PROGRESS REPORT 3
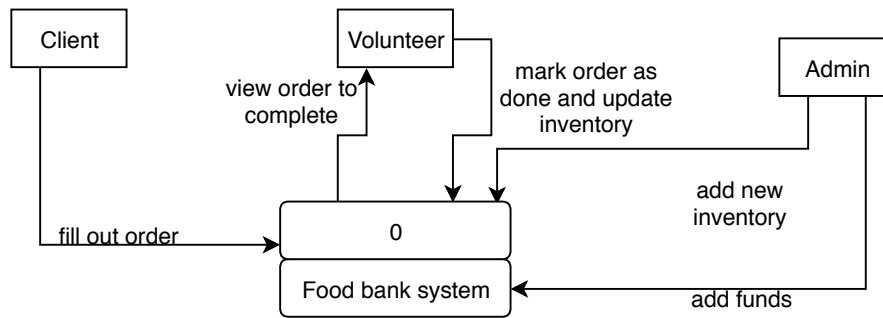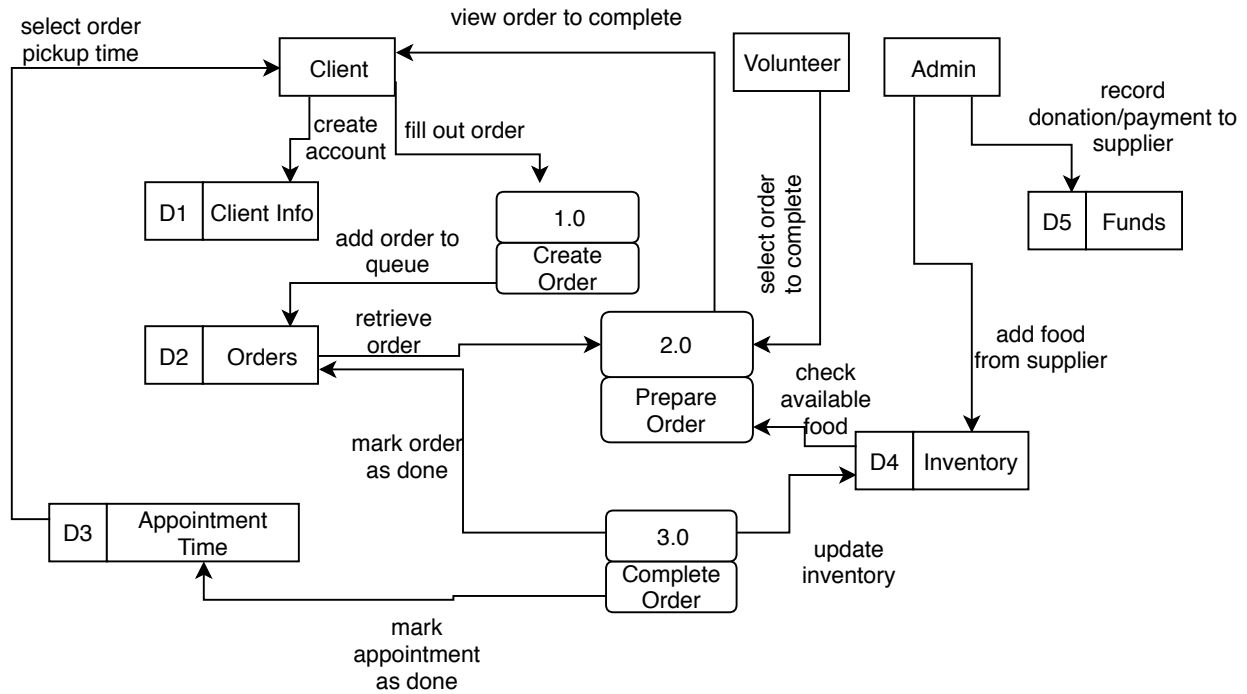
Functional Design (HIPO diagram, SQL queries and DFD diagrams)

