SYSTEMS ANALYSIS AND PROJECT MANAGEMENT

MIS-6308 | Spring 2020 | Group 08

Under

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Contents

I. Overview

The Comet Cupboard is a UT Dallas food pantry initiative dedicated to helping students in need. Its primary mission is to provide necessary food and personal care items to members of the UT Dallas community, but its impact reaches much further. The Comet Cupboard acts as a service-learning component of the undergraduate academic experience and strives to cultivate a campus culture where the community is valued above individualism.

Given the current global situation concerning the COVID-19 epidemic, many people from the UT Dallas community may be adversely affected by the virus in different ways, some are financially affected, while some are at risk by being in big audiences while they run daily necessary errands.

When designing this project, we as a group got to apply object-oriented analysis as well as design methodologies for a current problem that some students face. Through this project, we got to understand analysis and design comprehensively, which helped us solve the problem at hand.

This project aims to help students/members of the UT Dallas community who are still relying on the already set system of the Comet Cupboard get the things they need without adding any risk to themselves and their dear ones by being in outdoor spaces with other human beings.

II. Problem Statement

In the current global situation of the Covid-19 pandemic, a lot of students/UT Dallas employees who are financially affected are facing an issue to make ends meet. Also, UT Dallas being home to a culturally diverse group of students, employees, and faculties, many are at a higher risk of contracting COVID-19.

In such tough and unprecedented times during the Covid-19, the Comet Cupboard continues to help the UT Dallas community by providing essentials as well as food and fresh produce weekly on Thursday.

Our main objective with this project is to help the UT Dallas community be safe while utilizing the Comet Cupboard program and bring in a new innovative system which will simplify the order and donate processing system for all students, employees, and faculty while maintaining a safe distance and ensuring that groups of people are not formed, hence, keeping the public safe and keeping UT Dallas community healthy. We are completely automating the process from ordering online to booking timeslots. We have ensured that no more than 4 people are booked for a 15-minute time slot. We have extensively utilized technology to build a simple and trustworthy application and ensure safety for all our users.

As of today, there is no system available for the Comet Cupboard where all these processes are automated. At usual peak times at the Comet Cupboard (10:00 AM -11:30 AM), there are lines of 15-20 people who are being supplied and have to wait upwards of 20 minutes to receive the items they have chosen. The existing system has a lot of room for improvement with the addition of features such as taking orders online and booking timeslots to ensure that there are no lines formed at the Comet Cupboard room. It will also include new innovative features which can be done using the application such as timeslot reservation, in terms of choosing the kind of order that the customer wants, if the customer chooses to get a delivery or wants to pick up his/her items from the Comet Cupboard. The application also enables donations to be scheduled and dropped off at the Comet Cupboard. The application will provide the flexibility for the users to order items for delivery or takeaway purposes. This application aims to remove lines at Comet Cupboard to ensure people at risk can avoid being exposed to the virus, plus people suffering from financial burdens can still make ends meet.

Business Needs

The business need for the new system is as follows:

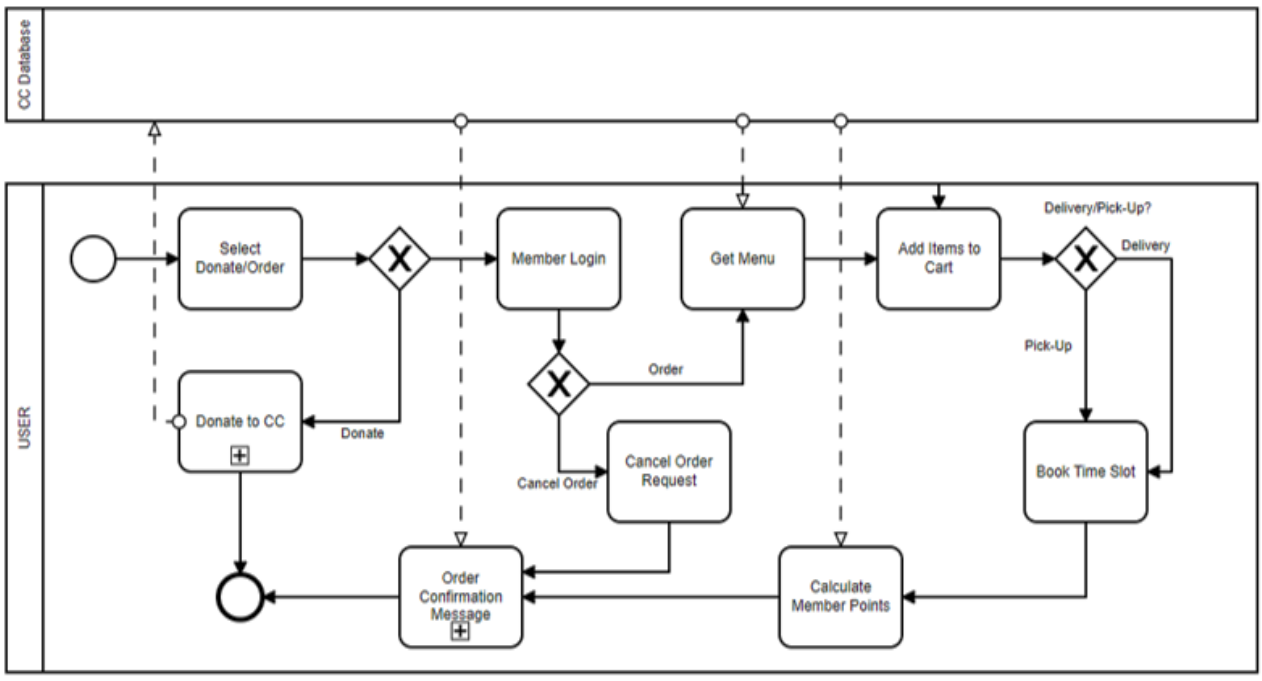
- Going to Comet Cupboard and standing in line is time-consuming and causes groups of people to gather in a small space, which should be avoided during Covid-19
- Comet Cupboard employees can get overwhelmed by seeing long lines during the current global pandemic
- Manage incoming and outgoing traffic at Comet Cupboard efficiently (fewer people in small spaces, as only 4 pickups per timeslot)
- The existing system offers slow customer service, including long waiting times in order-placing queues.
- The existing system tends to create a sense of panic/anxiety in individuals who are at a higher health risk who face long lines at the Comet Cupboard.

III. Business Process Model Notation

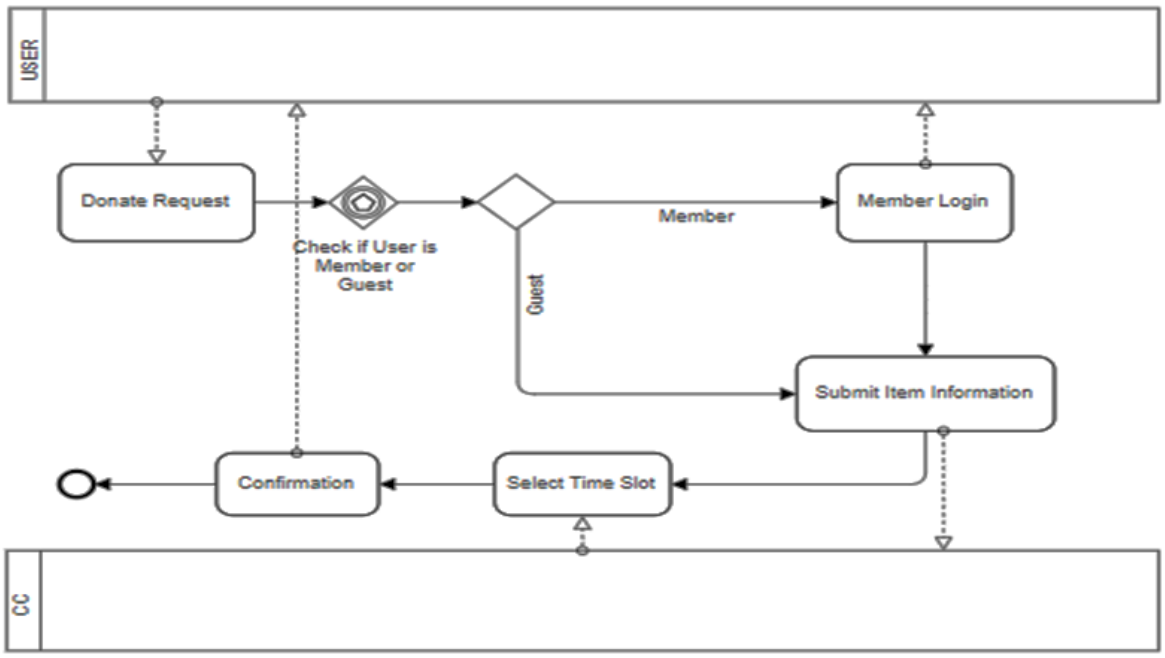
BPMN, or the 'Business Process Model and Notation', is a method for mapping out the approach to a business process; that is, creating a visual representation of complex business practice or process flow. This is designed to give major stakeholders the clarity and perspective required to make informed decisions, just as a well-drawn map can help you to figure out the best possible route to your destination.[1]

The models given below are descriptive of the different processes of Comet Cupboard. The objective is that given flow is understood by individuals in both business and technology domains.

