CSE307

Assignment-3

Department of CSE Spring 2023

**Independent University, Bangladesh
(IUB)**
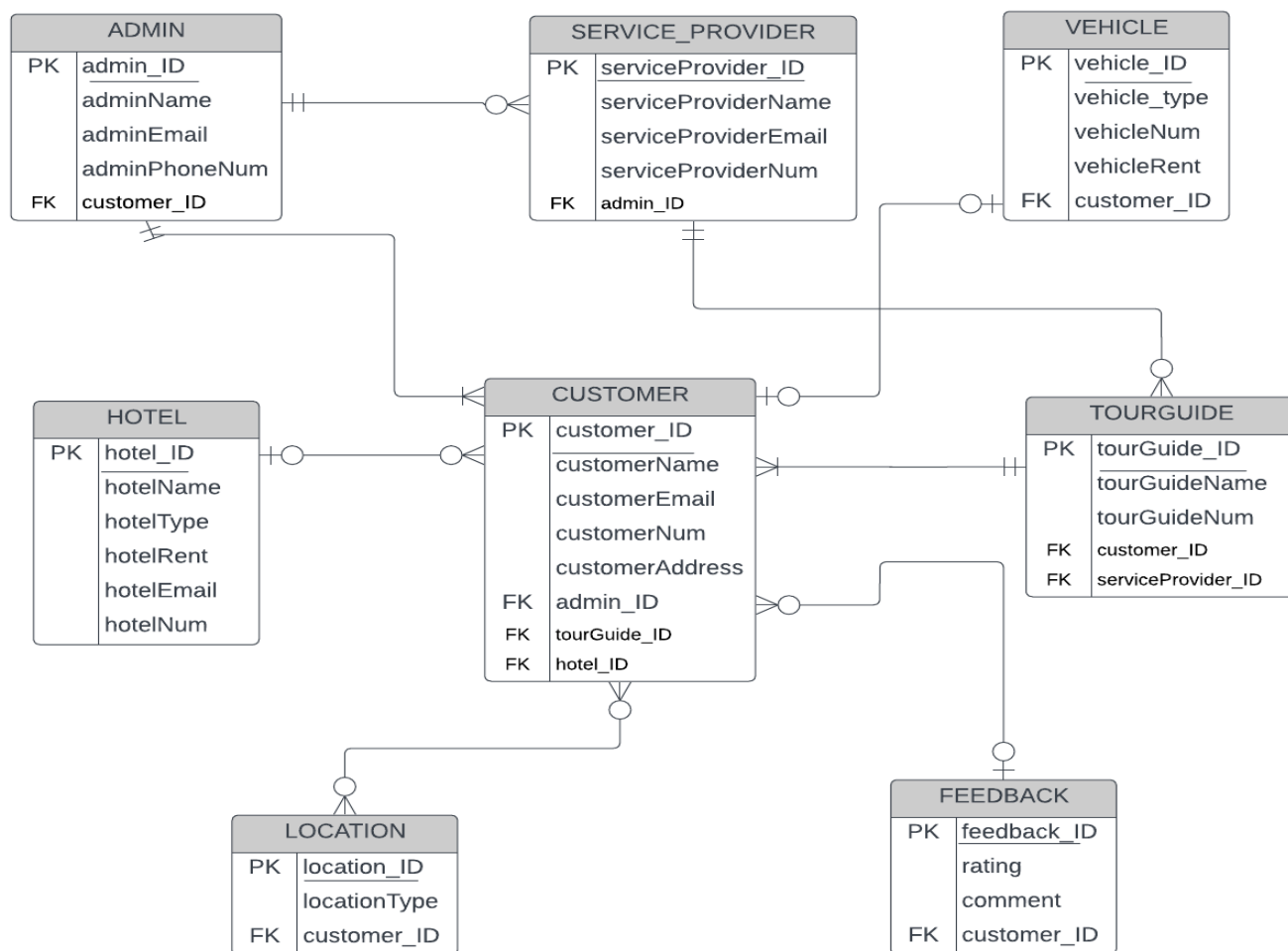
Submitted to

Submitted by

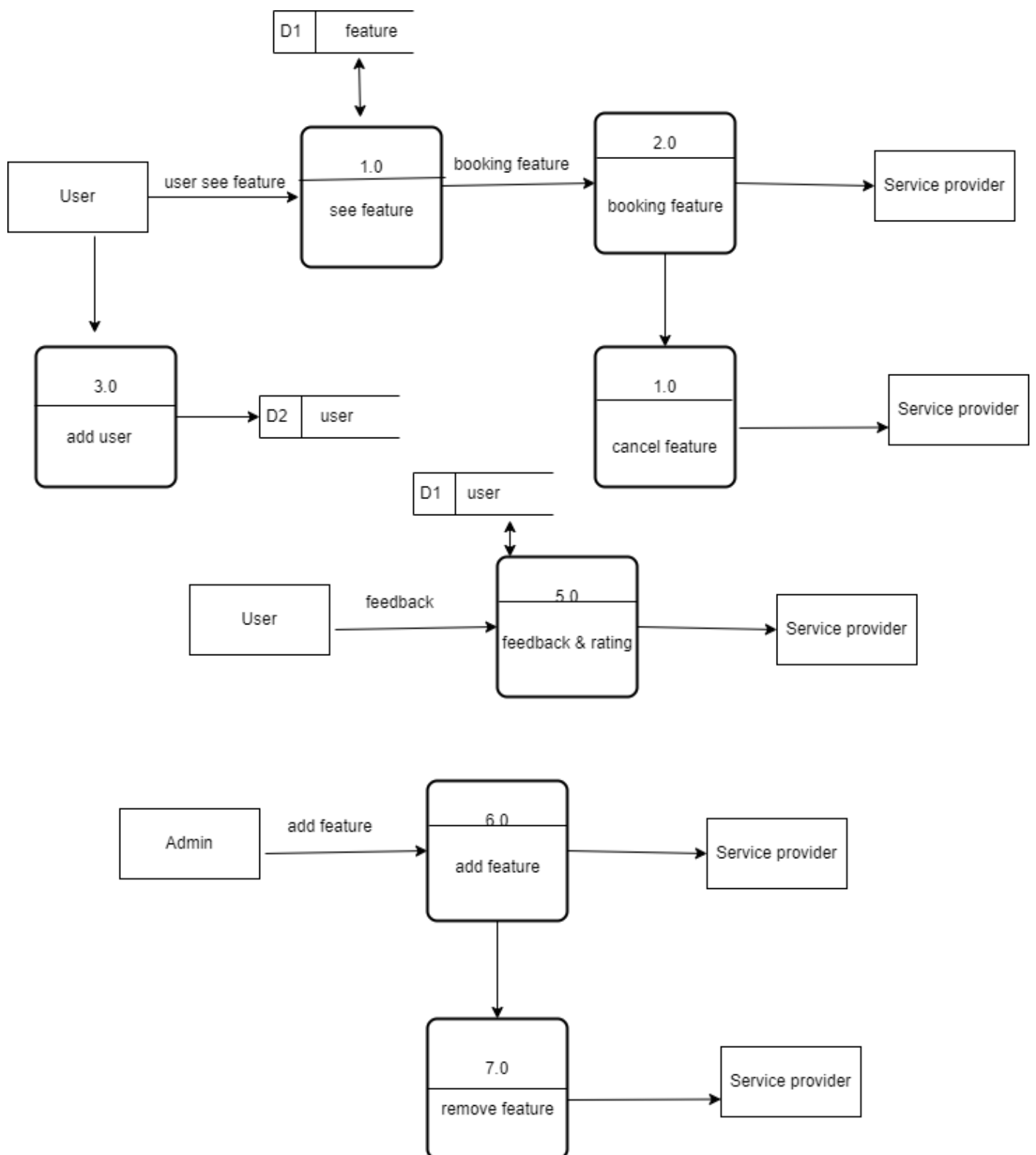| **Sabrina Alam**
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Contents