Rahmanta Satriana 30044533
Xin Yan Xie 10160975
Alan Fung 10083599
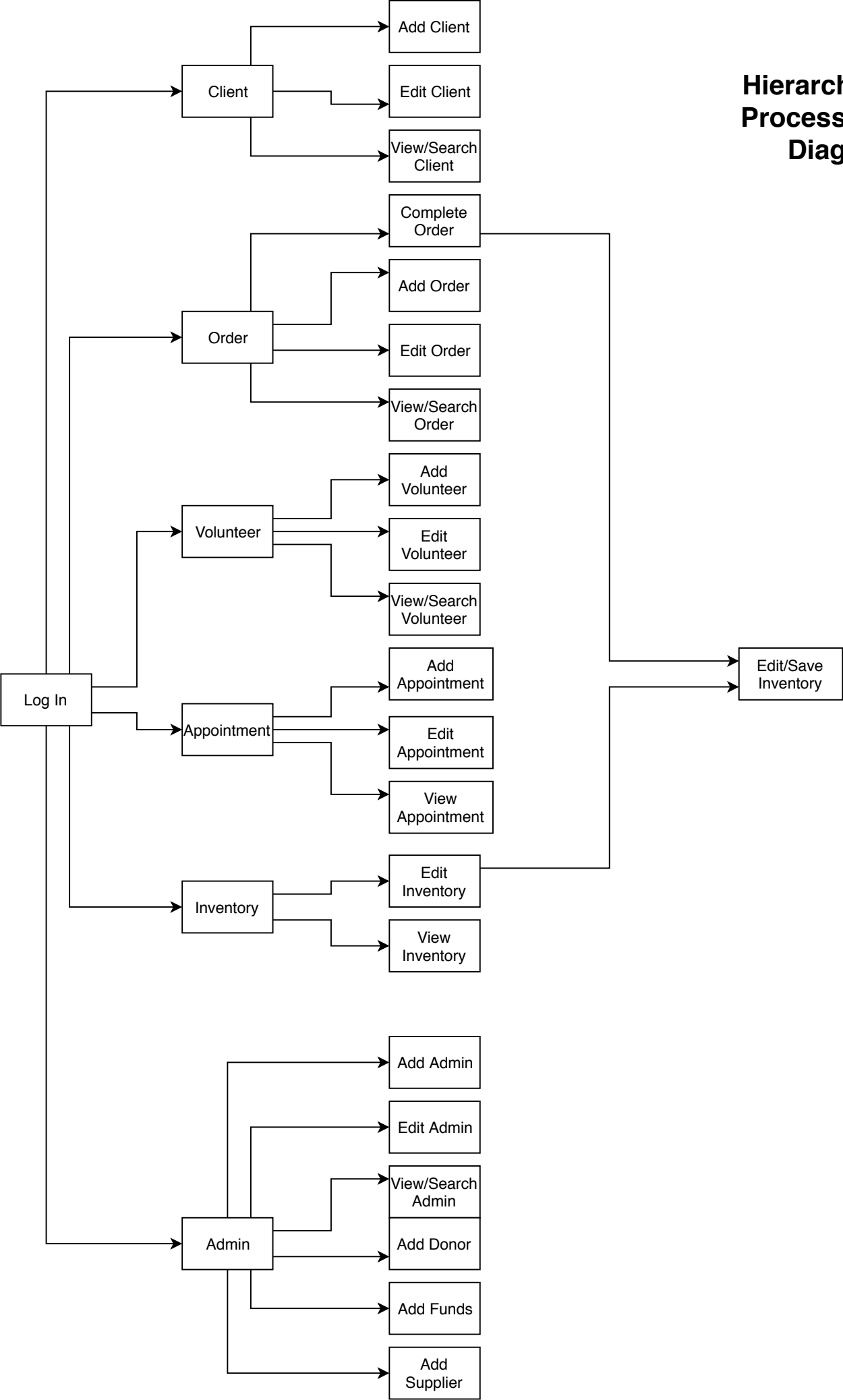
Context Diagram