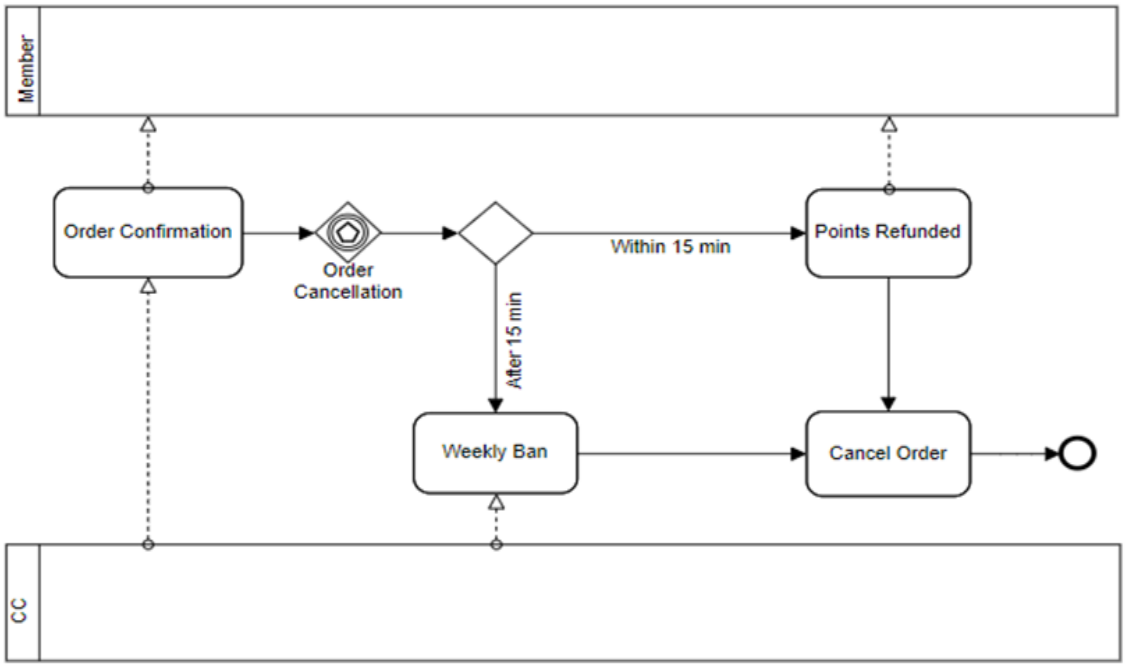
Proposed System



Donation Process



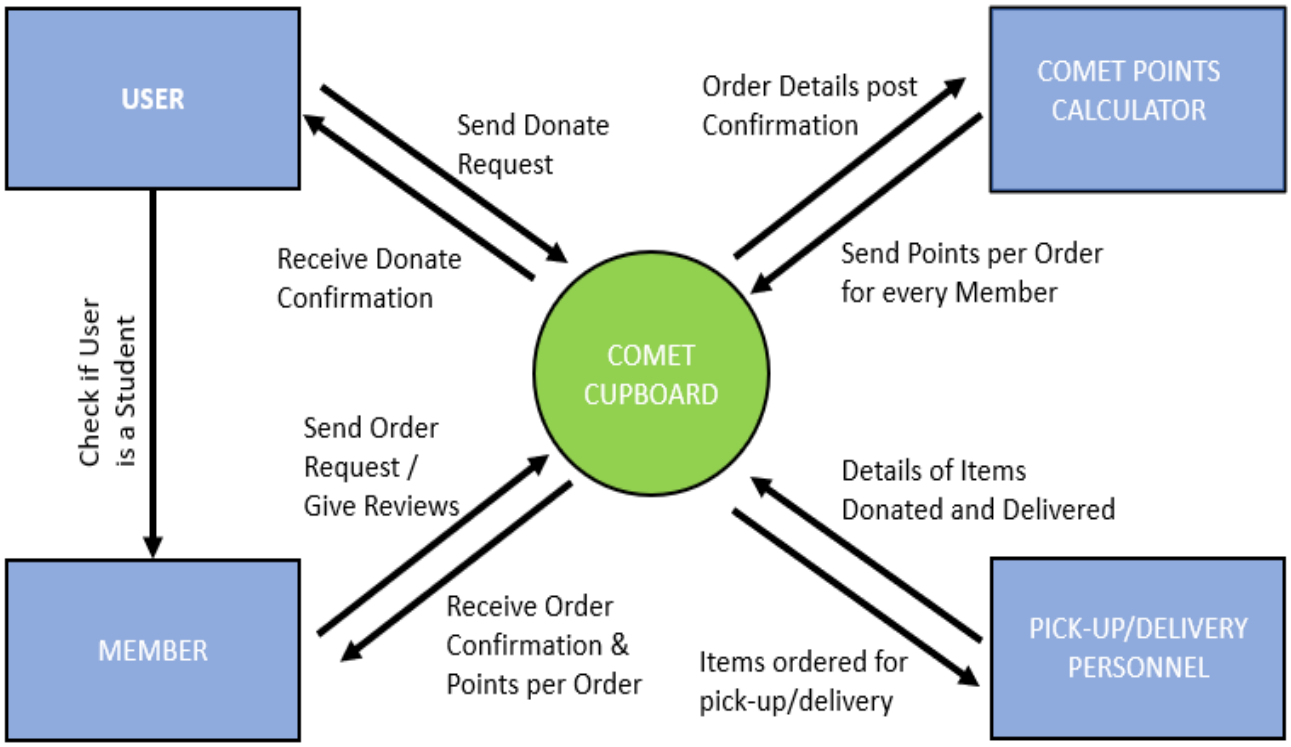
Order Cancellation Process



IV. System Context Diagram

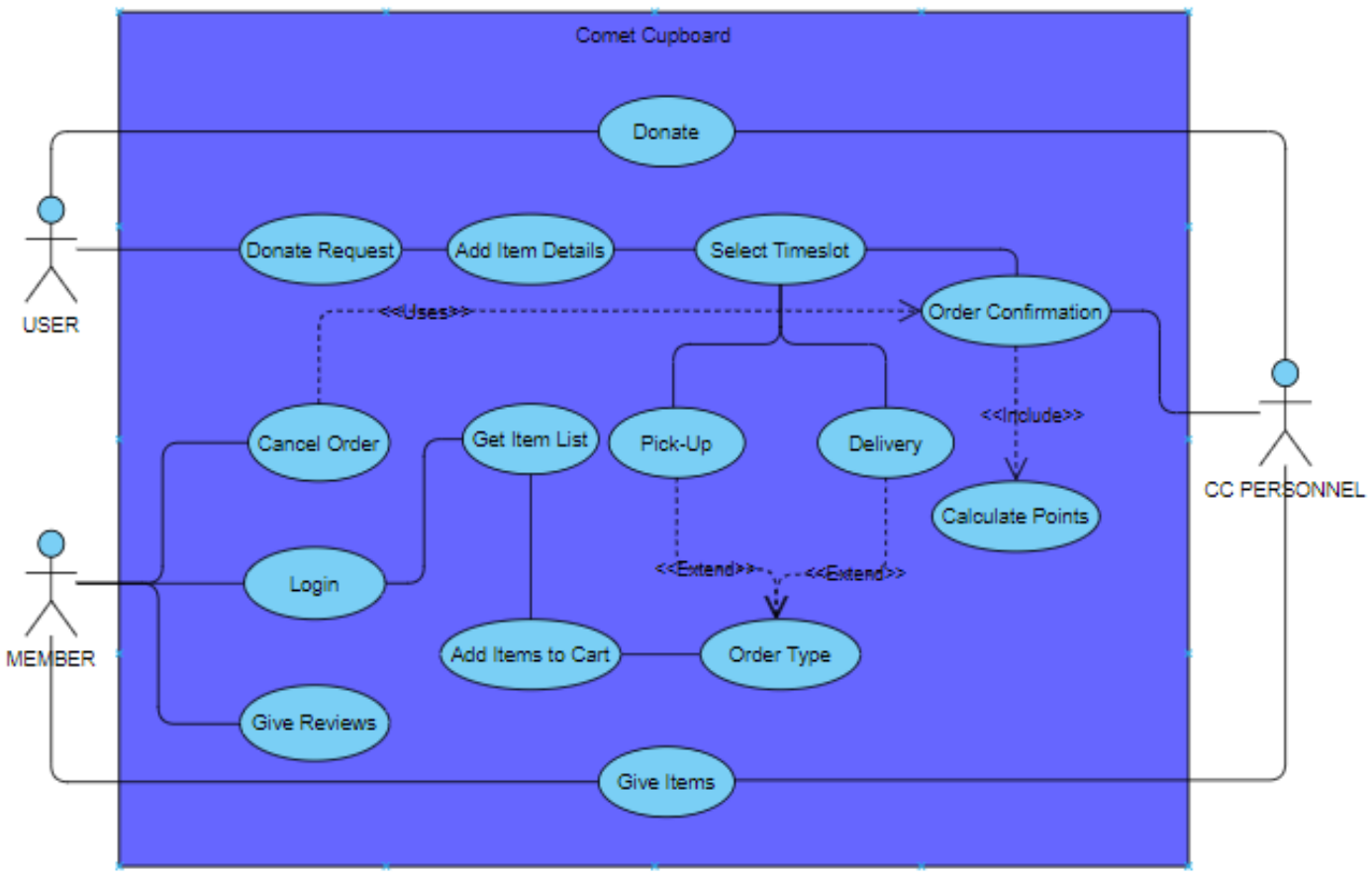
The system context diagram (also known as a level 0 DFD) is the highest level in a data flow diagram and contains only one process, representing the entire system, which establishes the context and boundaries of the system to be modeled. A system context diagram is often used early in a project to determine the scope under investigation. [2]

