is to assess how well was your collaborative skills with your customer group to understand their business (and NOT to assess your customer group themselves).

Topic: Assessment of the Business USER and SYSTEM Approval assessment.

<p>1- Assessment of your Requirement discovery techniques and ability</p>
<p>1.1- Have your customer group provided you with CLEAR answers to your queries about their business needs in terms of USER Requirements? If yes, how clear were their answers to help you identify USER & SYSTEM requirements. If no, write what issues where not clear (or ambiguous).</p>
<p>Yes , their answers were clear so when we put the requirement we didn't have an ambiguity between the identification of the requirements .</p>
<p>1.2- Have you found any particular aspect difficult to analyse or understand out of your customer's business USER & SYSTEM Requirements needs? If yes, describe what aspects. If no, write what aspects were hardest to understand.</p>
<p>Yes , we have some difficult about sign up in the system , it wasn't clear the aim of its existence</p>
<p>2- Assessment of the cooperation with your customer group</p>
<p>2.1- Have your customer group been responsive to your queries related to what they want to get done on their business needs? If yes, write how clear were their responses. If no, write examples of some issues they were not clear at.\</p>
<p>Yes as they sketched a draft u to show as the different views of the system.</p>
<p>2.2- How prompt (or fast) was your customer group in responding to your queries? If slow, write how long they took to respond. If fast, write how effective they were in responses</p>
<p>It is fast , they didn't take a long time to respond the queries, they fast to understand everything and also the user and the system requirement is clear .</p>
<p>2.3- Have your respective developer group been collaborative enough in discussion? Write a statement on their collaboration, in terms of, for example, being difficult, helpful, non-responsive, not interested.</p>
<p>Helpful and all of us discuss in interested way .</p>

3- Assessment of your COST and delivery TIME negotiation with your customer group		
3.1- Have the negotiation with your customer group been difficult to reach an agreement on a suitable cost and time? If yes, write what were the difficulties. If no, write how easy was to reach an agreement.		
No , the customer group is agreed with cost because they expected it .		
3.2- What were the negotiated COST and EFFORT/TIME relative to your estimated ones?- Write these down as noted below (Please keep your detailed calculation, you will be asked to submit them later, part of your next project report)		
Actually we agree to max cost and average time , we start negation with 2000\$ and 10weeks and we finish at 1550\$ and 8 weeks which was fine for us .		
Minimum effort:4.5 Minimum scheduled time: 6 weeks	Maximum effort: 9.5 Maximum scheduled time: 12 weeks	Minimum Cost: 1350 \$ Maximum Cost:1550 \$
AGREED COST: 1550 \$		AGREED TIME:8 weeks

Developer Groups: This exercise is to assess how well was your collaborative skills with your customer group to analyse their business requirements (and NOT to assess your customer group themselves

Topic: Assessment of the Business Requirement Analysis (or System Requirement Analysis/Model)

1- Assessment of your Requirement Analysis techniques and ability
1.1- Have your customer group provided you with CLEAR answers to your queries about their business requirements in terms of functional needs of the system? If yes, how clear were their answers to help you analyse their requirements and business processes into USE CASES and ACTIVITIES. If no, write what issues were not clear (or ambiguous).
Yes The needs are very clear, which helped ease make USE CASES and ACTIVITIES Especially with regard to payment method.
1.2- Have you found any particular aspect difficult to analyse or understand out of your customer’s business processes and Requirements? If yes, describe what aspects. If no, write what aspects were hardest to understand.
No, everything was clear.
2- Assessment of your cooperation and collaboration abilities with your customer group
2.1- Have your customer group been responsive to your queries related to what they want to get done on their business understanding details? If yes, write how clear were their responses. If no, write examples of some issues they were not clear at.
Yes, they answer all questions clearly.
2.2- How prompt (or fast) was your customer group in responding to your queries? If slow, write how long they took to respond. If fast, write how effective they were in responses
They were very fast to answer our questions
2.3- Have your respective customer group been collaborative enough in discussion? Write a statement on their collaboration, in terms of, for example, being difficult, helpful, non-responsive, not interested. If they were difficult what technique did you use to overcome their difficulty
They were very cooperative and working as a team

Developer Groups: This exercise is to assess how well was your negotiation skills with your customer group to Model and Design their business .