1. Entity--Relationship Diagram (ERD)

2. Logical Data Flow Diagram of Whole System

```
                    ┌────┬──────────┐
                    │ D1 │ feature  │
                    └────┴──────────┘
                          ↕
        ┌─────────┐              ┌──────────────┐              ┌──────────────┐
        │  User   │─user see──→  │     1.0      │──booking──→  │     2.0      │──→│ Service provider │
        │         │  feature     │  see feature │   feature    │ booking feature│
        └────┬────┘              └──────────────┘              └──────┬───────┘
             │                                                        │
             ↓                                                        ↓
        ┌─────────┐        ┌────┬────────┐                     ┌──────────────┐
        │   3.0   │──────→ │ D2 │ user   │                     │     1.0      │──→│ Service provider │
        │ add user│        └────┴────────┘                     │ cancel feature│
        └─────────┘                                            └──────────────┘

                              ┌────┬────────┐
                              │ D1 │ user   │
                              └────┴────────┘
                                    ↕
        ┌─────────┐              ┌──────────────┐
        │  User   │──feedback──→ │     5.0      │──→│ Service provider │
        │         │              │ feedback & rating│
        └─────────┘              └──────────────┘

        ┌─────────┐              ┌──────────────┐
        │  Admin  │──add feature→│     6.0      │──→│ Service provider │
        │         │              │  add feature │
        └─────────┘              └──────┬───────┘
                                        │
                                        ↓
                                 ┌──────────────┐
                                 │     7.0      │──→│ Service provider │
                                 │ remove feature│
                                 └──────────────┘
```

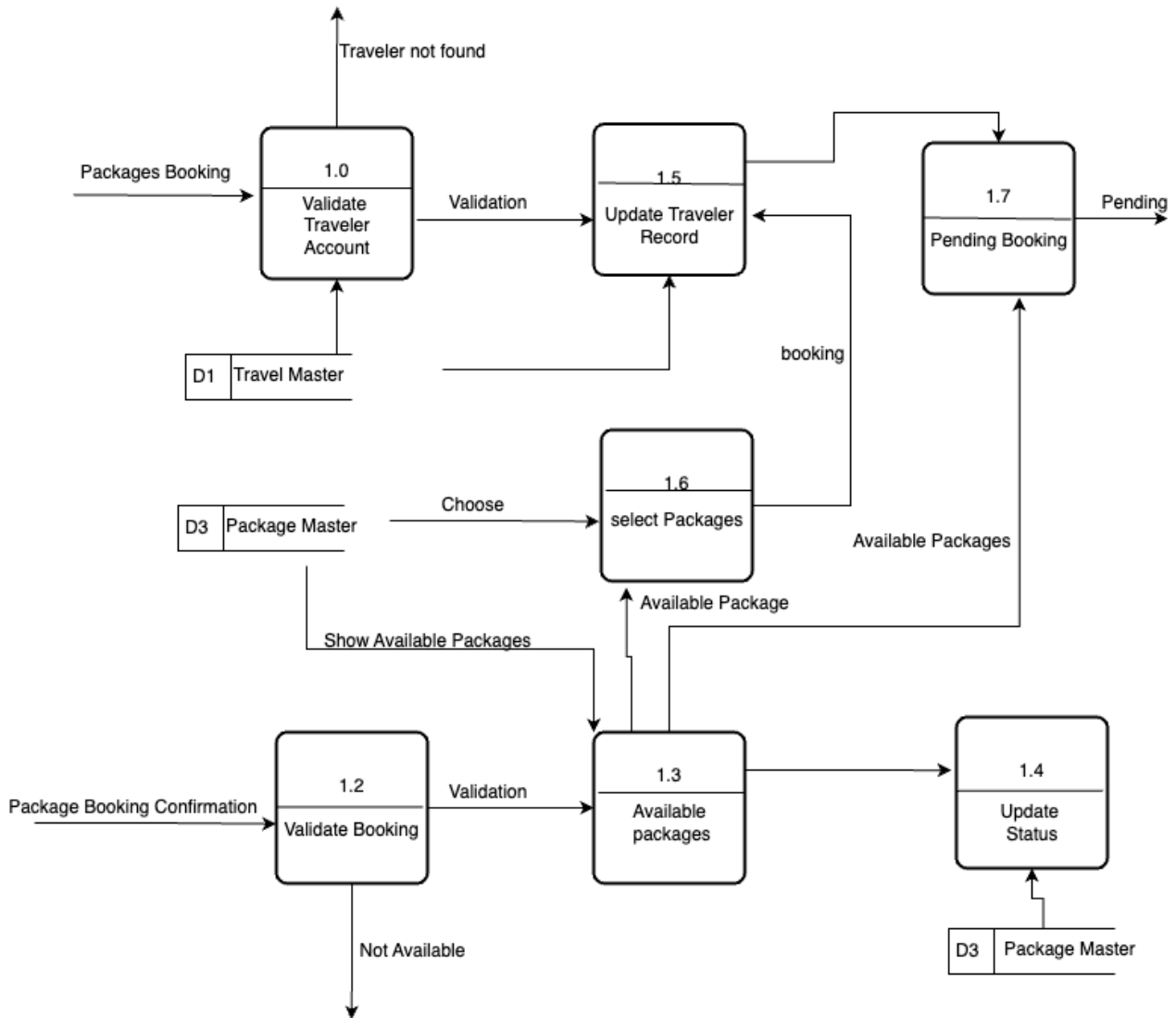## 2.1 Logical Data Flow Diagram of "Hotel Booking"