The entire software system is shown as a single process. In this case, it's the Come Cupboard system with 4 external entities.



V. Use Case Diagram

A use case diagram is a way to summarize details of a system and the users within that system. It is generally shown as a graphic depiction of interactions among different elements in a system. A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. In this context, the term "system" refers to something being developed or operated. Use case diagrams will specify the events in a system and how those events flow, however, use case diagram does not describe how those events are implemented.[3]



VI. Use Case Descriptions

1. Use Case Description 1: Donate Request

Use Case Name: Donate

Primary Actor: User/Registered Member

Stakeholder: Comet Cupboard

Brief Description: User who can be Guest/Member can donate items

Trigger: Click on the Donate option

The normal flow of events:

Click on the Donate button.

- Login as a member or enter guest details.
- Input details of items you want to donate. Item>=1
- Select Timeslot.
- Receive confirmation message.

2. Use Case Description 2: Login

Use Case Name: Authorized Log-In

Primary Actor: Registered Member

Stakeholder: Comet Cupboard

Brief Description: When a user wants to order or donate, login details will be authorized.

Trigger: When a member tries to login in Comet Cupboard

The normal flow of events:

- User clicks - on the Login button.
- User enters his/her registered NetID and password
- If credentials match with entered data, then Authorize Log-In
- Member can proceed to order option.

Exception: If the user enters invalid details, then display “Login failed”

3. Use Case Description 3: Get Items List

Use Case Name: Get Items List

Primary Actor: Registered Member

Stakeholder: Comet Cupboard

Brief Description: Displays the entire list Trigger: The user clicks on the Get Items List button.

The normal flow of events:

- The user selects an item from the item list in the search result.
- The user clicks on the items and quantity.
- Add Item to Cart

4. Use Case Description 4: Add to Cart

Use Case Name: Add to Cart

Primary Actor: Registered Member

Stakeholder: Comet Cupboard

Brief Description: Add items to cart after selecting the items

Trigger: The user selects the items and clicks on the “Add to Cart” button

The normal flow of events:

- Member selects the items
- Member clicks on the cart icon and the items get added to cart.
- Checkout by clicking the cart button
- This will take you to the “select mode of order button”

5. Use Case Description 5: Mode of Delivery

Use Case Name: Mode of Delivery

Primary Actor: Registered Member

Stakeholder: Comet Cupboard

Brief Description: Choose the mode of delivery for your order

Trigger: The user selects add to cart and clicks on ‘Pick-Up or Delivery’ button

The normal flow of events:

- Member clicks on Delivery/ Pickup to choose mode of order
- This will take you to the “select time slot” button.

6. Use Case Description 6: Select Time Slot

Use Case Name: Select Time Slot

Primary Actor: User/Registered Member

Stakeholder: Comet Cupboard

Brief Description: Select the available time slot

Trigger: The user selects the “Select Time Slot” button

The normal flow of events:

- User/Member selects the desired timeslot
- The system approves chosen time slot if available else choose another
- Proceed to order confirmation.

7. Use Case Description 7: Order Confirmation

Use Case Name: Order Confirmation

Primary Actor: User/Registered Member

Stakeholder: Comet Cupboard

Brief Description: Provide confirmation post completion of order or donation

Trigger: The user clicks on Confirm Order

The normal flow of events:

- After selecting the time slot, the user/member receives a confirmation message.
- The system calculates points spent and displays the balance in case of Order.

8. Use Case Description 8: Rate or Review about Comet Cupboard

Use Case Name: Rate or Review about Comet Cupboard

Primary Actor: Registered Member

Stakeholder: Comet Cupboard

Brief Description: Provide rating/reviews for the app

Trigger: The user clicks on the Review button after receiving the order confirmation

The normal flow of events:

- Give Reviews post Order Confirmation

9. Use Case Description 9: Cancellation of Order

Use Case Name: Cancellation of Order

Primary Actor: Registered Member

Stakeholder: Comet Cupboard

Brief Description: Cancel Order

Trigger: User clicks on “Cancel Order” button after receiving Order Confirmation

The normal flow of events:

- The user clicks on the Cancel Order button during the order confirmation stage.
- Check for 15 min criteria before the cancellation
- Refund the points of the week to members.
- Order canceled

Exception:

2a. If the order is canceled within 15 mins then refund amount and cancel order otherwise the student is barred from ordering that week.

VII. Data Dictionary

- Use Case: Authorize Login
  Net ID: Data Element Password: Data Element
  User Info = First Name + Last Name + NetID + Email Address + Password + Phone No + Address

- Use Case: Get Comet Cupboard details
  Comet Cupboard Information = Overview + Full Menu
  Overview = (Reviews) + Address + Timing + Contact Details + Location

- Use Case: Get Item Menu
  Full Menu = { ItemID + ItemName + Item Description+ Item Points}

- Use Case: Place Order
  Order data = Order ID + Order Details + Order Date + Order Time
  Order Details= 1{ItemID + ItemName + ItemType + Item Desc + ItemPoint}

- Use Case: Get Checkout Details
  Checkout details = First Name + Last Name + Email ID + Phone No + (TimeSlot) + Checkout Date + Check out Time
  Points Information = NetID + Points Used + Total Points Available

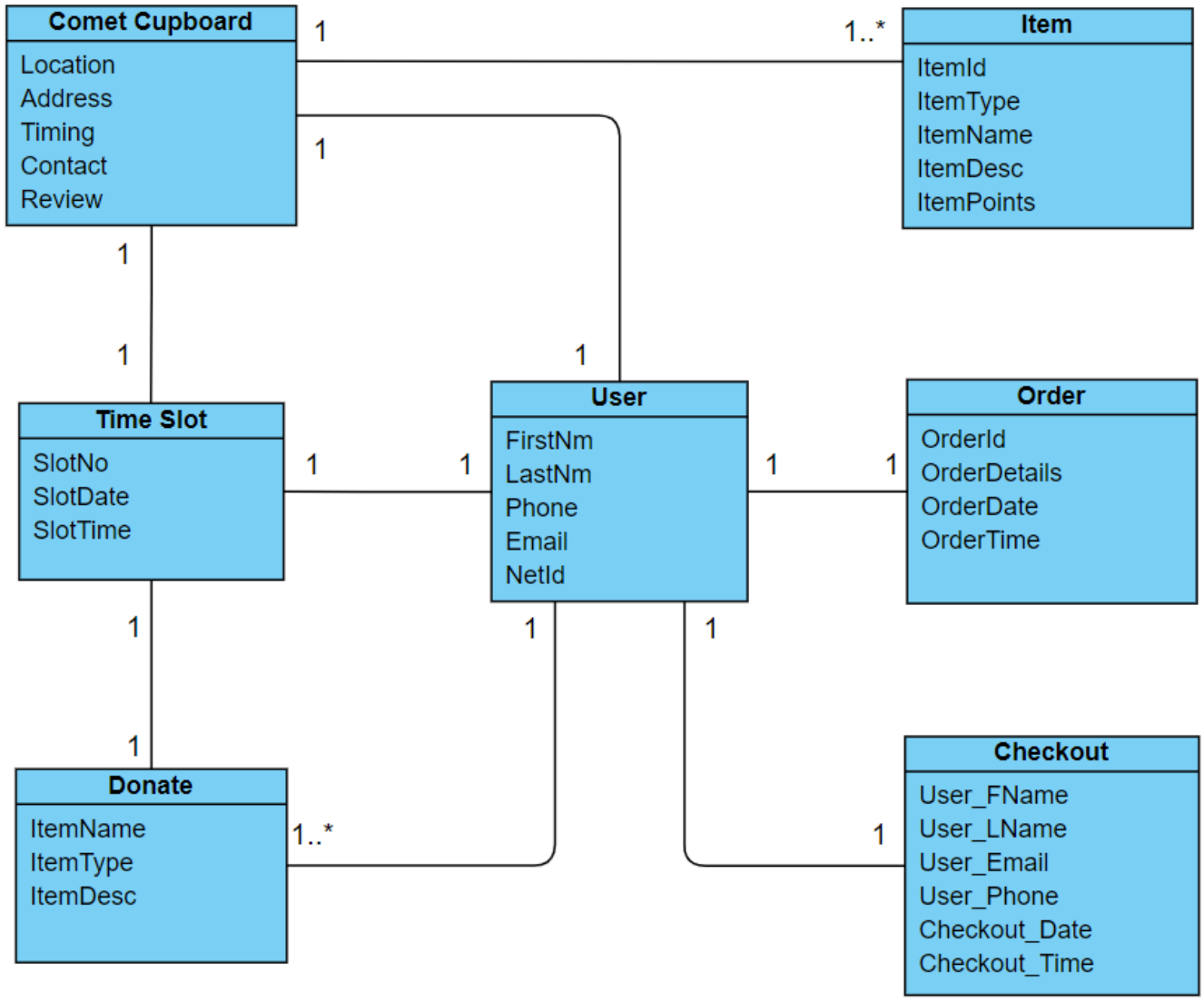
- Use Case: TimeSlot Reservation
  TimeSlot Data = SlotNo + SlotDate + SlotTime + Time Availability + OrderID + NetID

