Software Design Specification
for
Online Store-House Booking System

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Table of Contents

Purpose

Nowadays, the small businesses and start-ups are growing at a large scale. But the capacity, space is a major concern in this kind of businesses. They need to store their necessary products somewhere else. But going to store by store without knowing the capacity and other information regarding the store-house is a problem for the businessman. Moreover, many store owners can’t get enough customers by traditional methods. Our purpose is to create an app that can solve this problem by connecting the store owners and the businessmen. Basically, we are building this application focusing all kind of criteria regarding this scenario. We are also building this application on the basis of users’ requirements.

Architectural design

The software basically has 2 components. The frontend UI for both admins and end users, and the database that only admins will see and interact with.

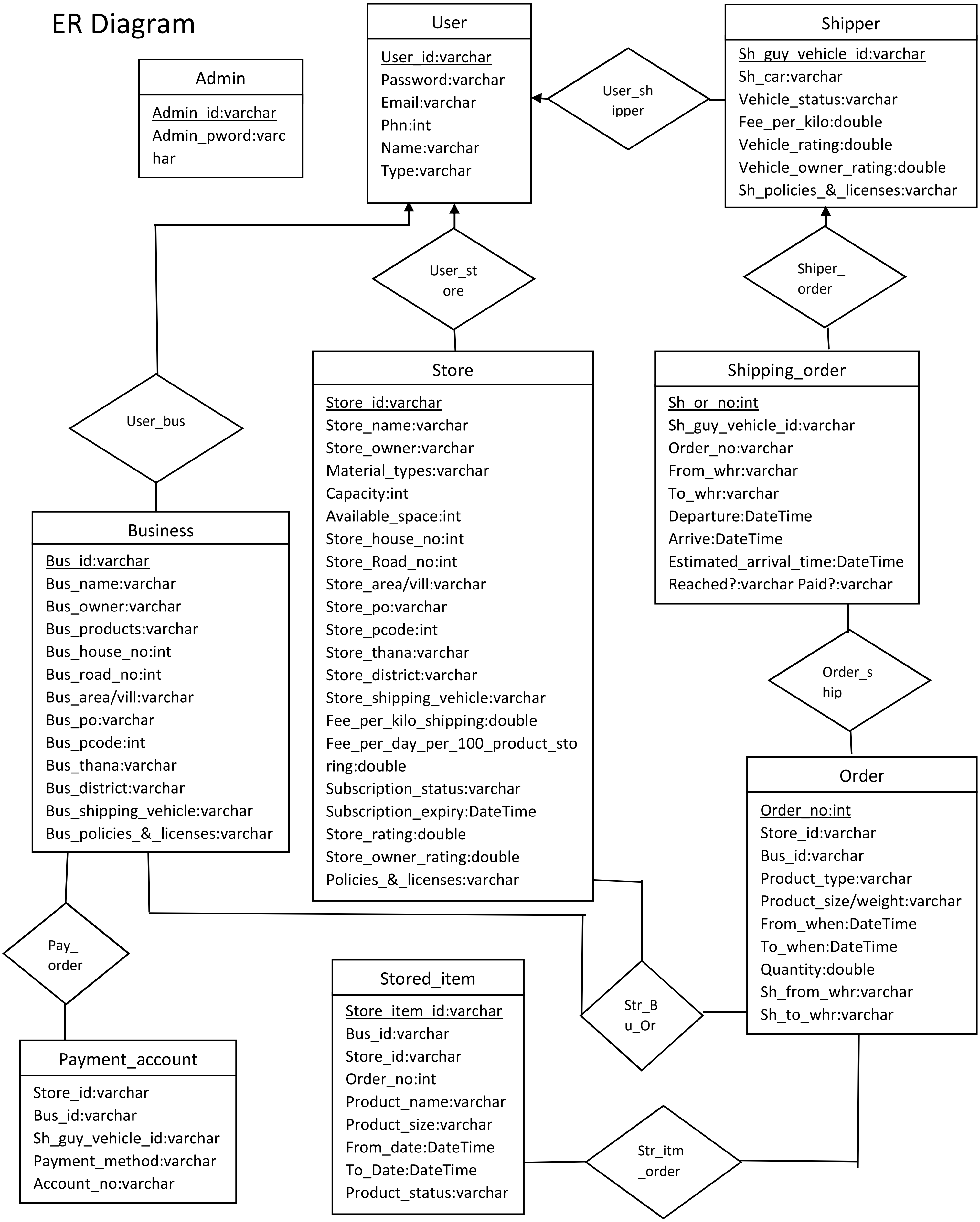
Architectural pattern

The application will be developed in the MVC architectural style. There are three main components to it

- Model component, which manages the data
- View component, which determines how the data is presented
- Controller component, that manages the both model and view components.

The purpose of using MVC is to separate the user interface from the logic so that it is easier to handle and this makes it more flexible to alter data or its representation. Hence being an easy option for applications.