Logical Data Flow Diagram of "Booking a Hotel room"
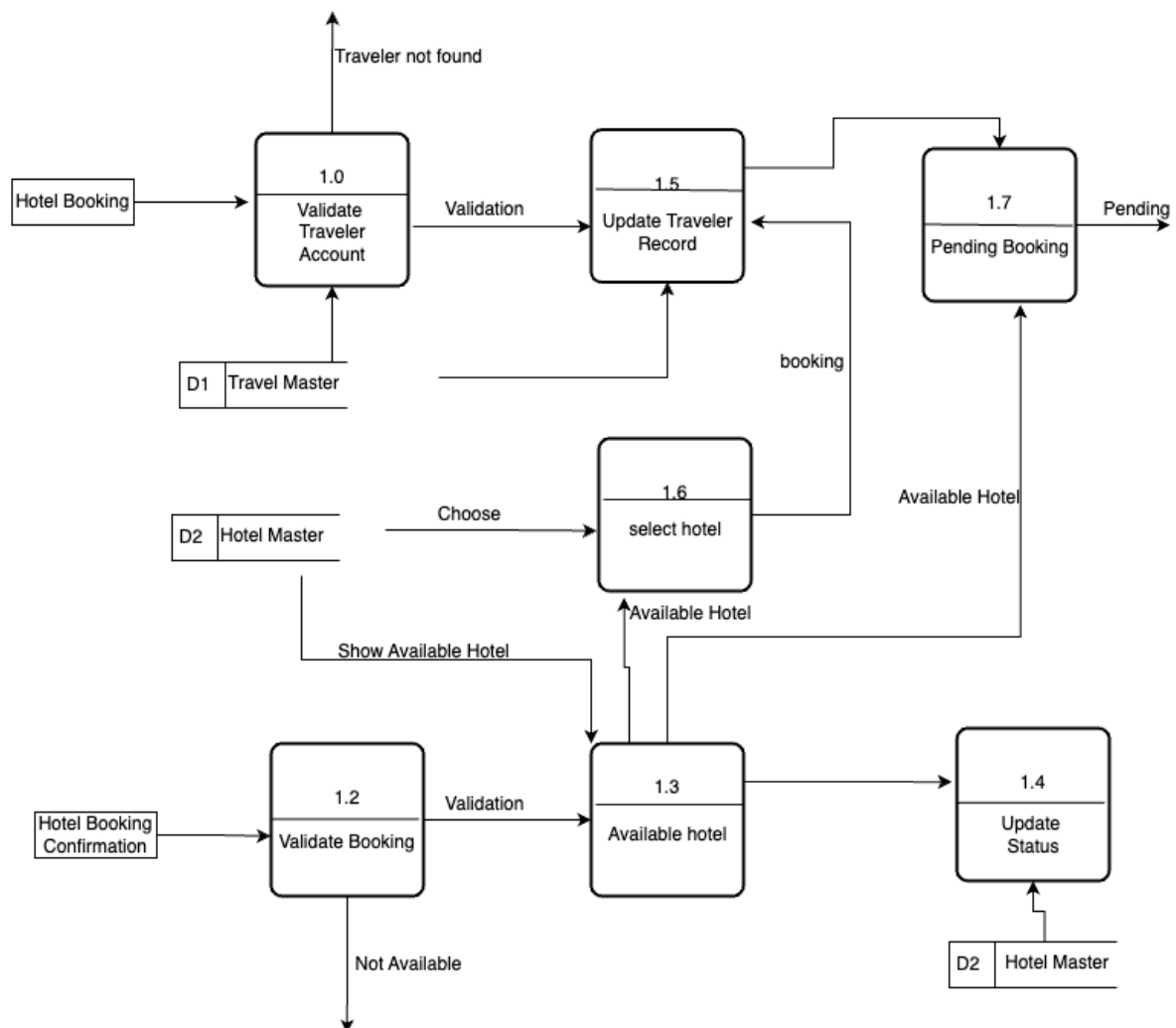
2.2 Logical Data Flow Diagram of "Packages"
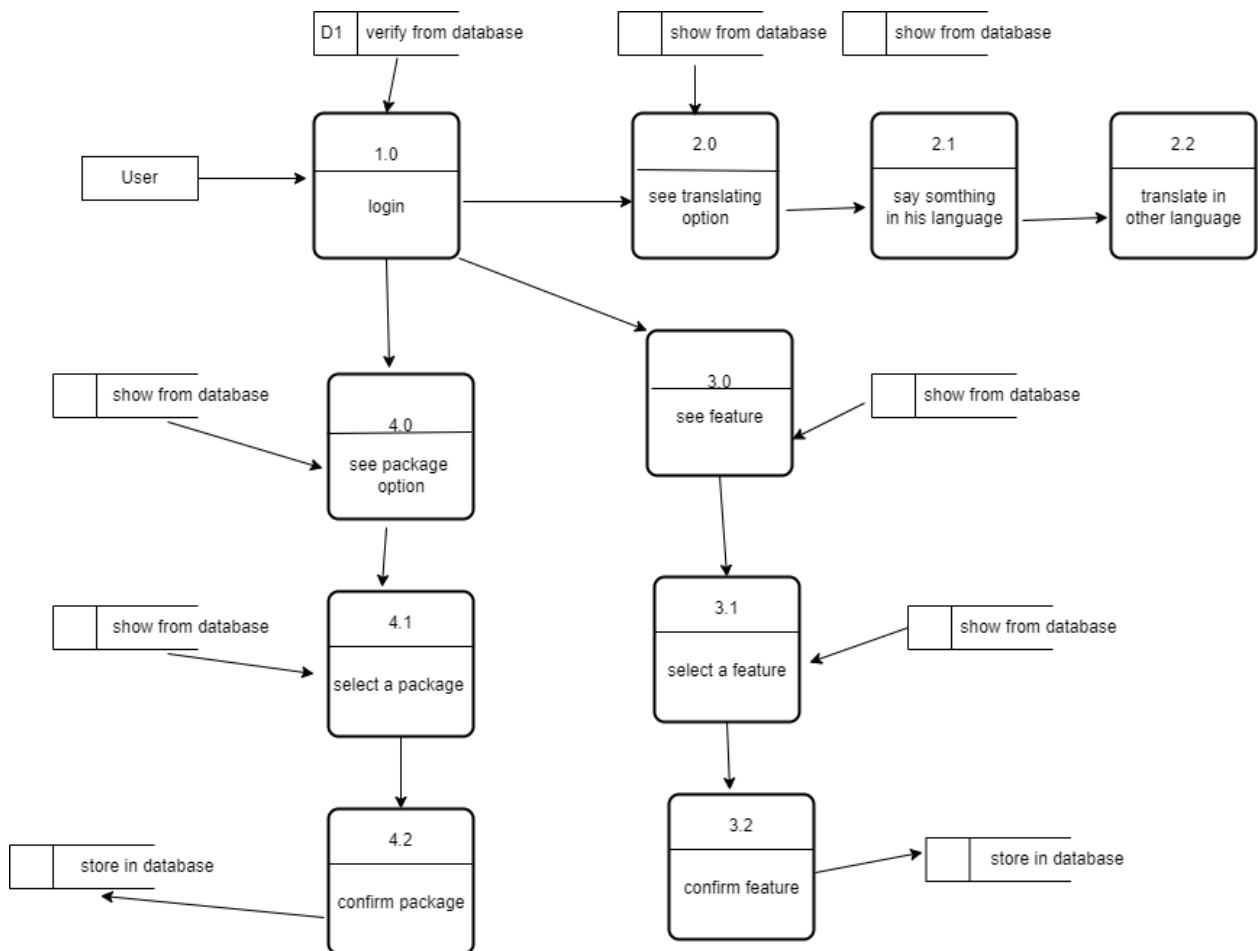
Logical Data Flow Diagram of "Booking Packages"

Traveler not found

Packages Booking

1.0
Validate Traveler Account

Validation

1.5
Update Traveler Record

1.7
Pending Booking

Pending

D1 | Travel Master

booking

D3 | Package Master

Choose

1.6
select Packages

Available Packages

Show Available Packages

Available Package

Package Booking Confirmation

1.2
Validate Booking

Validation

1.3
Available packages

1.4
Update Status

Not Available

D3 | Package Master

2.3 Logical Data Flow Diagram of "Translation"

Logical Data Flow Diagram of "Translate"

Traveler not found

Packages Booking

1.0
Validate Traveler Account

Validation

1.2
Update Traveler Record

Translate

1.3
Translate Process

D1 | Travel Master
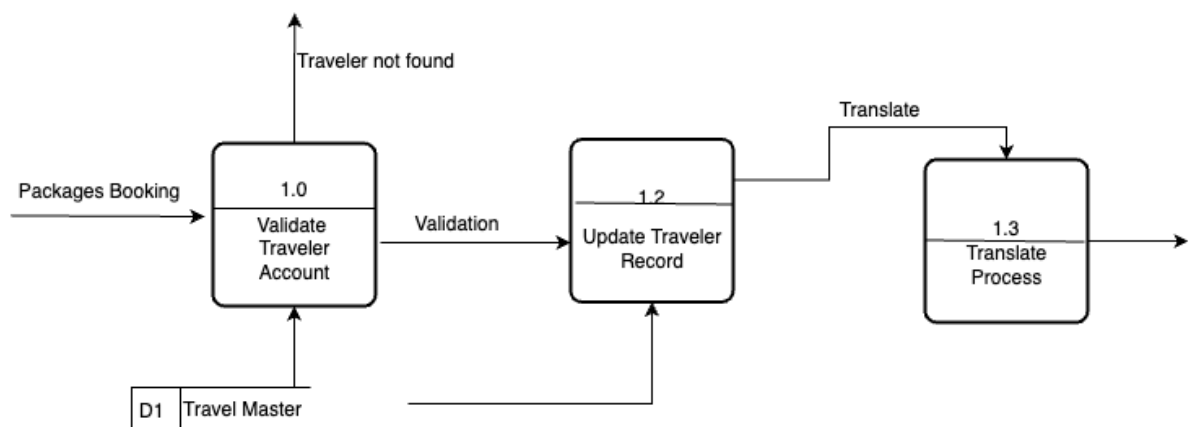
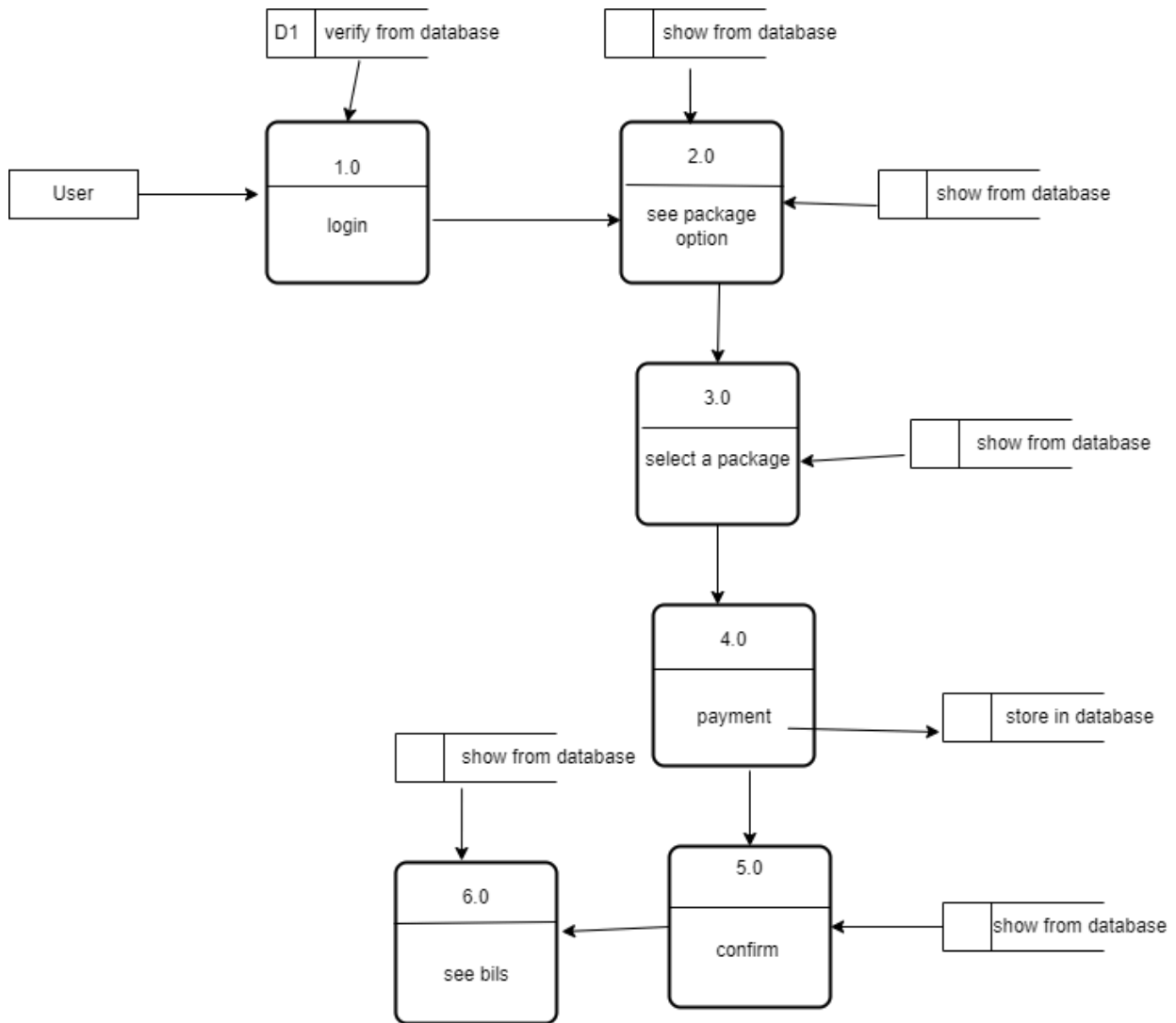# 3 .Physical Data Flow Diagram