- Use Case: Cancellation
  Cancel data = OrderID + Cancel Request time + Fine (Ban/No ban)
  Cancel Request time = Order Time - Cancel Order Time

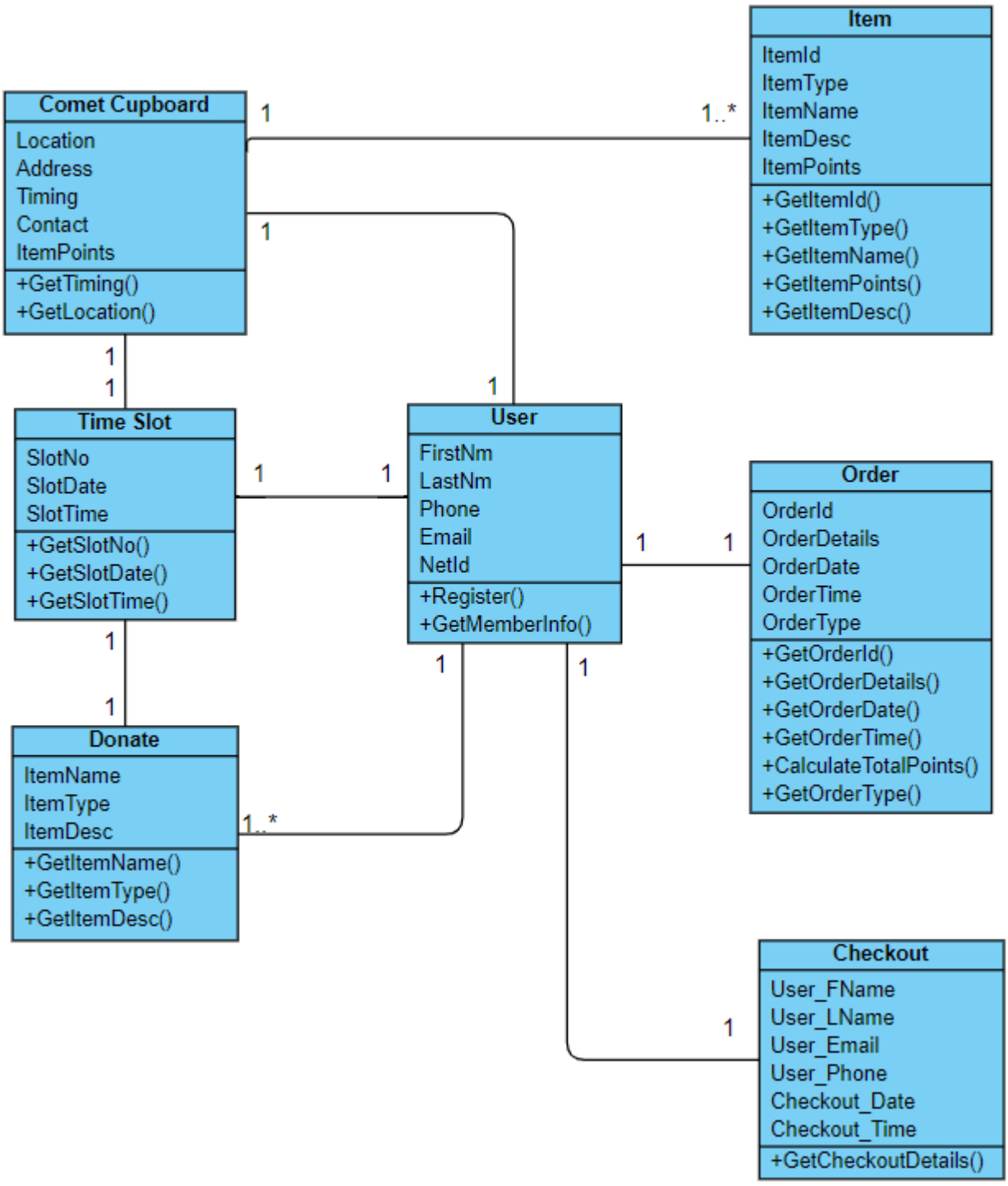
- Use Case: Donate
  Donate Details = 1{ItemName + ItemType + Item Desc}