Client

Volunteer

Admin

view order to
complete

mark order as
done and update
inventory

add new
inventory

fill out order

0

Food bank system

add funds

Level-0 Data Flow Diagram

select order
pickup time

Client

view order to complete

Volunteer

Admin

record
donation/payment to
supplier

create
account

fill out order

select order
to complete

D1 | Client Info

1.0

Create
Order

add order to
queue

D5 | Funds

D2 | Orders

retrieve
order

2.0

Prepare
Order

check
available
food

add food
from supplier

D4 | Inventory

mark order
as done

D3 | Appointment Time

3.0

Complete
Order

update
inventory

mark
appointment
as done

*The actions around adding volunteers/admins were
left out for clarity*

Hierarchy Input Process Output Diagram

- Log In
  - Client
    - Add Client
    - Edit Client
    - View/Search Client
  - Order
    - Complete Order
    - Add Order
    - Edit Order
    - View/Search Order
  - Volunteer
    - Add Volunteer
    - Edit Volunteer
    - View/Search Volunteer
  - Appointment
    - Add Appointment
    - Edit Appointment
    - View Appointment
  - Inventory
    - Edit Inventory
    - View Inventory
  - Admin
    - Add Admin
    - Edit Admin
    - View/Search Admin
    - Add Donor
    - Add Funds
    - Add Supplier

- Complete Order → Edit/Save Inventory
- Edit Inventory → Edit/Save Inventory

Xin Yan Xie   Rahmanta Satriana   Alan Fung
10160975   30044533   10083599

HIPO Pseudo Queries

Function: Add Client
Inputs: @ID, @Name, @Income
Outputs: None
Pseudocode:
Connect to the database
Query = INSERT INTO Client(@ID, @Name, @Income);
Parse Query
Execute Query
Close connection to the database

Function: Edit Client
Inputs: @ID, @Name, @Income
Outputs: None
Pseudocode:
Connect to the database
Query = UPDATE Client
        SET (Name = @Name, Income = @Income)
        WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Function: View/Search Client
Inputs: @ID
Outputs: ID, Name, Income
Pseudocode:
Connect to the database
Query = SELECT *
        FROM Client
        WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Xin Yan Xie   Rahmanta Satriana   Alan Fung

10160975   30044533   10083599

Function: Complete Order

Inputs: @ID, @Picked Up

Outputs: None

Pseudocode:

Connect to the database

Query = UPDATE RequestForm

       SET (Picked Up = @Picked Up)

       WHERE (ID = @ID);

Parse Query

Execute Query

Close connection to the database

Function: Add Order

Inputs: @ID, @Priority Level, @No. of Calories, @Volunteer ID, @Client ID, @Picked Up

Outputs: None

Pseudocode:

Connect to the database

Query = INSERT INTO RequestForm(@ID, @Priority Level, @No. of Calories, @Volunteer ID, @Client ID,

       @Picked Up);

Parse Query

Execute Query

Close connection to the database

Function: Edit Order

Inputs: @ID, @Priority Level, @No. of Calories, @Volunteer ID, @Client ID, @Picked Up

Outputs: None

Pseudocode:

Connect to the database

Query = UPDATE RequestForm

       SET (Priority Level = @Priority Level, No. of Calories = @No. of Calories, Volunteer ID =

       @Volunteer ID, Client ID = @Client ID, Picked Up = @Picked Up)

       WHERE (ID = @ID);

Parse Query

Execute Query

Close connection to the database

Xin Yan Xie   Rahmanta Satriana   Alan Fung
10160975   30044533   10083599

Function: View/Search Order
Inputs: @ID
Outputs: ID, Priority Level, No. of Calories, Volunteer ID, Client ID, Picked Up
Pseudocode:
Connect to the database
Query = SELECT *
     FROM RequestForm
     WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Function: Add Volunteer
Inputs: @ID, @Name, @Phone Number, @Availability, @Manager ID
Outputs: None
Pseudocode:
Connect to the database
Query = INSERT INTO Volunteer(@ID, @Name, @Phone Number, @Availability, @Manager ID);
Parse Query
Execute Query
Close connection to the database

Function: Edit Volunteer
Inputs: @ID, @Name, @Phone Number, @Availability, @Manager ID
Outputs: None
Pseudocode:
Connect to the database
Query = UPDATE Volunteer
     SET (Name = @Name, Phone Number = @Phone Number, Availibility = @Availability,
     Manager ID = @Manager ID)
     WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Xin Yan Xie   Rahmanta Satriana   Alan Fung
10160975   30044533   10083599