ER Diagram



Admin

- Admin_id:varchar
- Admin_pword:varchar

User

- User_id:varchar
- Password:varchar
- Email:varchar
- Phn:int
- Name:varchar
- Type:varchar

Shipper

- Sh_guy_vehicle_id:varchar
- Sh_car:varchar
- Vehicle_status:varchar
- Fee_per_kilo:double
- Vehicle_rating:double
- Vehicle_owner_rating:double
- Sh_policies_&_licenses:varchar

Store

- Store_id:varchar
- Store_name:varchar
- Store_owner:varchar
- Material_types:varchar
- Capacity:int
- Available_space:int
- Store_house_no:int
- Store_Road_no:int
- Store_area/vill:varchar
- Store_po:varchar
- Store_pcode:int
- Store_thana:varchar
- Store_district:varchar
- Store_shipping_vehicle:varchar
- Fee_per_kilo_shipping:double
- Fee_per_day_per_100_product_storing:double
- Subscription_status:varchar
- Subscription_expiry:DateTime
- Store_rating:double
- Store_owner_rating:double
- Policies_&_licenses:varchar

Shipping_order

- Sh_or_no:int
- Sh_guy_vehicle_id:varchar
- Order_no:varchar
- From_whr:varchar
- To_whr:varchar
- Departure:DateTime
- Arrive:DateTime
- Estimated_arrival_time:DateTime
- Reached?:varchar Paid?:varchar

Business

- Bus_id:varchar
- Bus_name:varchar
- Bus_owner:varchar
- Bus_products:varchar
- Bus_house_no:int
- Bus_road_no:int
- Bus_area/vill:varchar
- Bus_po:varchar
- Bus_pcode:int
- Bus_thana:varchar
- Bus_district:varchar
- Bus_shipping_vehicle:varchar
- Bus_policies_&_licenses:varchar

Order

- Order_no:int
- Store_id:varchar
- Bus_id:varchar
- Product_type:varchar
- Product_size/weight:varchar
- From_when:DateTime
- To_when:DateTime
- Quantity:double
- Sh_from_whr:varchar
- Sh_to_whr:varchar

Stored_item

- Store_item_id:varchar
- Bus_id:varchar
- Store_id:varchar
- Order_no:int
- Product_name:varchar
- Product_size:varchar
- From_date:DateTime
- To_Date:DateTime
- Product_status:varchar

Payment_account

- Store_id:varchar
- Bus_id:varchar
- Sh_guy_vehicle_id:varchar
- Payment_method:varchar
- Account_no:varchar

Database Schema

Admin(Admin_id:varchar, Admin_pword:varchar)

User(User_id:varchar, Password:varchar, Email:varchar, Phn:int, Name:varchar, Type:varchar)

User_bus(User_id:varchar, Bus_id:varchar)

Business(Bus_id:varchar, Bus_name:varchar, Bus_owner:varchar, Bus_products:varchar, Bus_house_no:int, Bus_road_no:int, Bus_area/vill:varchar, Bus_po:varchar, Bus_pcode:int, Bus_thana:varchar, Bus_district:varchar, Bus_shipping_vehicle:varchar, Bus_policies_&_licenses:varchar)

User_store(User_id:varchar, Store_id:varchar)

Store(Store_id:varchar, Store_name:varchar, Store_owner:varchar, Material_types:varchar, Capacity:int, Available_space:int, Store_house_no:int, Store_Road_no:int, Store_area/vill:varchar, Store_po:varchar, Store_pcode:int, Store_thana:varchar, Store_district:varchar, Store_shipping_vehicle:varchar, Fee_per_kilo_shipping:double, Fee_per_day_per_100_product_storing:double, Subscription_status:varchar, Subscription_expiry:DateTime, Store_rating:double, Store_owner_rating:double, Policies_&_licenses:varchar)

User_shipper(User_id:varchar, Sh_guy_vehicle_id:varchar)

Shipper(Sh_guy_vehicle_id:varchar, Sh_car:varchar, Vehicle_status:varchar, Fee_per_kilo:double, Vehicle_rating:double, Vehicle_owner_rating:double, Sh_policies_&_licenses:varchar)

Order(Order_no:int, Store_id:varchar, Bus_id:varchar, Product_type:varchar, Product_size/weight:varchar, From_when:DateTime, To_when:DateTime, Quantity:double, Sh_from_whr:varchar, Sh_to_whr:varchar)

Shipping_order(Sh_or_no:int, Sh_guy_vehicle_id:varchar, Order_no:varchar, From_whr:varchar, To_whr:varchar, Departure:DateTime, Arrive:DateTime, Estimated_arrival_time:DateTime, Reached?:varchar, Paid?:varchar)

Payment_account(Store_id:varchar, Bus_id:varchar, Sh_guy_vehicle_id:varchar, Payment_method:varchar, Account_no:varchar)

Stored_item(Store_item_id:varchar, Bus_id:varchar, Store_id:varchar, Order_no:int, Product_name:varchar, Product_size:varchar, From_date:DateTime, To_Date:DateTime, Product_status:varchar)

Pay_order(Store_id:varchar, Bus_id:varchar, Sh_guy_vehicle_id:varchar, Payment_method:varchar, Account_no:varchar)

Shipper_order(Sh_guy_vehicle_id:varchar, Sh_or_no:int)

Order_ship(Sh_or_no:int, Order_no:int)

Str_Bu_Or(Order_no:int, Bus_id:varchar, Store_id:varchar)

Str_itm_order(Store_item_id:varchar, Order_no:int)

Use Case Diagram:

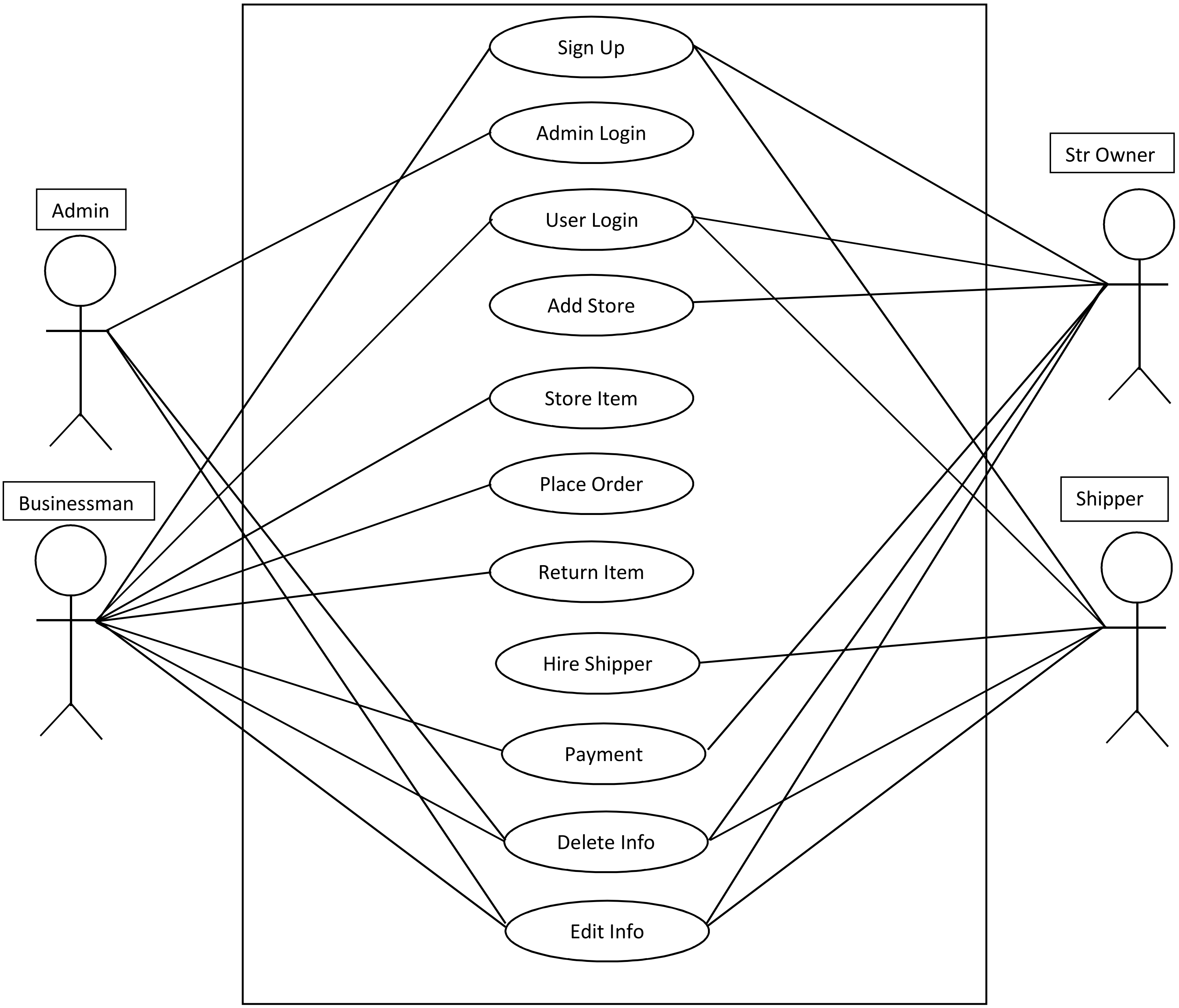


Figure: Use Case Diagram

Admin Login use case scenario:

1. Input User ID and password.

2. Check user id and password (user authentication).

3. Save id and password.

4. Remember password.

5. Admin will have full control over every information. Admin can modify or delete any information.

Login use case scenario:

1. Input User ID and password.

2. Check user id and password (user authentication).

3. Save id and password.

4. Remember password.

Sign Up use case scenario:

1. Input user id, password, confirm password, name, address, date of birth.
2. Check user id unique or not.
3. Store new user account into the database.

Delete use case scenario:

1. The admin selects a ‘List User Accounts’ option.
2. The admin selects one user from the list, and then delete choose an option to delete that user account.
3. The system deletes the user the user account from the database.

Modify use case scenario:

1. Open user id, shipping status, Shipping guy status, name, address etc. for editing.
2. Add or reset the wanted field to change in desired way.
3. System modifies the database as given edit instruction.

Add-Store use case scenario:

1. Open ‘Add store’ option.
2. Add new store in the store list then enter.
3. The system adds new store in the database.

Store item use case scenario:

1. Open ‘Store item’ option.
2. Add new order to the store item task.

3. The system adds new order into the database.

Return item use case scenario:

1. Open ‘Return Item’ option.
2. Add new return item task and provide necessary instruction.
3. The system adds new task on the returning item list.