Topic: Assessment of the System Modelling and Design.

1- Assessment of your analysis techniques and ability
1.1- Have your respective customer provided you with CLEAR answers to your queries about their business? If yes, how clear were the answers to help you conduct the system analysis. If no, write what issues where not clear or ambiguous.
Yes, they answered all the questions that are relative to system analysis in a clear way. As they helped us in describing the objects needed in the system in details, which helped us in designing the class diagram of the whole system.
1.2- Have you found any particular aspect difficult to analyse or understand out of your customer’s business? If yes, describe some of these issues. If no, write what issues were hardest to understand.
Two issues were hardest to understand: 1- Handling the activation of the user either by phone or by credit card. 2- The display of the main course based on the period of time in the day.
2- Assessment of the cooperation with your developer group
2.1- Have your customer group been responsive to your queries related to FUNCTIONAL and NON-FUNCTIONAL needs? If yes, write how clear were these responses. If no, write example of some issues they were not clear at.
Yes, they were clear in describing functional and non-functional requirements. Since they described in details what each page will contain and how to deal with the order of the user, as they described the need of the cart to contain many meals in one order. Also the performance of the system and how reliable it must be, and to be interactive with behaviour of the user.
2.2- How prompt was your respective customer group in responding to your queries? If slow, write how long they took to respond. If fast, write how effective they were in responses
They were fast to respond and involved in the meeting times that were announced. Also, we kept in touch by e-mail if any interrupt or problem has happened. They always answer before 24 hours passed.
2.3- Have your respective developer group been collaborative enough in discussion? Write a statement on their collaboration, in terms of, for example, being difficult, helpful, non-responsive, not interested.
They were helpful and very polite, as they demanded any modifications in the system in a respected way. Also they expressed their gladness in the process of designing the system step by step which motivated us to keep the great work going.

5.2 Three assessment forms in your role as a CUSTOMER (i.e. assessing your developer groups): one at User requirement approval, one at Requirement analysis, and one at System modeling and Design :

Customer Groups: This exercise is to assess how well you understood User and System Requirement of your business .

Topic: Assessment of the Business USER and SYSTEM Requirements Approval .

1-Are these items included or submitted in the approval report?	
Yes	The requirement statement/Business description – which you supplied to them.
Yes	USER Requirements.
Yes	SYSTEM Requirements
Yes	The negotiated COST of project completion.
Yes	The negotiated TIMESCALE (delivery time) of project completion.
2- Do you Approve the USER and SYSTEM requirements?	
No	USER requirements are complete and meet my business needs.
No	SYSTEM requirements are complete and meet my business needs.
Yes	Requirements are not complete- some requirements are missing and are listed below in 3.1.
Yes	Requirements are not complete- some requirements are not correctly identified and are listed below in 3.2.
3- Assessment of the cooperation with your developer group	
3.1- Have your respective developer group identified the USER requirements to fit your business needs? If yes, list what <u>key</u> requirements have been identified. If not, write what requirements have NOT been identified.	
<ol style="list-style-type: none"> 1. The user shall see he’s orders ! (not included) . 2. is the case that the website is down for any reason, it will show an apology and a list of numbers that can be used to make an order via phone . (not included). <ul style="list-style-type: none"> • The developers got the feedback from us but we see that there are changes on the requirements that we did not know about it . 	
3.2- Have your developer group put enough effort to understand your business and identify both USER and SYSTEM requirements correctly? If yes, write how well you think they understood your business. If no, write what they failed at to understand your business.	
<ol style="list-style-type: none"> 1. We do not have a mobile application (Added Extra by developers) . 2. The site should serve up to 50 person concurrently not 100 . 	
3.3- Have your developer group been collaborative enough in responding to your discussion? Write a statement on their collaboration, on: helpful in listening to your suggestions, contacting you to discuss, meeting you to discuss and suggesting ways to improve the efficiency of your business.	
<p>They was good in listen to our suggestions.</p> <p>They was contact us one time to discuss.</p> <p>They was good in meetings but was not show us that their work in such a way to improve our business.</p>	

4- Assessment of your COST and delivery TIME negotiation with your developer group

4.1- Have the negotiation with your developer group been difficult to reach an agreement on a suitable cost and time? If yes, write what were the difficulties. If no, write how easy was to reach an agreement.