3.1Physical Data Flow Diagram for "Booking a Hotel room"

Physical Data Flow Diagram of "Booking a Hotel room"

	verify by database			show from database

User → **1.0 login** → **2.0 see feature** ← show from database

2.0 see feature → **3.0 select hotel feature** ← show from database

3.0 select hotel feature → **4.0 hotel information rating** ← show from database

4.0 hotel information rating → **5.0 seect a hotel** ← show from database

show from database → **7.0 select a room** ← **6.0 see available room and rent** ← **5.0 seect a hotel**

show from database → **6.0 see available room and rent**

7.0 select a room → **8.0 confirm a room** → **9.0 see booking information** ← show from database

show from database → **8.0 confirm a room**

3.2 Physical Data Flow Diagram for "Packages"

3.3 Physical Data Flow Diagram for "Translate"

D1	verify from database

	show from database

User

1.0

login

2.0

see translating option

3.0

say something in his language

4.0

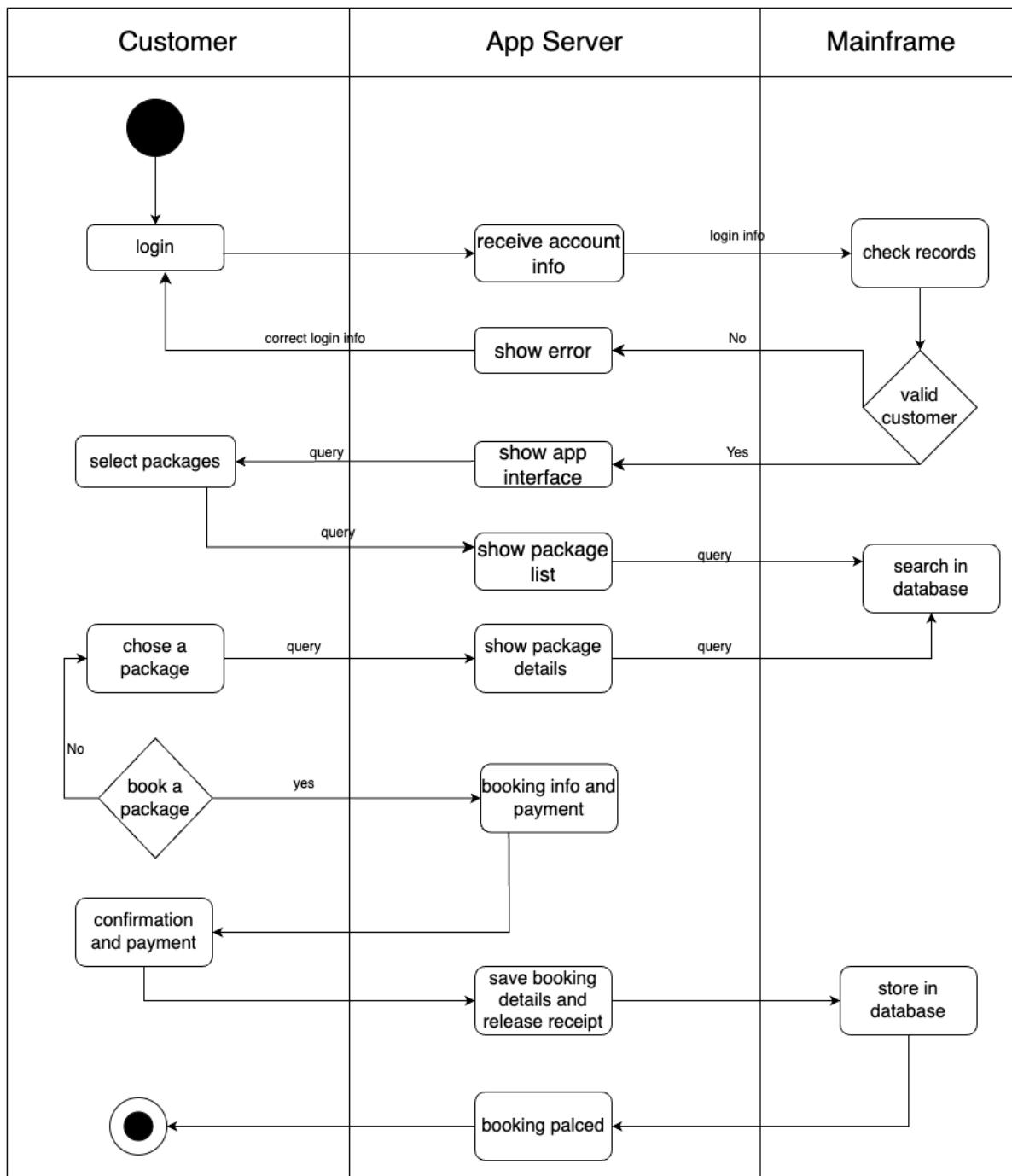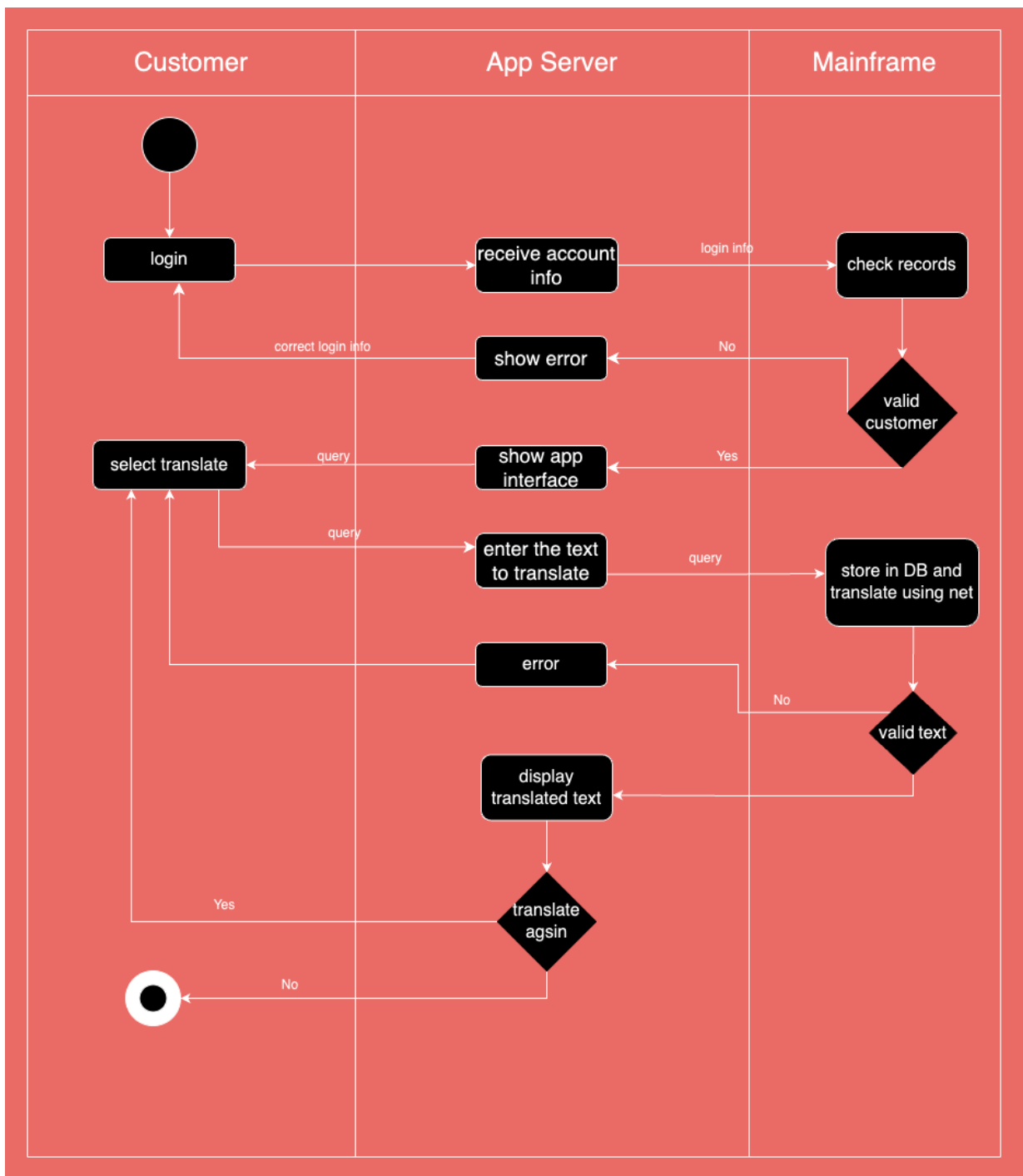translate in other language