VIII. Complete Class Diagrams

Without Methods

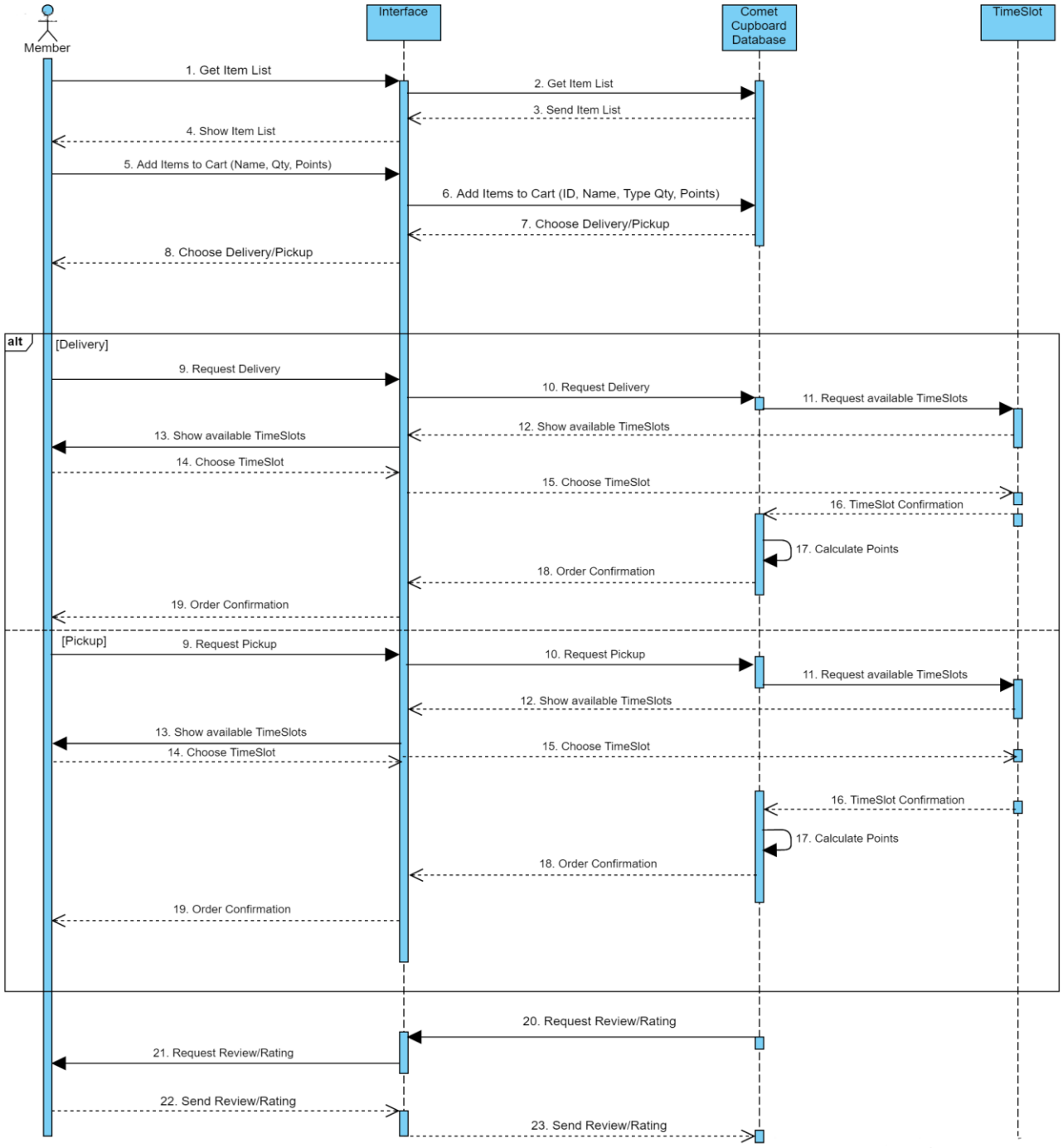


With Methods

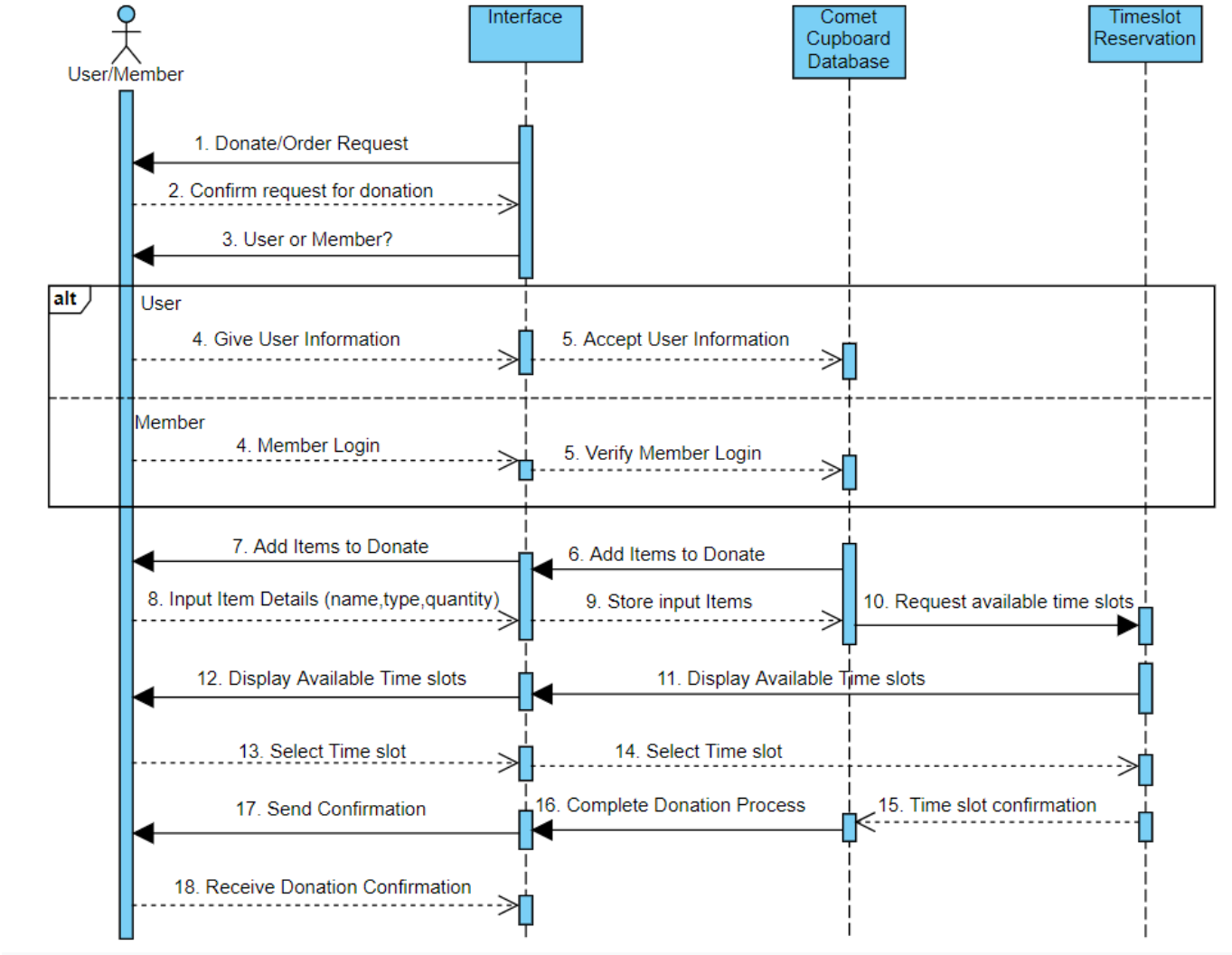


IX. Object Behavior Models - Sequence Models

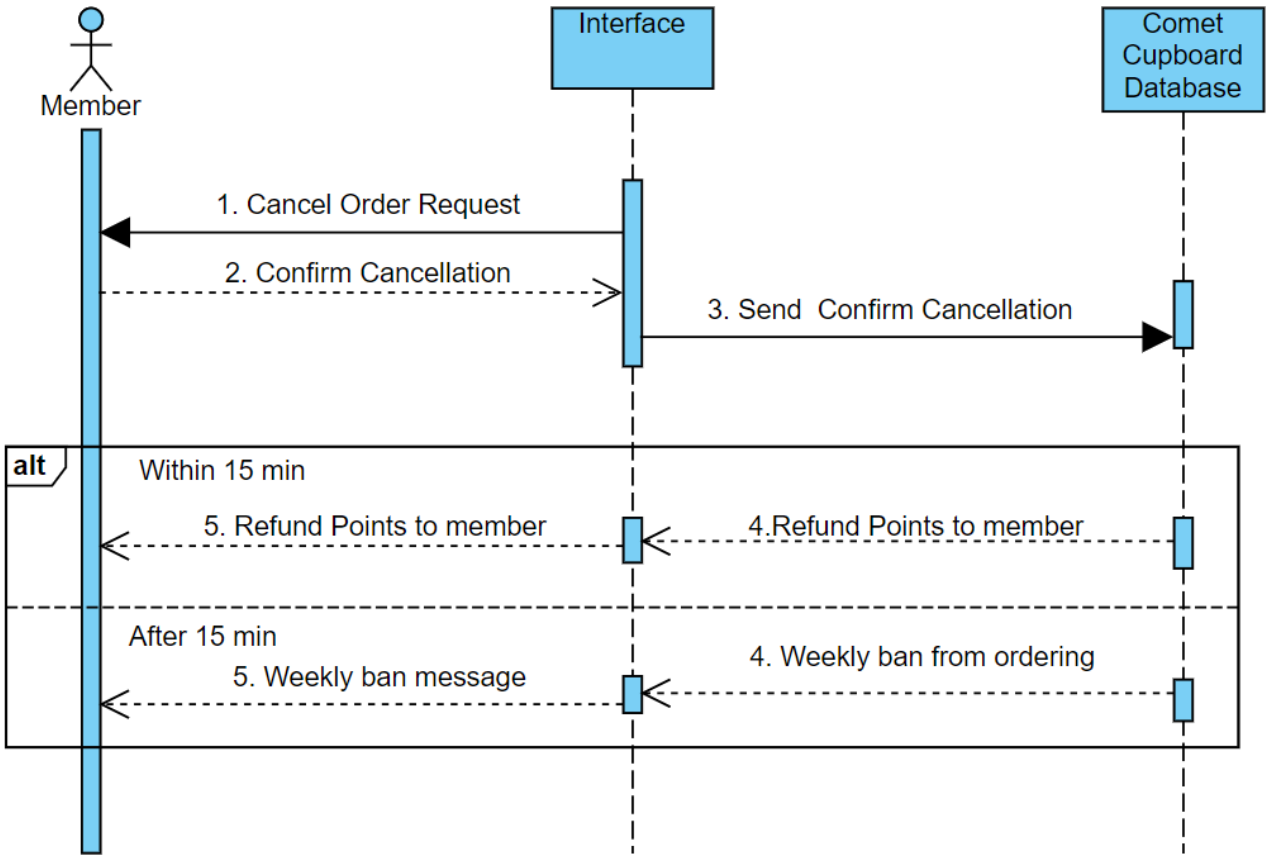
A. Placing an Order



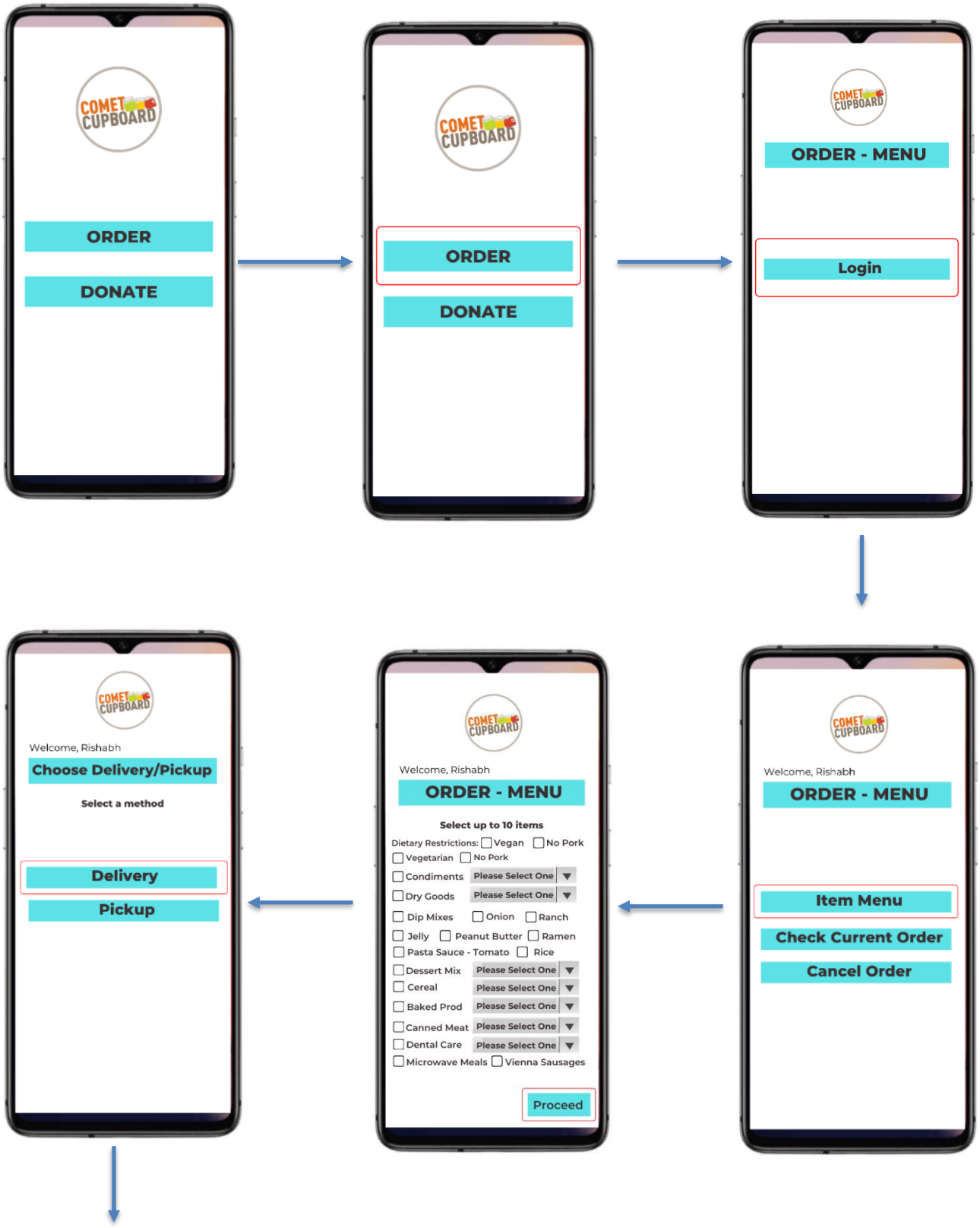
B. Donate Items

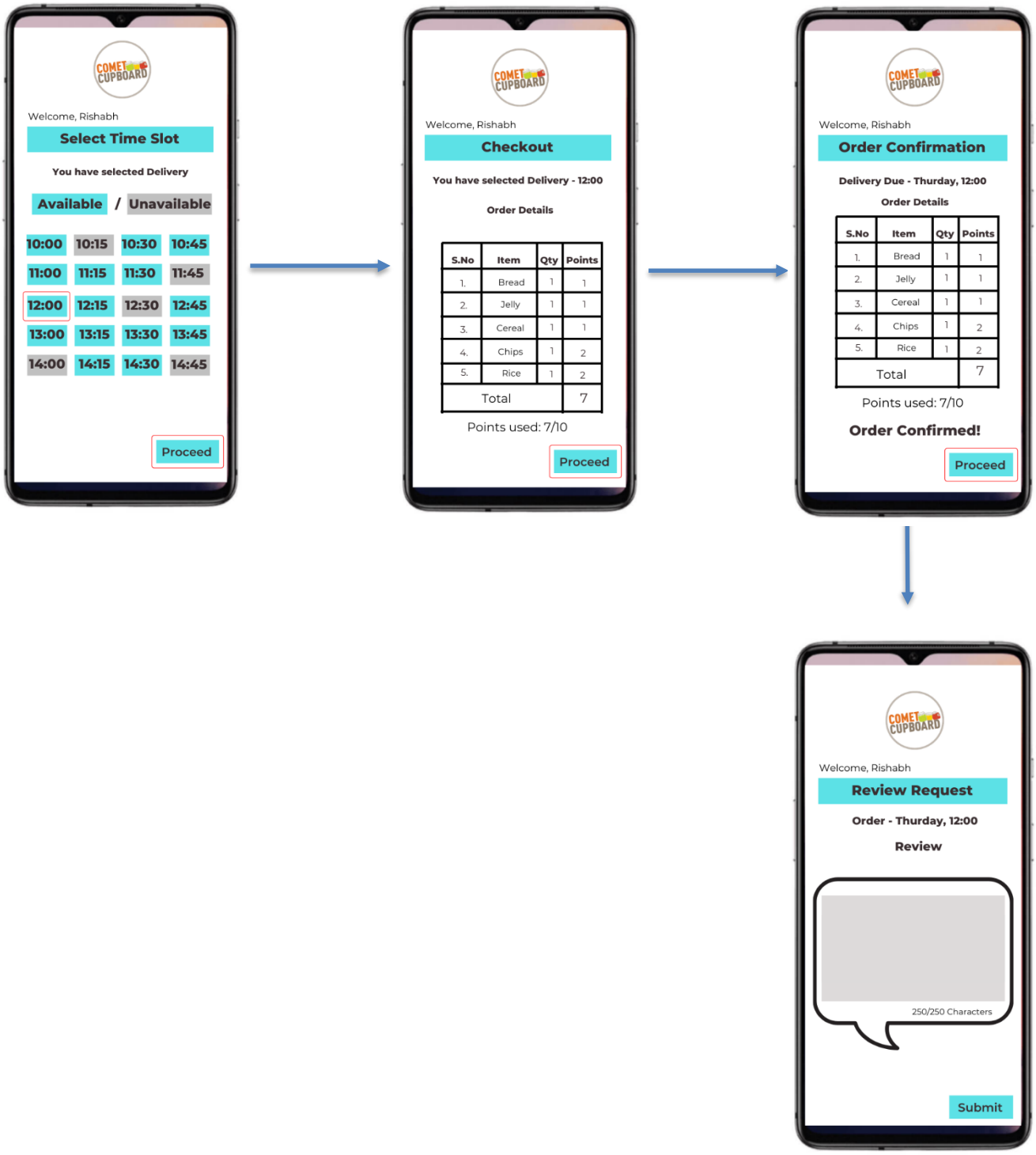


C. Order Cancellation

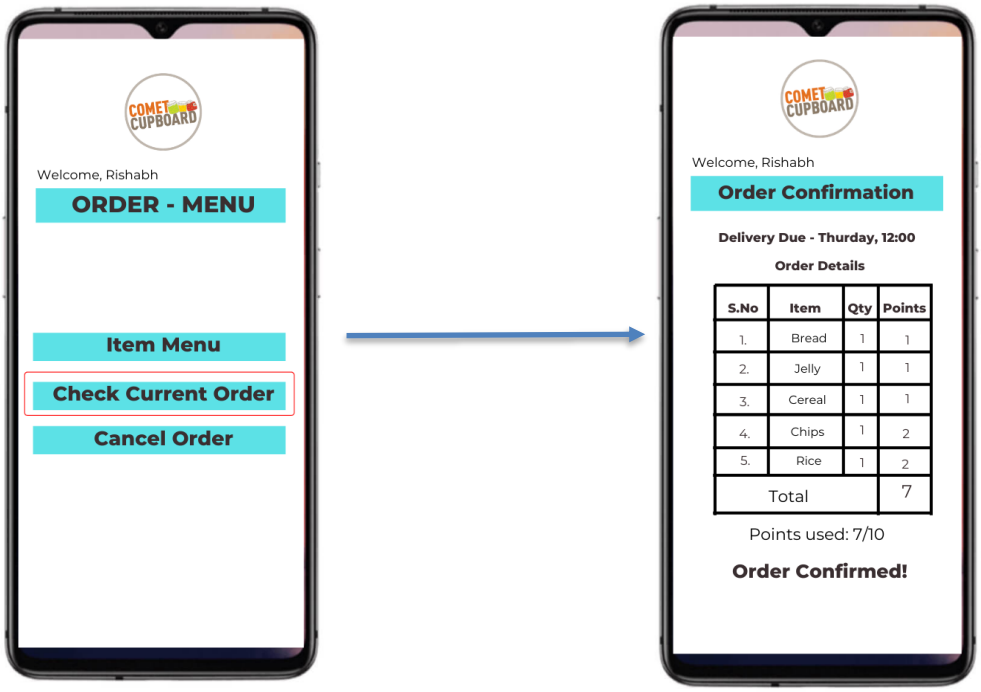


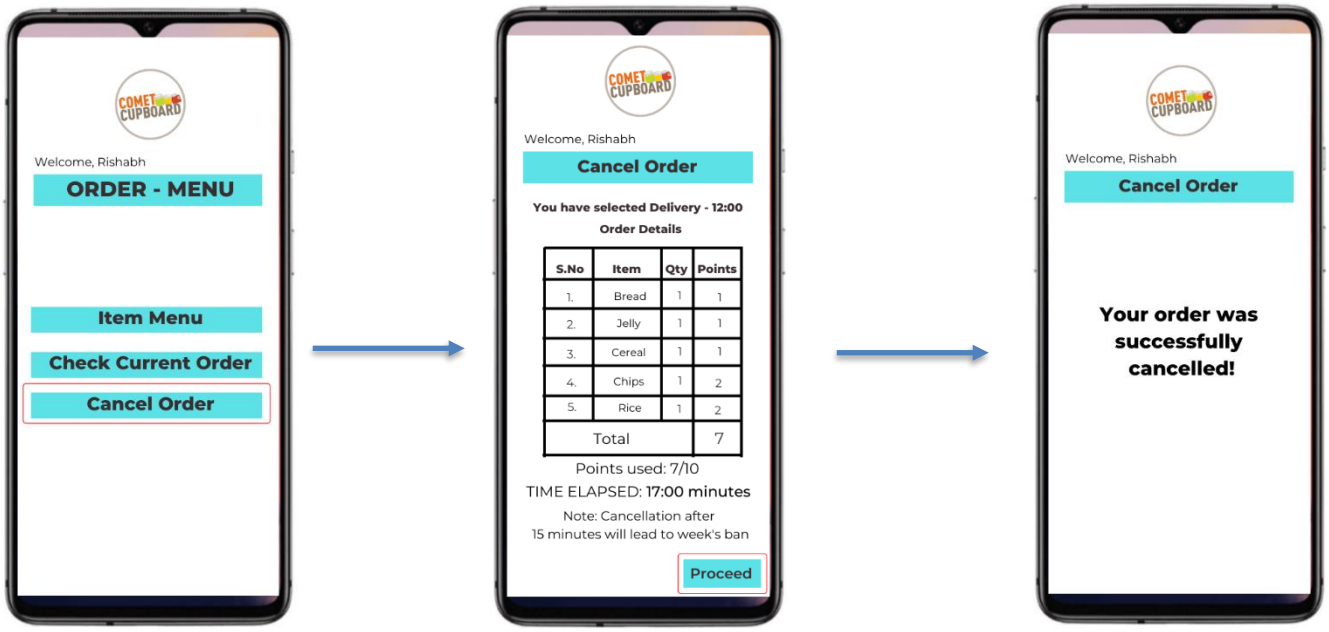
X. Interface Designs




COMET CUPBOARD
Welcome, Rishabh
Select Time Slot
You have selected Delivery
Available / Unavailable
10:00 10:15 10:30 10:45
11:00 11:15 11:30 11:45
12:00 12:15 12:30 12:45
13:00 13:15 13:30 13:45
14:00 14:15 14:30 14:45
Proceed
Welcome, Rishabh
Checkout
You have selected Delivery - 12:00
Order Details
S.No Item Qty Points
1. Bread 1 1
2. Jelly 1 1
3. Cereal 1 1
4. Chips 1 2
5. Rice 1 2
Total 7
Points used: 7/10
Proceed
Welcome, Rishabh
Order Confirmation
Delivery Due - Thurday, 12:00
Order Details
S.No Item Qty Points
1. Bread 1 1
2. Jelly 1 1
3. Cereal 1 1
4. Chips 1 2
5. Rice 1 2
Total 7
Points used: 7/10
Order Confirmed!
Proceed
Welcome, Rishabh
Review Request
Order - Thurday, 12:00
Review
250/250 Characters
Submit


COMET CUPBOARD
ORDER
DONATE
Donate - Guest Login
First Name:
Last Name:
NetID
Email
SUBMIT
Welcome, Rishabh
Donate
Item Name
Item Type
Item Description
Add Item
Proceed
Welcome, Rishabh
Select Time Slot
When will you drop off the donation?
Available / Unavailable
10:00 10:15 10:30 10:45
11:00 11:15 11:30 11:45
12:00 12:15 12:30 12:45
13:00 13:15 13:30 13:45