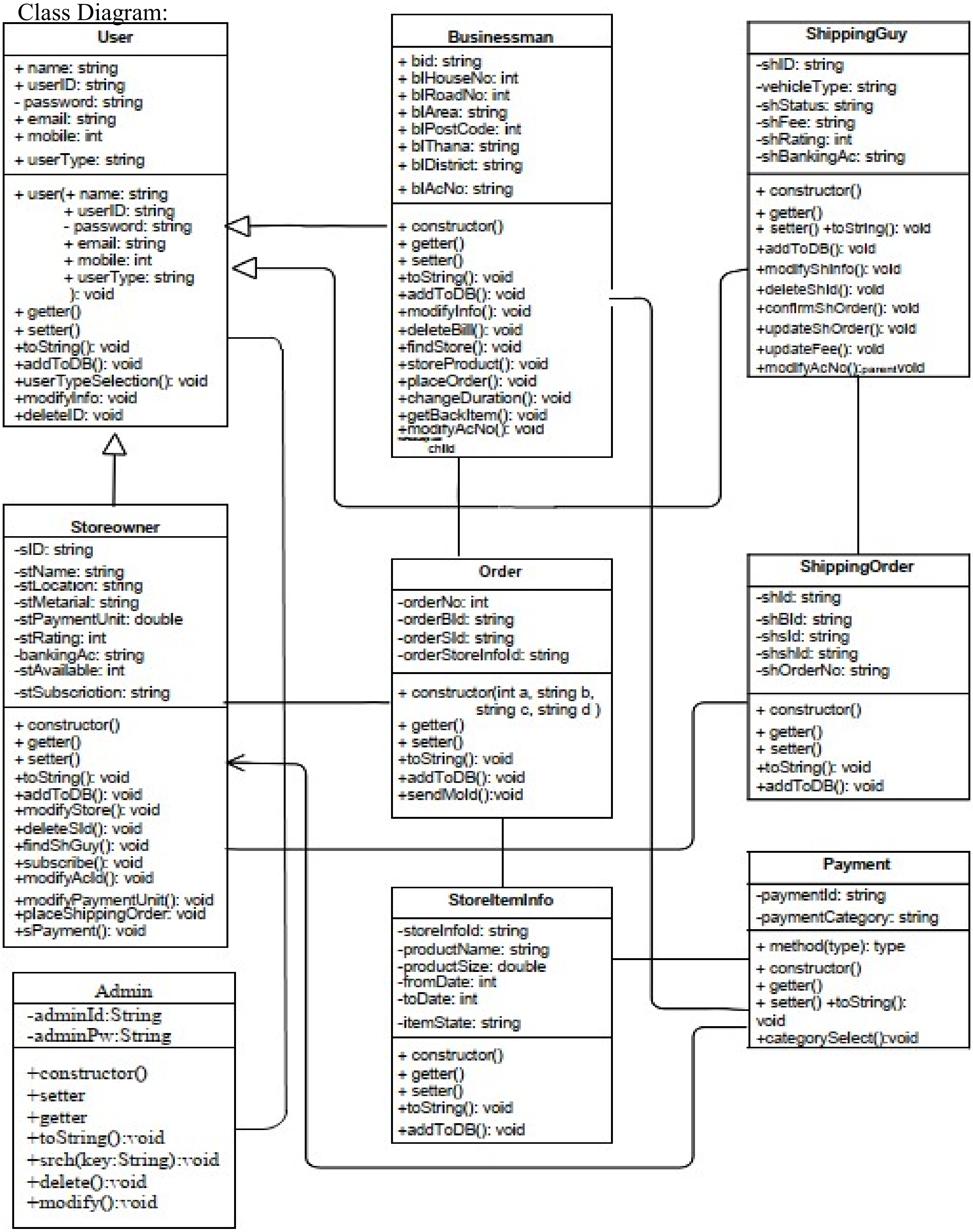
Hire shipping guy use case scenario:

1. Open ‘Hire shipping guy’ option.
2. Check applicant’s details to match all conditions.
3. Add new name in shipping guy list.
4. The system will add name in the system.

Payment use case scenario:

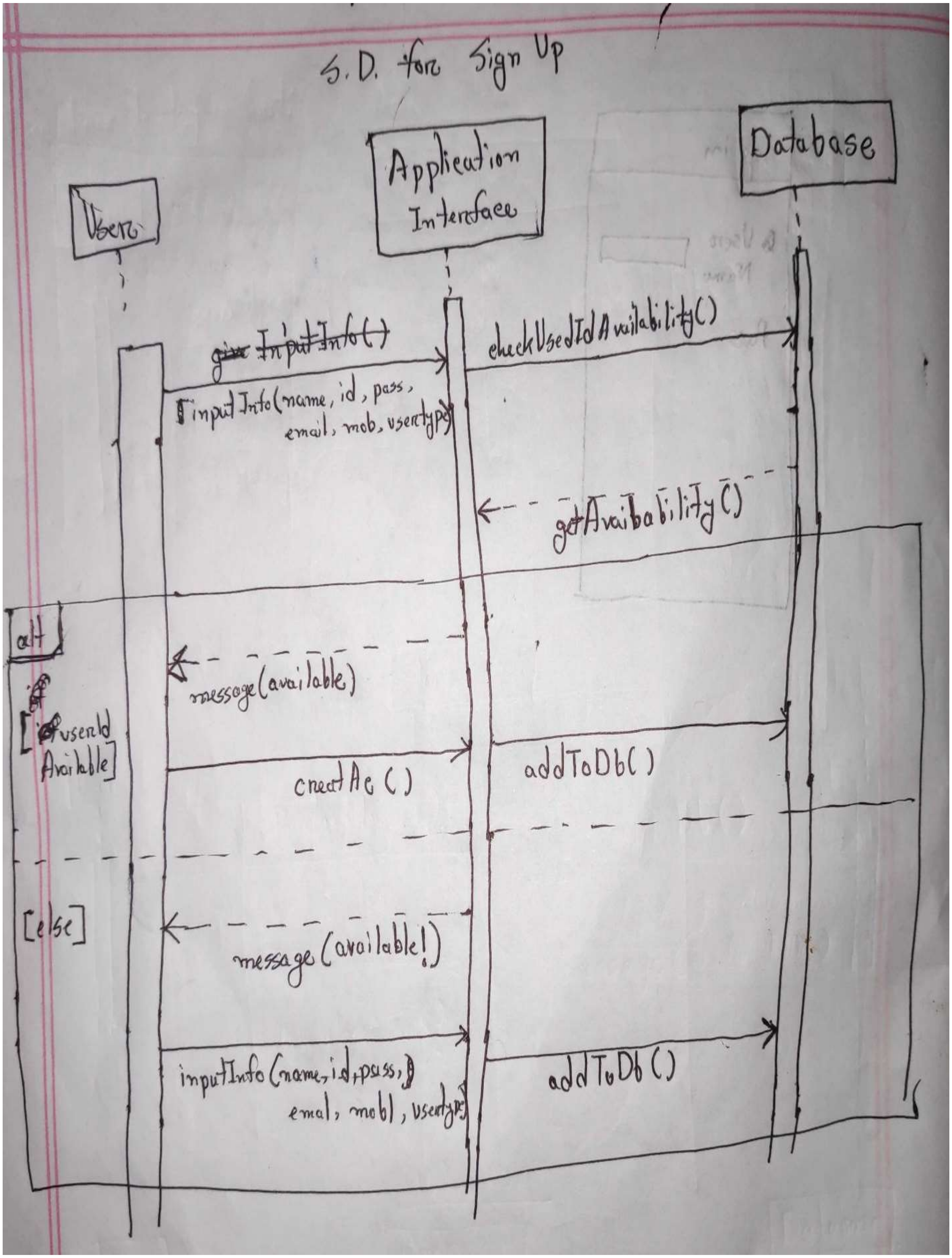
1. Open ‘Payment’ use case scenario.
2. Insert payment amount for Store payment, Shipping payment, Subscription payment to pay or cut the fee.
3. The system implements the instruction and store the information on the database.

Class Diagram:

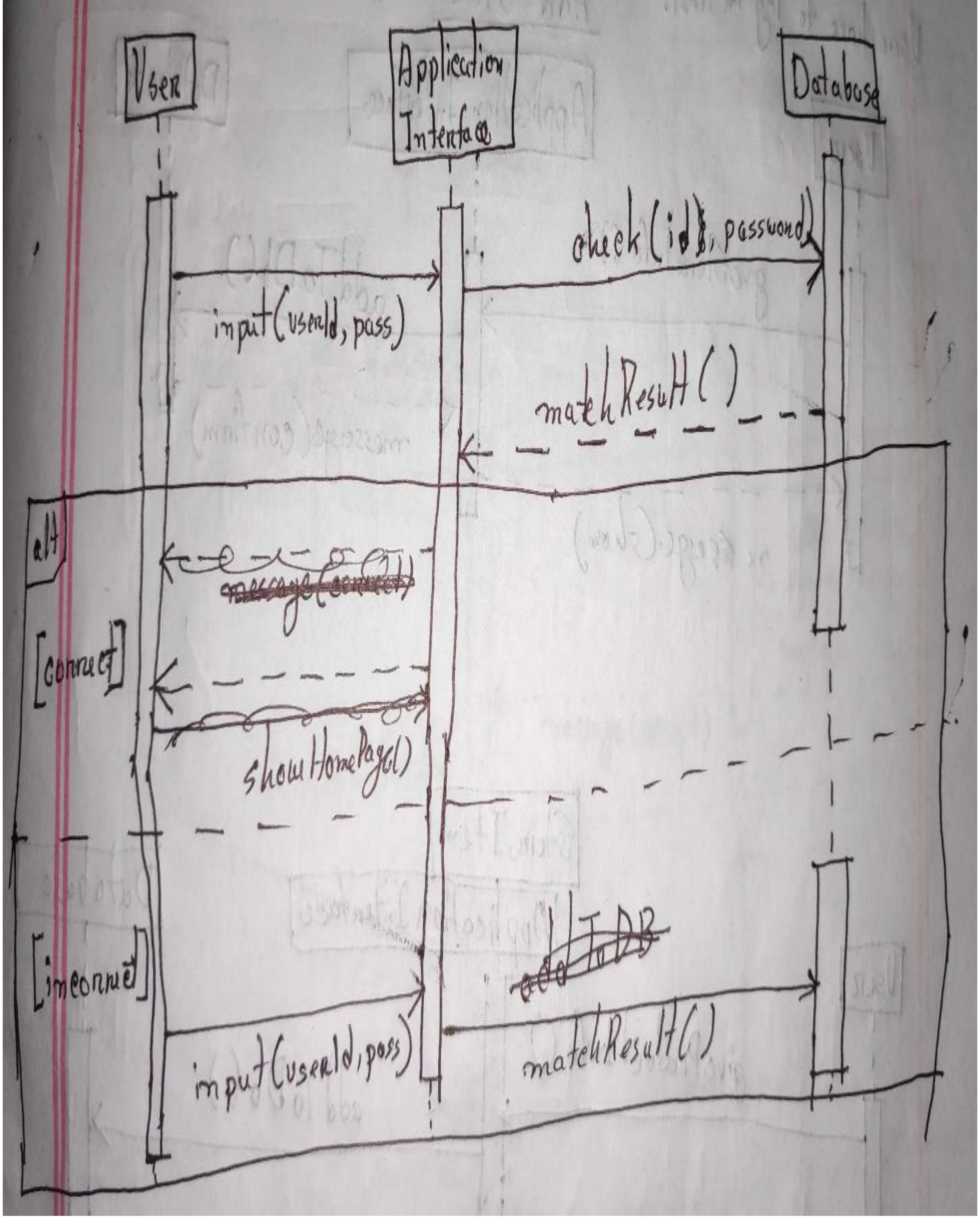


UML Class Diagram

Sequence Diagram:

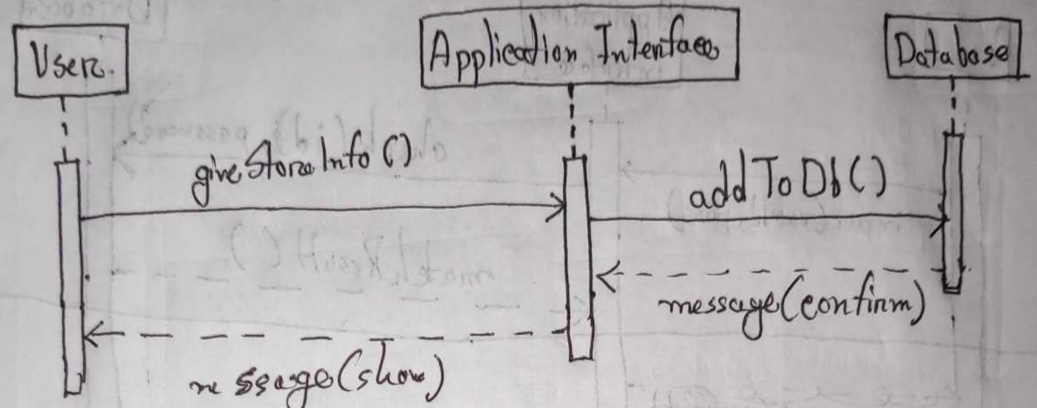


Sign In (For user and admin)

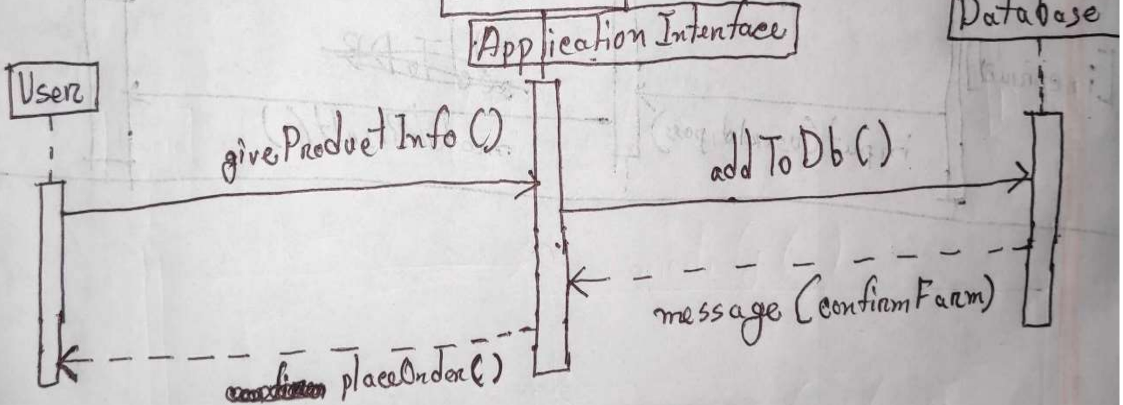


User have to log in first:

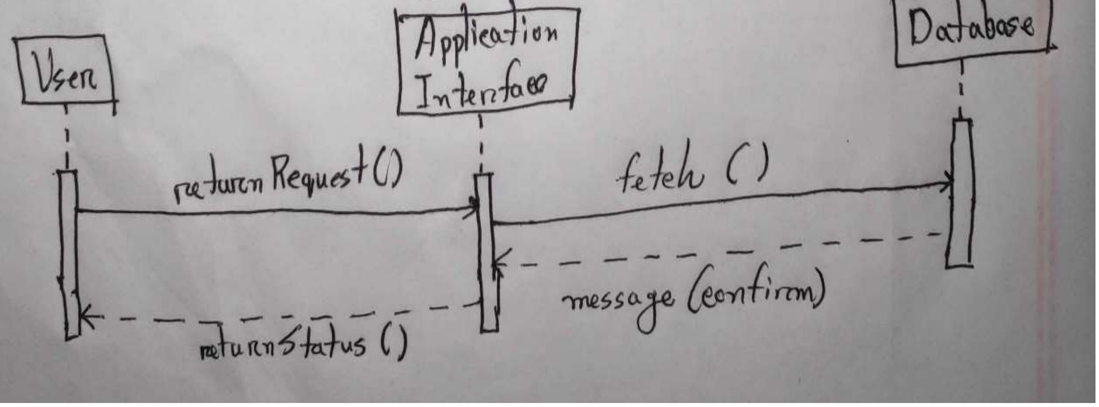
Add Store



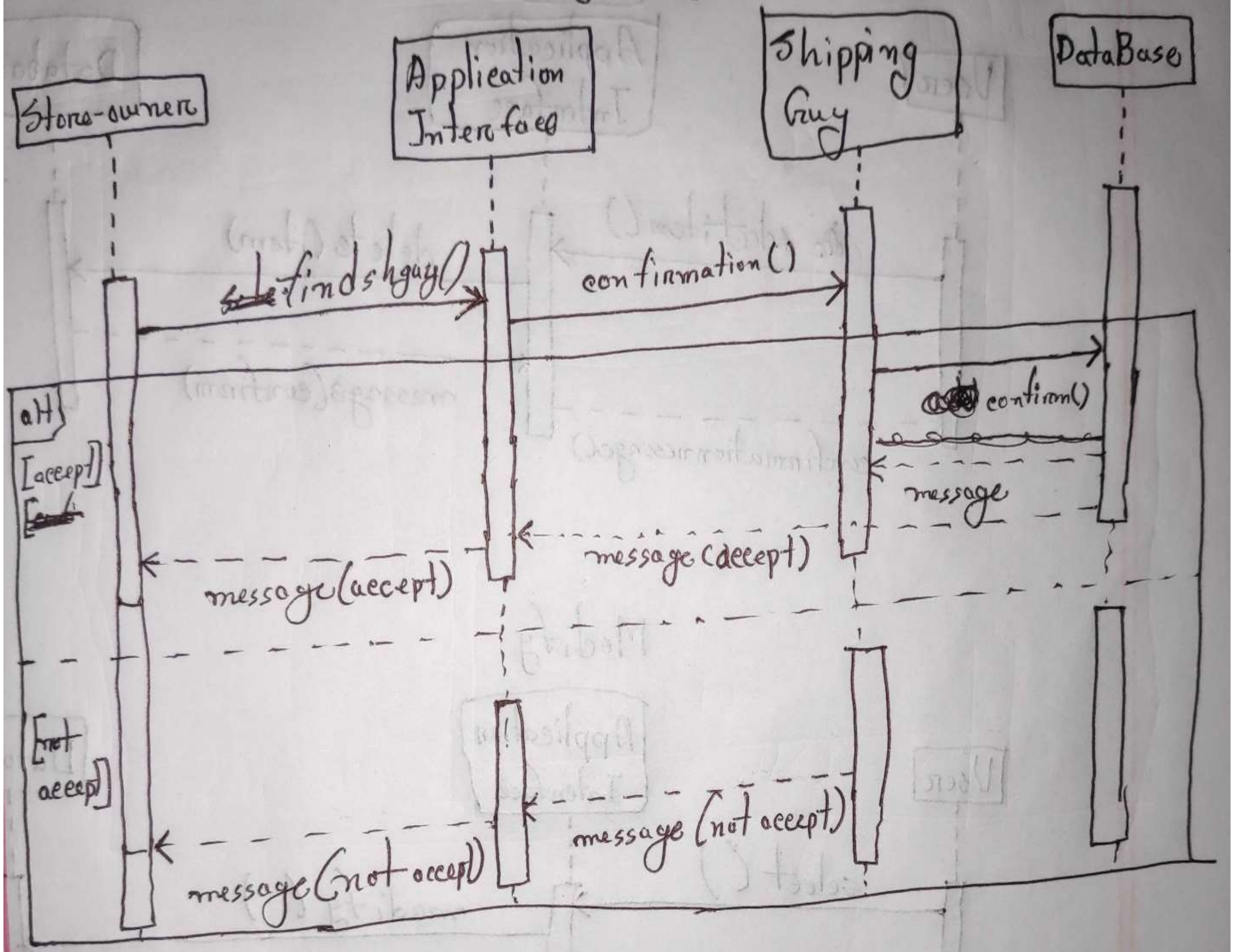
Store Item



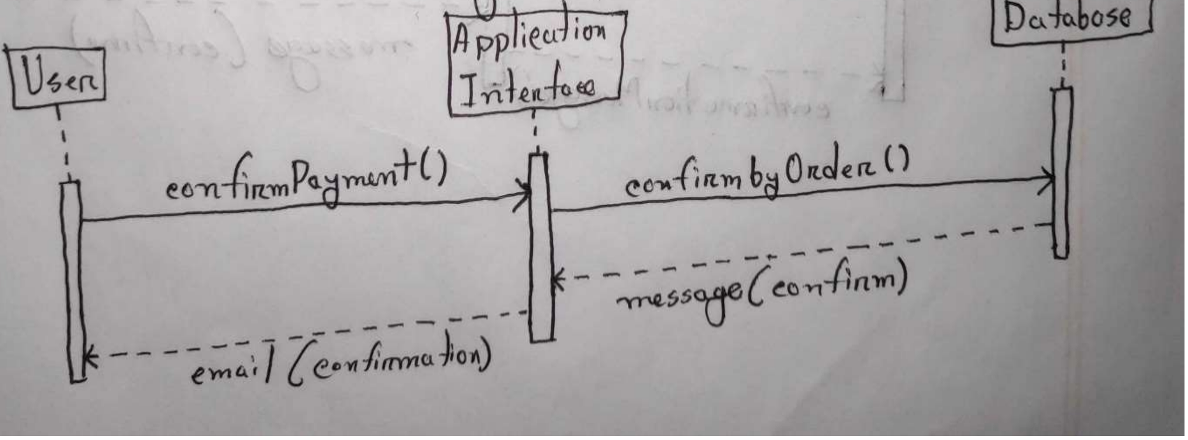
Return Item



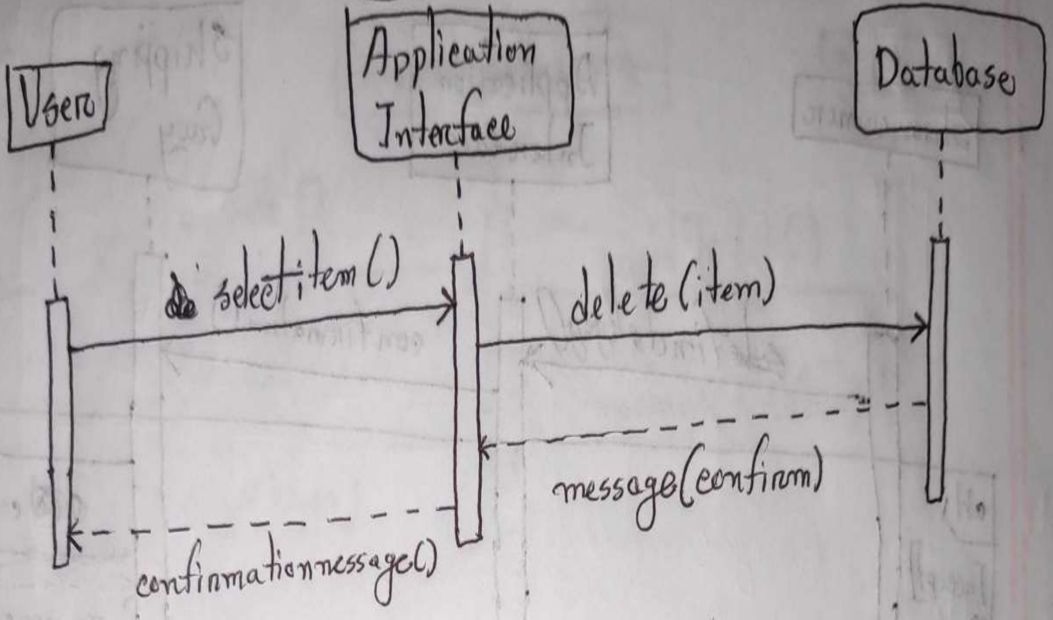