5.0

confirm
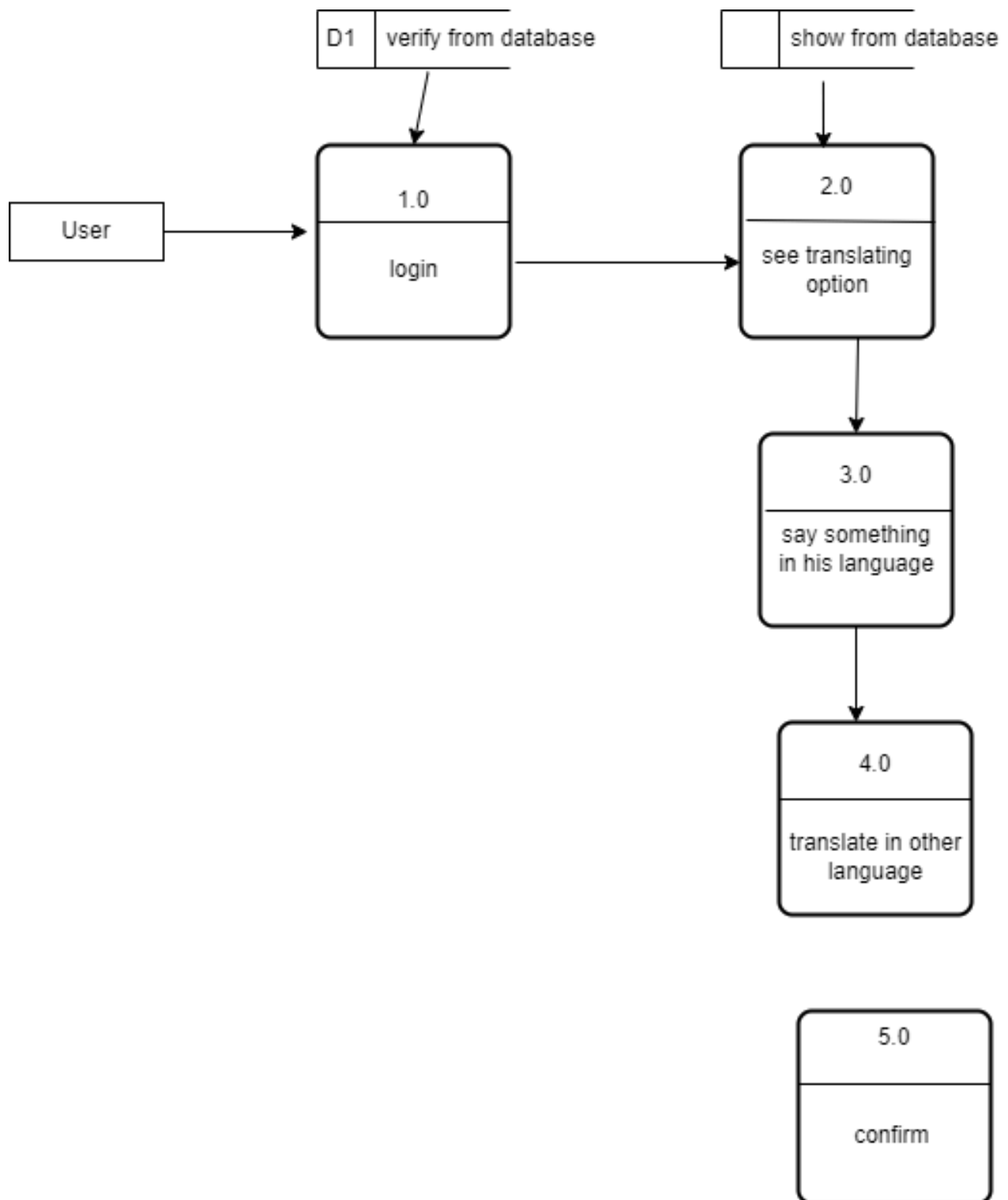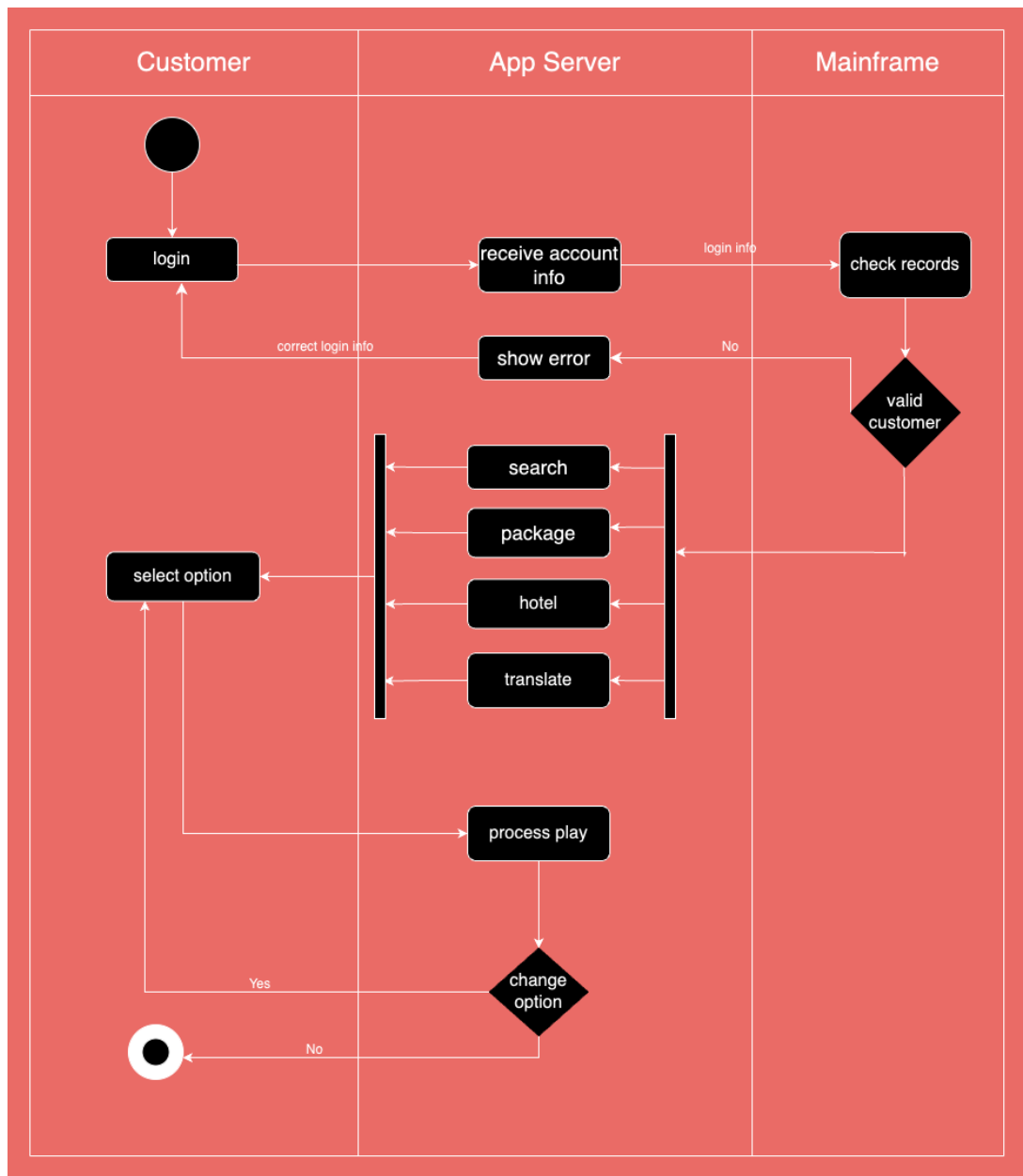
4. Activity Diagram