14:00 14:15 14:30 14:45
Proceed
Welcome, Rishabh
Checkout
You have selected DropOff - 12:00
Order Details
S.No Item Qty
1. Bread 1
2. Jelly 2
3. Cereal 1
4. Chips 2
5. Rice 2
Total 8
Total Items being donated: 8/10
Proceed
Welcome, Rishabh
Doanation Confirmation
DDrop off Due - Thurday, 12:00
Order Details
S.No Item Qty
1. Bread 1
2. Jelly 2
3. Cereal 1
4. Chips 2
5. Rice 2
Total 8
Total Items being donated: 8/10
Donation Confirmed!


Welcome, Rishabh
ORDER - MENU
Item Menu
Check Current Order
Cancel Order
Welcome, Rishabh
Order Confirmation
Delivery Due - Thurday, 12:00
Order Details
S.No | Item | Qty | Points
1. | Bread | 1 | 1
2. | Jelly | 1 | 1
3. | Cereal | 1 | 1
4. | Chips | 1 | 2
5. | Rice | 1 | 2
Total | 7
Points used: 7/10
Order Confirmed!


Welcome, Rishabh
ORDER - MENU
Item Menu
Check Current Order
Cancel Order
Welcome, Rishabh
Cancel Order
You have selected Delivery - 12:00
Order Details
S.No | Item | Qty | Points
1. | Bread | 1 | 1
2. | Jelly | 1 | 1
3. | Cereal | 1 | 1
4. | Chips | 1 | 2
5. | Rice | 1 | 2
Total | 7
Points used: 7/10
TIME ELAPSED: 17:00 minutes
Note: Cancellation after
15 minutes will lead to week's ban
Proceed
Welcome, Rishabh
Cancel Order
Your order was successfully cancelled!

XI. Database Design

1. User Table (NetID, FirstName, LastName, Phone, EmailAddress)

   Constraints:

   - Primary Key ‘NetID’ should be unique and NOT NULL.
   - Attribute ‘FirstName’ and ‘Email Address’ should be NOT NULL.
   - Attribute ‘EmailAddress‘ should be unique.

2. Comet Cupboard Table (Location, Address, Timings, Contact, Item Points)