Function: View/Search Volunteer
Inputs: @ID
Outputs: ID, Name, Phone Number, Availability, Manager ID
Pseudocode:
Connect to the database
Query = SELECT *
        FROM Volunteer
        WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Function: Add Appointment
Inputs: @ID, @Time, @Volunteer ID, @Client ID
Outputs: None
Pseudocode:
Connect to the database
Query = INSERT INTO Appointment(@ID, @Time, @Volunteer ID, @Client ID);
Parse Query
Execute Query
Close connection to the database

Function: Edit Appointment
Inputs: @ID, @Time, @Volunteer ID, @Client ID
Outputs: None
Pseudocode:
Connect to the database
Query = UPDATE Client
        SET (Time = @Time, Volunteer ID = @Volunteer ID, Client ID = @Client ID)
        WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Xin Yan Xie   Rahmanta Satriana   Alan Fung
10160975   30044533   10083599

Function: View Appointment
Inputs: @ID
Outputs: ID, Time, Volunteer ID, Client ID
Pseudocode:
Connect to the database
Query = SELECT *
      FROM Appointment
      WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Function: Edit Inventory
Inputs: @Barcode, @Name, @Quantity, @Expiry Date, @Nutritional Value
Outputs: None
Pseudocode:
Connect to the database
Query = UPDATE Food
      SET (Name = @Name, Quantity @Quantity, Expiry Date = @Expiry Date, Nutritional Value =
      @Nutritional Value)
      WHERE (Barcode = @ Barcode);
Parse Query
Execute Query
Close connection to the database

Function: Edit/Save Inventory
Inputs: @Barcode, @Quantity
Outputs: None
Pseudocode:
Connect to the database
Query = UPDATE Food
      SET (Quantity = @Quantity)
      WHERE (Barcode = @ Barcode);
Parse Query
Execute Query
Close connection to the database

Xin Yan Xie   Rahmanta Satriana   Alan Fung
10160975   30044533   10083599

Function: View Inventory
Inputs: @Barcode
Outputs: Barcode, Name, Quantity, Expiry Date, Nutritional Value
Pseudocode:
Connect to the database
Query = SELECT *
   FROM Food
   WHERE (Barcode = @ Barcode);
Parse Query
Execute Query
Close connection to the database

Function: Add Admin
Inputs: @ID, @Name, @Phone Number
Outputs: None
Pseudocode:
Connect to the database
Query = INSERT INTO Admin(@ID, @Name, @Phone Number);
Parse Query
Execute Query
Close connection to the database

Function: Edit Admin
Inputs: @ID, @Name, @Phone Number
Outputs: None
Pseudocode:
Connect to the database
Query = UPDATE Admin
   SET (Name = @Name, Phone Number = @ Phone Number)
   WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Xin Yan Xie   Rahmanta Satriana   Alan Fung

10160975   30044533   10083599

Function: View/Search Admin
Inputs: @ID
Outputs: ID, Name, Phone Number
Pseudocode:
Connect to the database
Query = SELECT *
        FROM Admin
        WHERE (ID = @ID);
Parse Query
Execute Query
Close connection to the database

Function: Add Donor
Inputs: @ID, @Name, @Phone Number, @Email
Outputs: None
Pseudocode:
Connect to the database
Query = INSERT INTO Donor(@ID, @Name, @Phone Number, @Email);
Parse Query
Execute Query
Close connection to the database

Function: Add Funds
Inputs: @Address, @Funds
Outputs: None
Pseudocode:
Connect to the database
Query = UPDATE FoodBank
        SET (Funds = Funds + @Funds)
        WHERE (Address = @Address);
Parse Query
Execute Query
Close connection to the database

Xin Yan Xie
10160975

Rahmanta Satriana
30044533

Alan Fung
10083599

Function: Add Supplier
Inputs: @Name, @Phone Number, @Email
Outputs: None
Pseudocode:
Connect to the database
Query = INSERT INTO Supplier(@Name, @Phone Number, @Email);
Parse Query
Execute Query
Close connection to the database