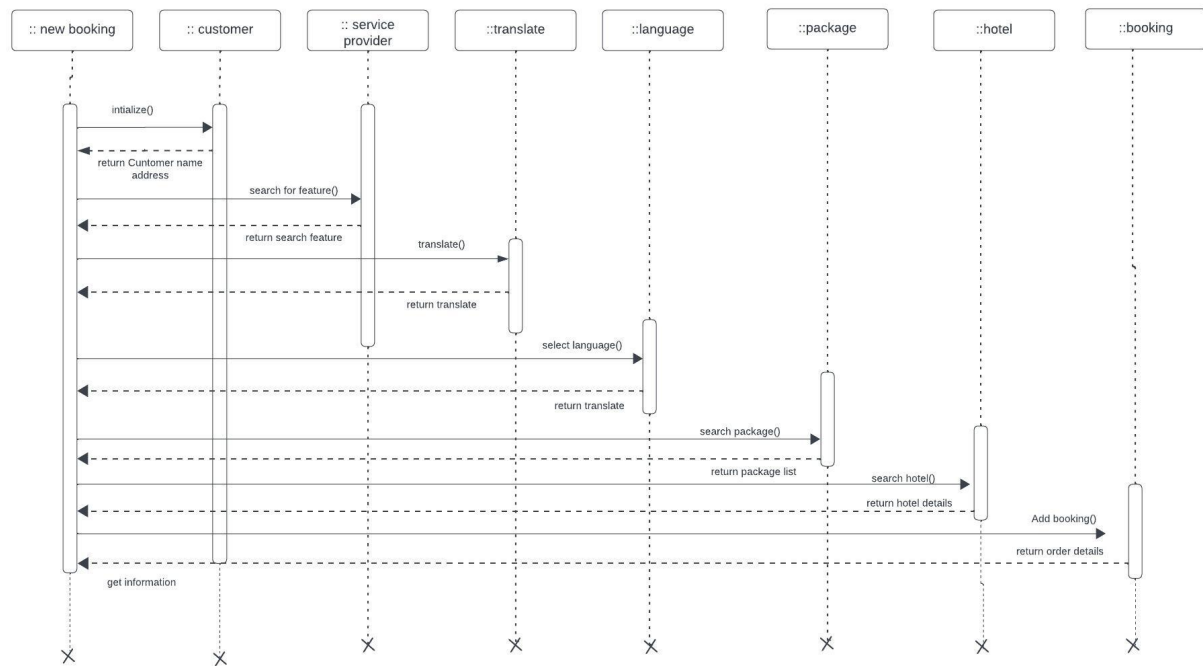# 4.1 Activity Diagram for "Hotel Booking"
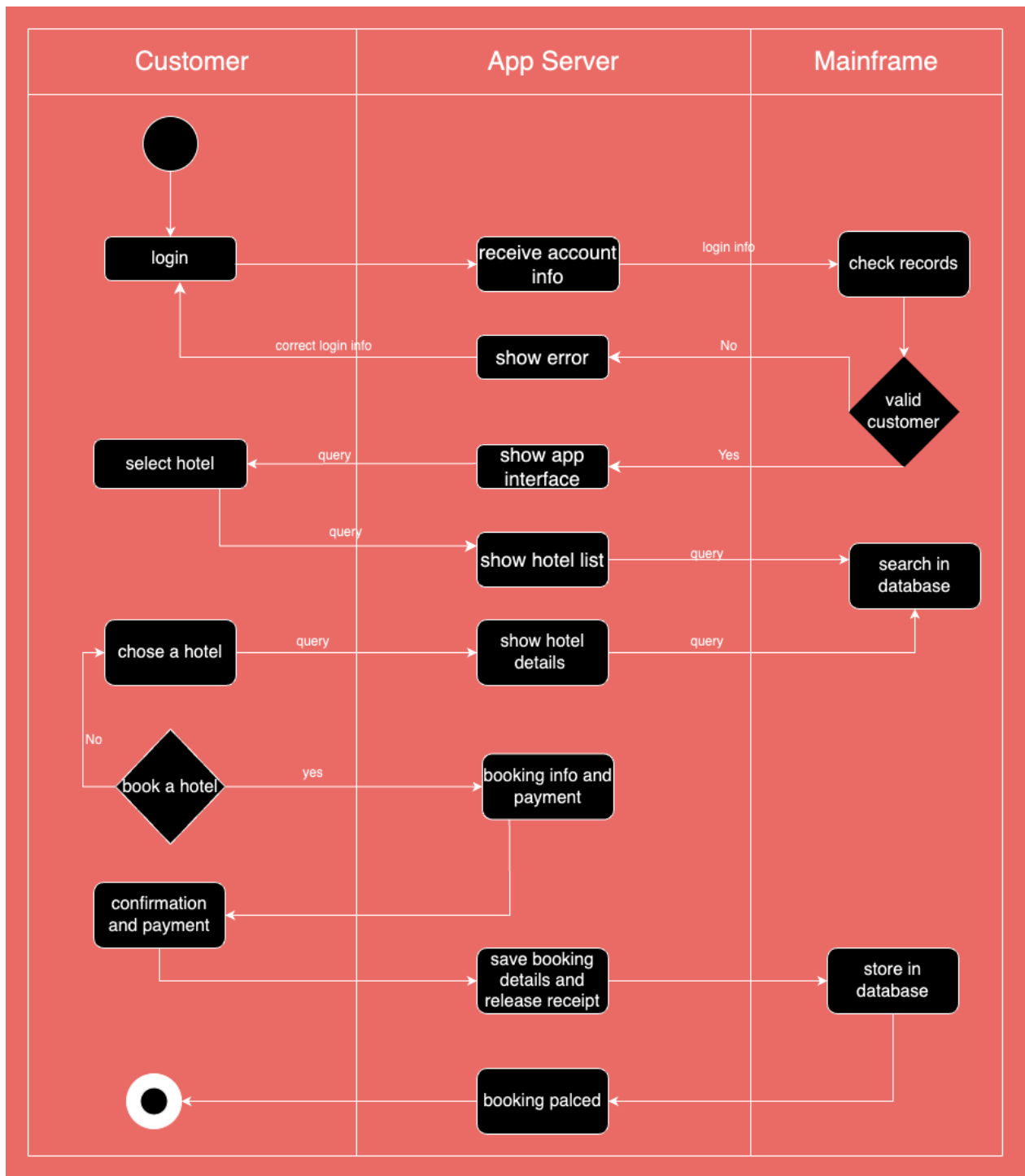
4.2 Activity Diagram for "Package"