   Constraints:

   - Location should be NOT NULL
   - Address should be NOT NULL
   - Item Points should be NOT NULL

3. Time Slot Table (SlotNo, NetID, SlotDate, SlotTime,)

   Constraints:

   - Primary Key ‘SlotNo’ should be unique and NOT NULL.
   - Attribute ‘NetID’ should be NOT NULL and should exist in the User Table (Referential Integrity Constraint)

4. Item Table (ItemID, *NetID*, ItemName, ItemType, ItemDesc, ItemPoints)

   Constraints:

   - Primary Key ‘ItemID’ should be NOT NULL and unique.
   - Attribute ‘NetID’ should be NOT NULL and should exist in the User Table. (Referential Integrity Constraint)
   - ItemName and ItemPoints should be NOT NULL.

5. Order Table (OrderID, *NetID*, OrderDetails, OrderDate, OrderTime, OrderType, Review)
   Constraints:

   - Primary Key ‘OrderID’ should be unique and NOT NULL.
   - Attribute ‘NetID’ should be NOT NULL and should exist in the User Table. (Referential Integrity Constraint)
   - OrderType should be NOT NULL.

6. Checkout Table (Checkout_Date, Checkout_Time, *NetID,* User_Fname, User_Lname, User_Email, User_Phone)
   Constraints:

   - Composite primary key which includes ‘NetID’, ‘CheckoutDate’ and ‘CheckoutTime’ should be unique and NOT NULL.
   - Attribute ‘User_Fname’ should be NOT NULL.
   - Attribute ‘NetID’ should be NOT NULL and should exist in the User Table.(Referential Integrity Constraint)

7. Donate Table (ItemName, ItemType, ItemDesc)
   Constraints:

   - ItemName should be NOT NULL.
   - ItemType should be NOT NULL.
   - ItemDesc should be NOT NULL.