Yes , Actually we faced some problems with the agreement because the developers group was so late in delivering the cost .
This made us a little bit confused .
On the other hand , the time estimated by developers was long and the agreement was not possible in less than 11 weeks of work from the developer side which was a little bit long time for us , but finally we accepted that .

4.2- What were the negotiated COST and EFFORT/TIME relative to your expected ones?

AGREED COST: 5650\$

AGREED TIME:11 Weeks .

AGREED Delivery date:13-2-2016.

Customer Groups: This exercise is to assess how well you understood Requirement Analysis .

Topic: Assessment of the Business Requirement Analysis (or System Requirement Analysis/Model).

1-Are the following items included in the report	
Yes	ACTORS analysis and their description.
Yes	USE-CASE diagram(s). [One overall system use case - and up to 3 multi-level use case diagrams, if needed].
Yes	USE-CASES and their detailed description [up to 4 use cases, one each]
Yes	ACTIVITY diagram (s): <u>One</u> main activity diagram to show a business process, and up to <u>four</u> instance activity diagrams of key use-cases, one each, preferably of the scenarios in detailed before, showing its normal, alternative and error flows.
2- Do you Approve the requirement Analysis report? - -delete YES or No as appropriate	
Yes	Yes, ACTORS and their description are complete, meaningful and meet my business needs.
Yes	Yes, USE CASES are complete- meaningful and meet my business (USER) requirement.
Yes	Yes, ACTIVITIES are complete- meaningful and represent my business processes.
3- Assessment of the cooperation with your developer group	
3.1- Have your respective developer group analysed the requirements to fit your business needs? If yes, list what <u>key</u> requirements have correctly been analysed. If not, write what requirements have NOT correctly been analysed.	
Yes , the key requirements are : The main thing is the way if pay and some things related with the order cancelation .	
3.2- Have your respective developer group analysed the requirements correctly in terms of your business understanding and have they used the correct UML notation for you to understand? If yes, write how well you think they understood your business and UML notations. If not, write where they have not analysed your business correctly or not conformed to UML.	
Yes , I think they understand our business well as we see from the activity diagram they made .	
3.3- Have your respective developer group been collaborative enough in responding to your discussion? Write a statement on their collaboration, on: helpful in listening to your suggestions, contacting you to discuss, meeting you to discuss and suggesting ways to improve the efficiency of your business.	
They are so collaborated with our discussion And they are good listener And in this phase they did a great job to show me that the are really interested in my project .	

Customer Groups: This exercise is to assess how well you understood the System Modelling and Design.

Topic: Assessment of the System Modelling and Design .