Hire Shipping Guy



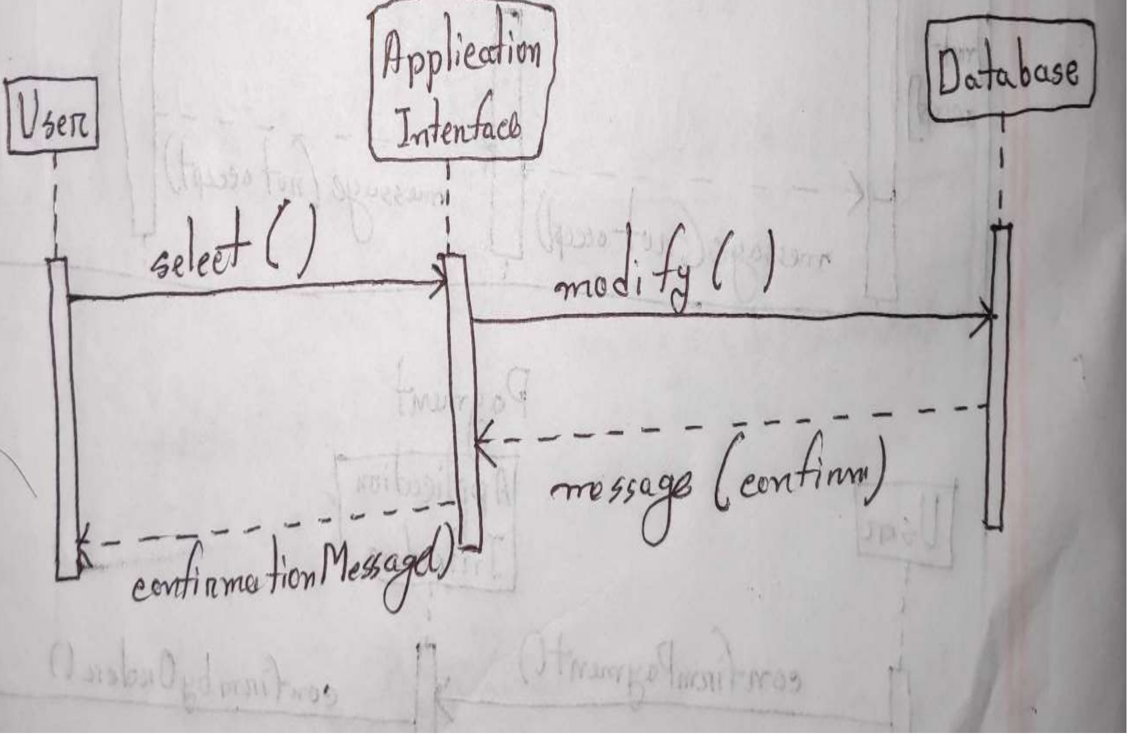
Payment



Detele



Modify


User
Application Interface
Database
select ( )
modify ( )
message (confirm)
confirmationMessage()