XII. Software Design

1. Signature

Method Name: Login()	Class Name: User
Clients (Consumers): Registered Member	
Associated Use Cases: Placing an order or Donate	
Description of Responsibilities: Login and validates the user in the system	
Arguments Received: NetID, password	
Type of Value Returned: Boolean	
Pre-Conditions: User should have a valid NetID	
Post-Conditions: User login success or failure	

Logic:

DISPLAY Login Screen
ACCEPT NetID, password
IF Registered Member
THEN
DISPLAY Login Successful
ELSE
DISPLAY Error message
ACCEPT credentials
PROCESS Login

2. **Signature**

Method Name: Get Item List	Class Name: Item
Clients (Consumers): Registered Member	
Associated Use Cases: Get Item List, Add Item to Cart	
Description of Responsibilities: Displays Item List and select items	
Arguments Received: ItemID	
Type of Value Returned: Boolean	
Pre-Conditions: User should be a registered member	
Post-Conditions: Cart cannot be empty	

Logic:

DISPLAY Available Item List
ACCEPT Item Details(Name, Type, Quantity, Points)
PROCESS Total Points of the Items selected
IF Total Points exceed the weekly limit
DISPLAY “Cannot add Item, Exceeds Balance”
ELSE
ACCEPT more items
ADD Items to cart
IF Item<=1
DISPLAY “Cart cannot be empty”
PROCESS Item List in Cart

3. **Signature**

Method Name: Order Type	Class Name: Order
Clients (Consumers): Registered Member	
Associated Use Cases: Select Order Type (Delivery/Pickup)	
Description of Responsibilities: Provide option between delivery and pickup	
Arguments Received: N/A	
Type of Value Returned: Boolean	
Pre-Conditions: Cart cannot be empty	
Post-Conditions: Order Type Selection should be made	

Logic:

DISPLAY " DELIVERY or PICKUP"
ACCEPT any one option.

4. **Signature**

Method Name: TimeSlot()	Class Name: TimeSlot
Clients (Consumers): Guest, Registered Member	
Associated Use Cases: Placing an order or donate	
Description of Responsibilities: Displays available timeslots (Each timeslot can be selected by only 4 users)	
Arguments Received: SlotID	
Type of Value Returned: Timeslot, Date & Time	
Pre-Conditions: Cart should not be empty; order type should be selected / Donate list should not be empty	
Post-Conditions: Order Details, timeslot, and Order type should be NOT NULL	

Logic:

DISPLAY available timeslots based on Order Type
ACCEPT Selected Time slot
PROCESS time slot selection for user/member (Maximum of 4 Users per Slot)
DISPLAY Checkout Information .

5. **Signature**

Method Name: Order()	Class Name: Order
Clients (Consumers): Registered Member	
Associated Use Cases: Placing an order	
Description of Responsibilities: Gives order confirmation	
Arguments Received: Order Details, time slot, and Order type	
Type of Value Returned: Order confirmation, text	
Pre-Conditions: User should have as many points available as the order	
Post-Conditions: Order Details, time slot, and Order type	

Logic:

PROCESS Checkout Information
DISPLAY Order Confirmation Message.

6. **Signature**

Method Name: OrderCancellation()	Class Name: Order
Clients: Registered Member (User who has received order confirmation)	
Associated Use Cases: Cancelling order, Calculate points	
Description of Responsibilities: Cancels confirmed order	
Arguments Received: Order Details, time slot, and Order type	
Type of Value Returned: Confirmed, text	
Pre-Conditions: Registered member should have received the order confirmation	
Post-Conditions: Updating of member points/week	

Logic:

IF Member clicks on Cancel Order button
  Check for 15 min criteria
IF Order is canceled within 15 Min
  Refund the order points
 Cancel the Order
ELSE
  Weekly ban from ordering
  Cancel the Order

7. **Signature**

Method Name: Donate()	Class Name: Donate
Clients (Consumers): Guest / Registered Member	
Associated Use Cases: Donate, Login	
Description of Responsibilities: Allows to donate to comet cupboard	
Arguments Received: User first name, user last name, NetID, phone, email	
Type of Value Returned: Boolean	
Pre-Conditions: N/A	
Post-Conditions: Donate List cannot be empty	

Logic:

DISPLAY DONATE button
DISPLAY Select Login/Guest User
IF User selects Login
ACCEPT credentials and got to LOGIN gateway
ELSE ACCEPT Guest Details
ADD Items Details to Donate (Item>=1)
SELECT Time slot for Donation
RECEIVE Order Confirmation

XIII. Minutes of Meeting

Project Activities/discussed topics:	Planned Date/ Meeting:	Execution Date/ Week:	Attendees and task allocation:	Meeting summary:	Next action/ meeting date:
Exchange email and phone number	June 12th	June 12th	Aratrika Sanyal & Rishabh Bhatia	Contact information exchanged	June 13th
Get to know the team and have a discussion on project deliverables, Project requirements to select a system to work on.	June 13th	June 13th	Aratrika Sanyal & Rishabh Bhatia	Discussion on project requirements- Scope, Mobility	June 16th
Project Idea brain storming Discussed 4 broad ideas	June 16th	June 16th	Aratrika Sanyal & Rishabh Bhatia	Discussion on different ideas with their proposed improvements. Deciding whether to improve on a system or create a new system	June 20th
Project idea finalized	June 20th	June 20th	Aratrika Sanyal & Rishabh Bhatia	Finalized on Comet Cupboard system, detailed discussion on creation of a system. How to start + what tools we require	June 25th
Flow of project discussed. System flow, scope and business requirements	June 25th	June 25th	Aratrika Sanyal & Rishabh Bhatia	Discussed and noted down the flow, problem statement, elaborated scope of our project and documented business and functional requirements, objectives	June 30th
Documentation – Overview, Problem Statement, Business Needs		June 30th	Rishabh Bhatia	Completed documentation - Overview, Problem Statement, Business Needs	
Business Process Model Notation	June 30th	June 30th	Discussion: Aratrika Sanyal & Rishabh Bhatia Task Executed	Discussed the creation of a visual representation of a complex business practice or process flow. Post discussion task	July 4th

			by: Aratrika Sanyal	executed by Aratrika Sanyal	
System Context Diagram	July 4th	July 4th	Discussion: Aratrika Sanyal & Rishabh Bhatia Task Executed by: Rishabh Bhatia	Discussed the highest level in a data flow diagram that contains only one process, representing the entire system to establishes the context and boundaries of the system to be modeled. Post discussion task executed by Rishabh Bhatia	July 9th
Use Case diagram	July 9th	July 9th	Discussion: Aratrika Sanyal & Rishabh Bhatia Task Executed by: Aratrika Sanyal	Summarized the details of the system and the users within that system. It is generally shown as a graphic depiction of interactions among different elements in a system. Post discussion task executed by Aratrika Sanyal	July 13th
Use Case Descriptions	July 13th	July 13th	Discussion: Aratrika Sanyal & Rishabh Bhatia Task Executed by: Aratrika Sanyal	Detailed descriptions of the summarized details of the system as shown in the use case diagram. Post discussion task executed by Aratrika Sanyal	July 19th

Data Dictionary	July 19th	July 19th	Discussion: Aratrika Sanyal & Rishabh Bhatia Task Executed by: Rishabh Bhatia	The data dictionary contains metadata/information about the attributes of the database. Discussed the parts of the data dictionary. Post discussion task executed by Aratrika Sanyal	July 25th
Class Diagrams	July 25th	July 25th	Discussion: Aratrika Sanyal & Rishabh Bhatia Task Executed by: Done together while on Zoom meeting	Discussed the structure diagram that completely describes the system's classes, their attributes, operations and the relationship among them	July 27th
Object Behavior Model – Sequence Diagram	July 27th	July 27th	Discussion: Aratrika Sanyal & Rishabh Bhatia Task Executed by: 1. Donate items – Aratrika Sanyal 2. Placing an order – Rishabh Bhatia 3. Order cancellation – Aratrika Sanyal	Discussed the sequence blow of the main three tasks of the system. The sequence diagram shows object interactions arranged in time sequence depicting the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario.	July 29th

Interface design		July 29th	Rishabh Bhatia	Constructed the front-end interface design for the entire mobile application depicting the flow of different tasks performed by the system	
Database design		July 29th	Aratrika Sanyal	Organized the data according to the database model. Determined what data is stored and how the data elements interrelate	July 31st
Software Design	July 31st	July 31st	Discussion: Aratrika Sanyal & Rishabh Bhatia Task Executed by: Done together while on Zoom meeting	Organized the methods, signature and logic for the software	August 1st
Project report documentation first complete draft	August 1st	August 1st	Compiled by Aratrika Sanyal & Rishabh Bhatia.	Each member put their parts into the document	August 2nd
Report Final draft	August 2nd	August 2nd	Final draft completed. All parts included	Team Members completed all parts of the report	August 3rd
Final editing	August 3rd	August 3rd	Minor details checked and edits completed.	Team members went over the documentation repeatedly to check for minor errors, alignment issues, etc	

XIV. References

[1] https://www.goodelearning.com/courses/business-process/bpmn-training/what-is-bpmn

[2] https://online.visual-paradigm.com/knowledge/system-context-diagram/what-is-system-context-diagram/

[3] https://whatis.techtarget.com/definition/use-case-diagram

[4] https://online.visual-paradigm.com/diagrams/features/uml-tool/ - Used for all diagrams