1-Are these item included in the report	
System Modelling	
yes	System CLASS Diagram, and brief description of classes
yes	OBJECT Diagram
yes	SEQUENCE Diagram; two sequence diagrams for two different use cases
yes	STATE diagram: one state diagram, of an object that has a state. If none exists, describe why.
System Design	
yes	An architectural design– component diagram
yes	Description of chosen Design Goals, and describe how they will be addressed, justification for choosing architecture style.
yes	COMPONENT Diagram; Describe how and where in the component Chosen Design goals have been addressed.
yes	DEPLOYMENT Diagram: mapping Software components on hardware nodes.
2- Do you Approve the System (Analysis) Model report?	
yes	Yes, the presented system model/Design is complete and meets my business needs.
<input type="checkbox"/>	No, the presented system model/Design is not complete- some issues are not addressed and are listed below in 3.1
<input type="checkbox"/>	No, the presented system model/Design is not complete - some issues are not correctly modelled and listed below in 3.2
3- Assessment of the cooperation with your developer group	
3.1- Have your respective developer group presented System model/Design that answers your business needs and rules? If yes, list what <u>key</u> issues have been addressed. If not, write what issues have NOT been addressed.	
The system is easy to use since the developer group provided us with three different interfaces. This contributed in minimizing the complexity.	
3.2- Have your respective developer group presented a system model/Design CORRECTLY in terms of your business rules and have they used the correct UML notation for you to understand? If yes, write how you think they met your business needs in their solution. If not, write what issues they have not analysed CORRECTLY or UML notation errors.	
Yes, the respective developer group presented the system design correctly and the used notations were easy to understand.	
3.3- Have your respective developer group modified your System Analysis/Model/Design according to your feedback on the Requirement analysis/ document. If yes, write which changes you asked them to modify. If not, write which changes they did not attempt.	
After we discussed the system design with the developer group we gave them some notes to consider and they agreed on these notes and took them into consideration. One of these notes that we need all the information to be stored in one database	
3.4- Have your respective developer group been collaborative enough in responding your discussion? Write a statement on their collaboration.	
Our developer group were collaborative ,They took our notes into consideration, and made the needed changes that met our business needs.	

5.3 Effort/Time estimation calculation :

User requirement #	Estimation Effort	Estimated No of Developers	Total Effort
UR Number 1	1 pw	3	3 pw
UR Number 2	0.5 pw	2	1 pw
UR Number 3	0.5 pw	2	1 pw
UR Number 4	0.5 pw	3	1.5 pw
UR Number 5	1 pw	2	2 pw
UR Number 6	1 pw	1	1 pw
Total Effort	4.5 pw	Need approximately 2 developers on average	9.5 pw
Schedule time 30%	4.5*1.3 = 6 W (Min Time)	-	9.5*1.3 = 12 W (Max Time)
Cost		<u>Avg</u> Salary = 100\$	1200\$
Profit margin (<u>min</u> =10%; <u>max</u> =30%)	-	Min Cost ==>	1200*1.1 = 1350\$
		Max Cost ==>	1200*1.3 = 1550\$

Appendix

Meeting minutes:

❖ List of meetings of your group :

Date	Meeting Subject And Actions
20 Oct	Dissection the business and general description how it works .
28Oct	Improve the outline .
6 Nov	Try to make all things that we discuss with our customer group and make a final version from it .
20 Nov	Try to understand all cases we want to include and divide the work to each one to work on one usecase scenario and description .
26 Nov	Review the usecase diagram after the ,meeting with customer group .
30 Nov	improve the main activity diagram and four instance activity diagram (specific with use cases)
4 Dec	Discuss the activity diagrams after the customer group meeting and finalize things .
14 Dec	improve system class diagram and object diagram
16 Dec	Discuss class and object diagram after customer meeting and develop the sequence diagram for each member.
4 th Jan	Improve the architectural design , component design and deployment diagram .

- All members attended in all meetings .

❖ List of meetings with the customer group :

Date	Meeting Subject
20 Oct	First interview : Dissection the business and understanding it .
27 Oct	Second interview : Improve the outline description for business requirement .
5 th Nov	Finalize the user requirements version and analysis it to get the system requirements .Also make sure from the customer that system and user requirement meet their needs and approve them .
24 Nov	Discuss all actors in the system , over all use cases and also the five scenarios in system in addition five use cases .
25 Nov	Continue dissection for the actors ,over all use cases , discussed five scenarios for system and also the five use cases .
1 st Dec	Discussed the main activity diagram and four instance activity diagram (specific with use cases)
2 nd Dec	Continue dissection for activity diagrams .
15 Dec	Discussed system classes , class model and object diagram
17 Dec	Continuo our dissection about classes and object diagram.
5 th Jan	Discussed the architectural design , component design and deployment diagram too .

- All members attended in all meetings .