4.3 Activity Diagram for "Package"

5. Sequence Diagram

| :: new booking | :: customer | :: service provider | ::translate | ::language | ::package | ::hotel | ::booking |

intialize()

return Cuntomer name address

search for feature()

return search feature

translate()

return translate

select language()

return translate

search package()

return package list

search hotel()

return hotel details

Add booking()
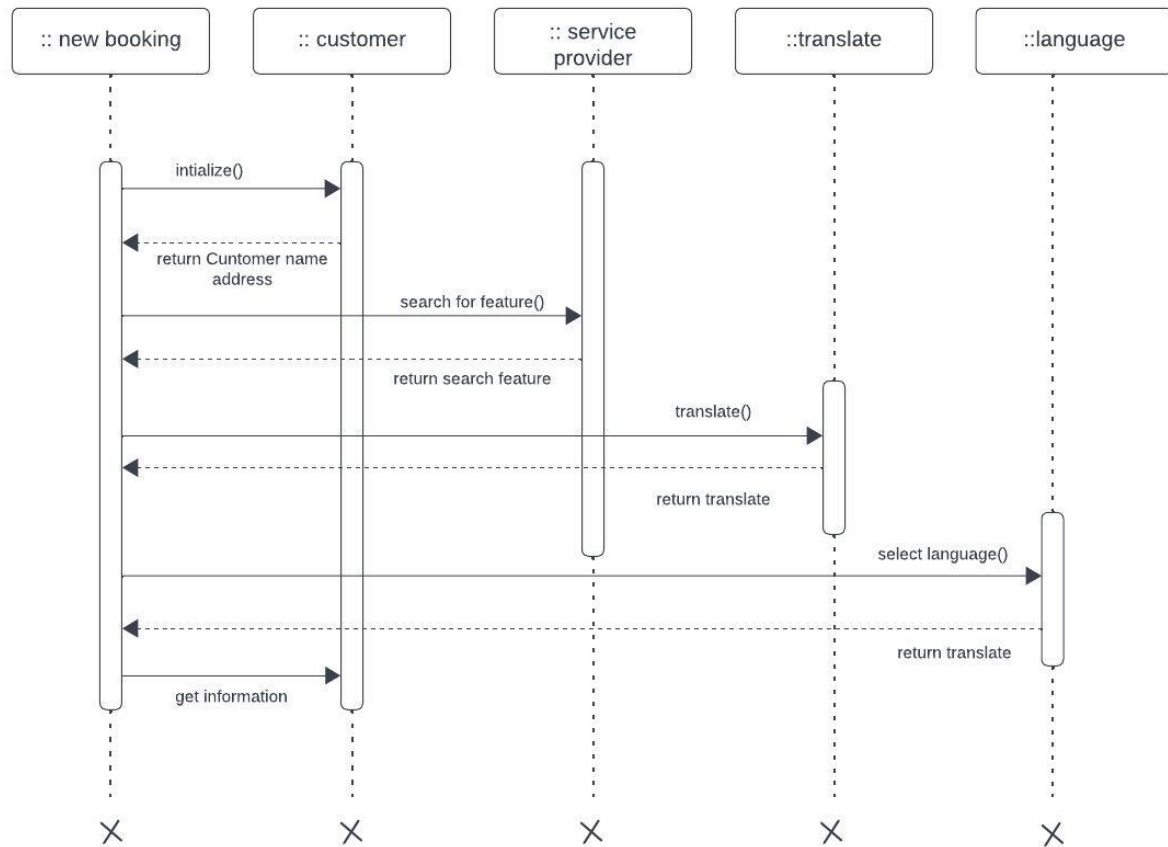
return order details

get information

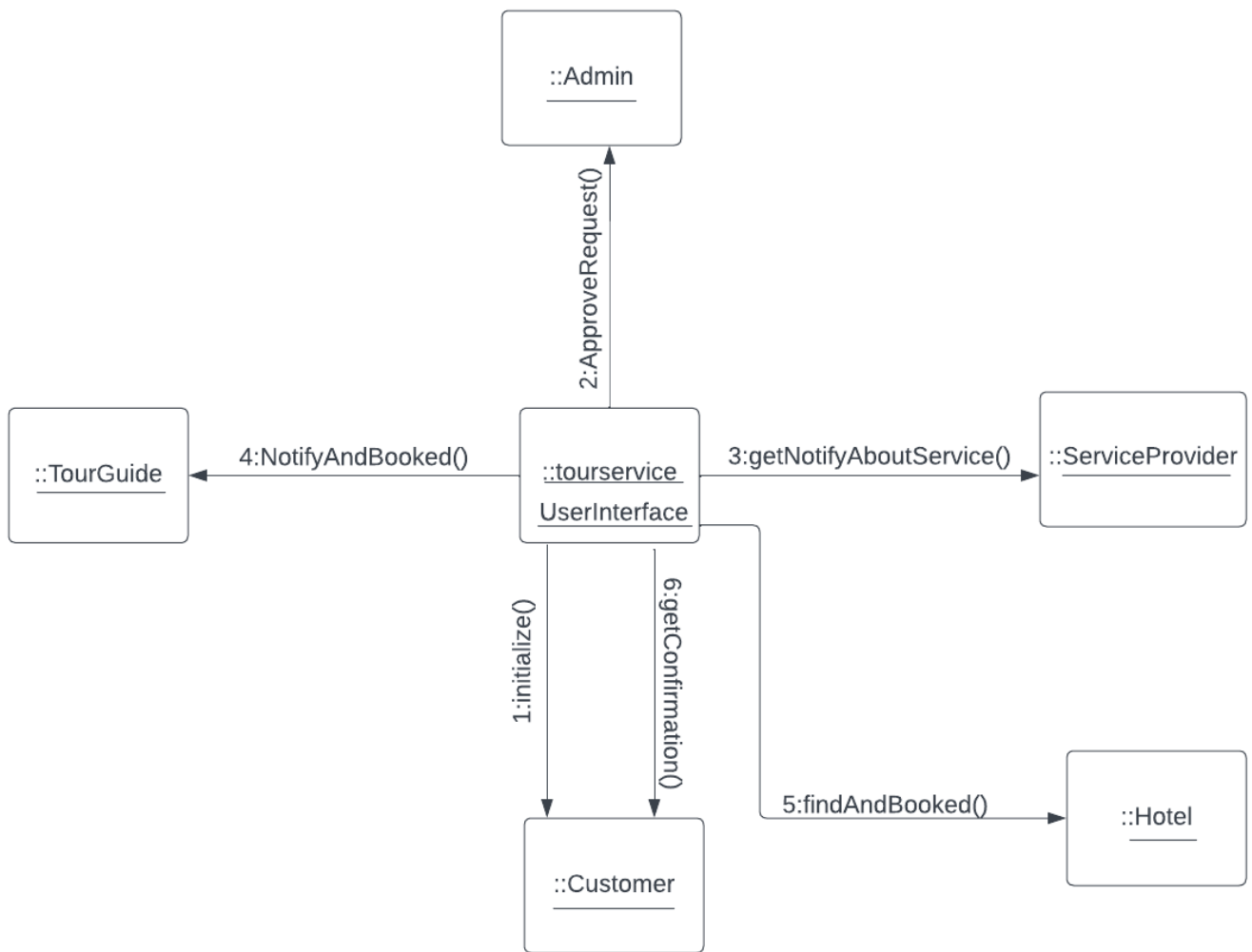# 5.1 Sequence Diagram for "Booking a hotel"
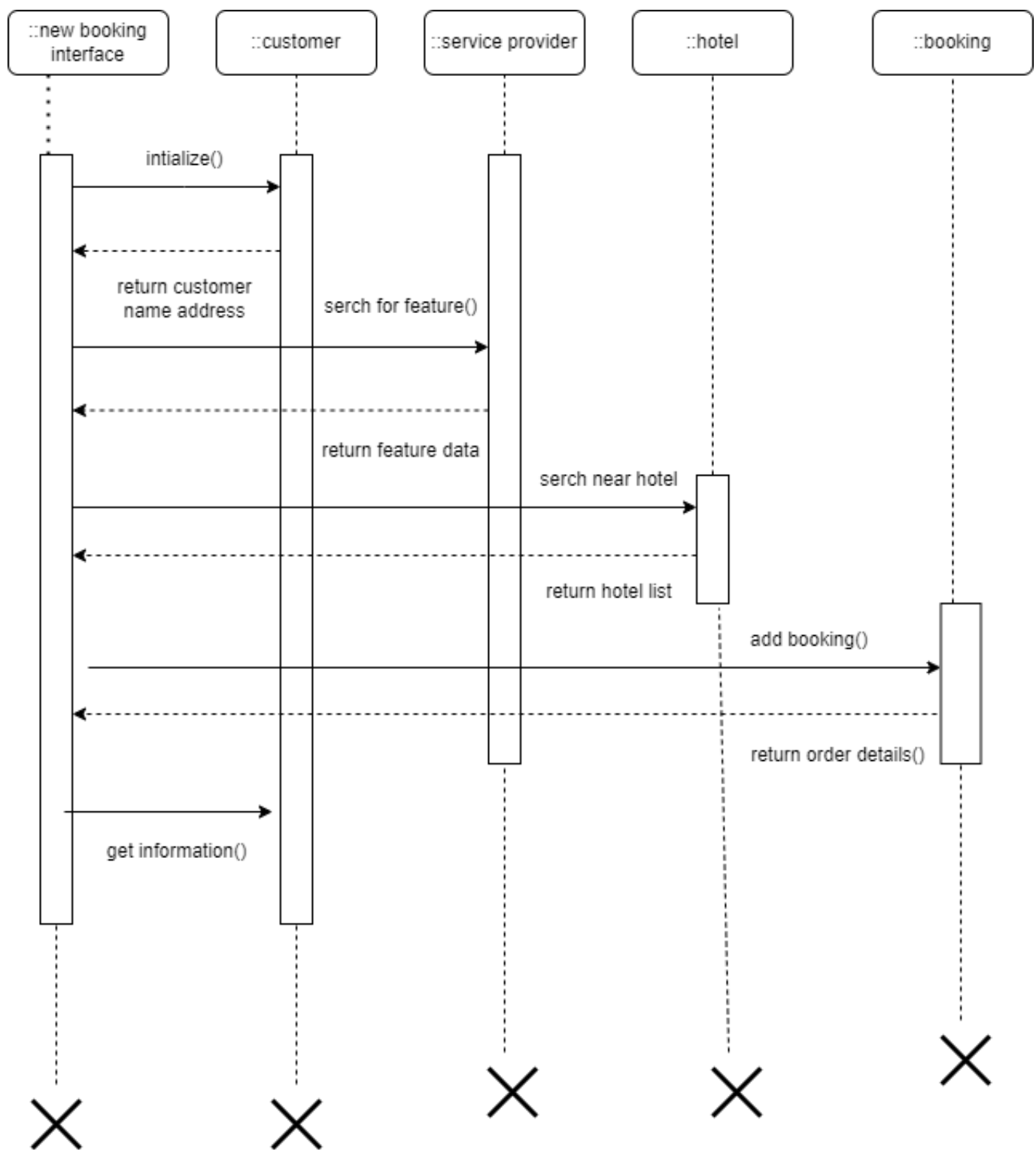
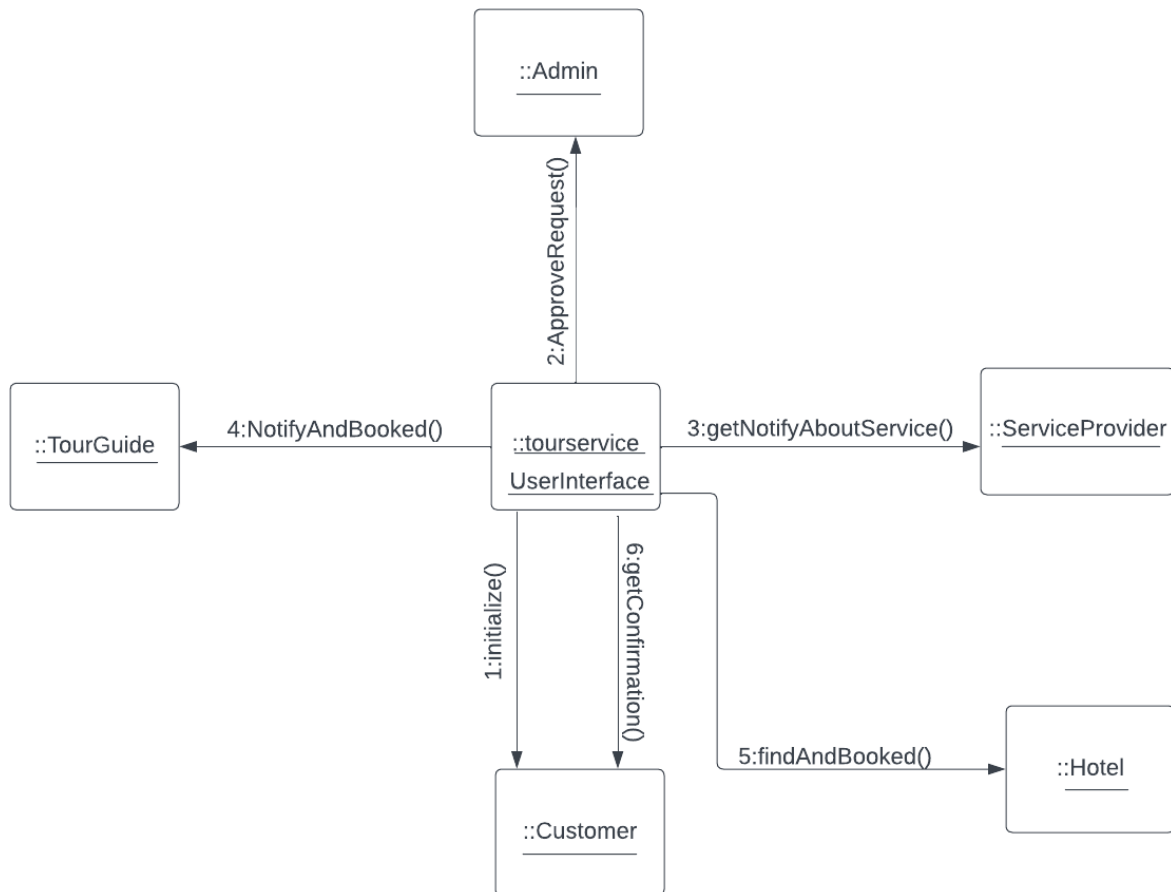## 5.2 Sequence Diagram for "Packages"
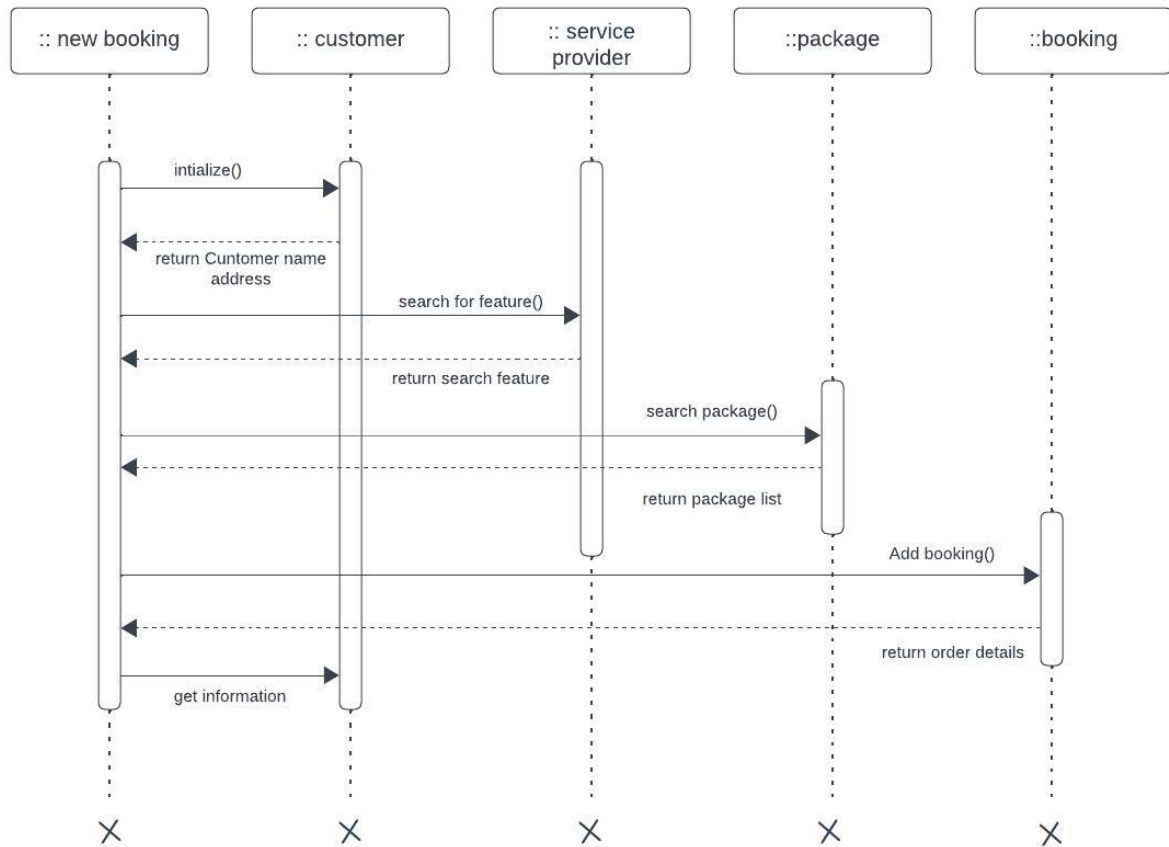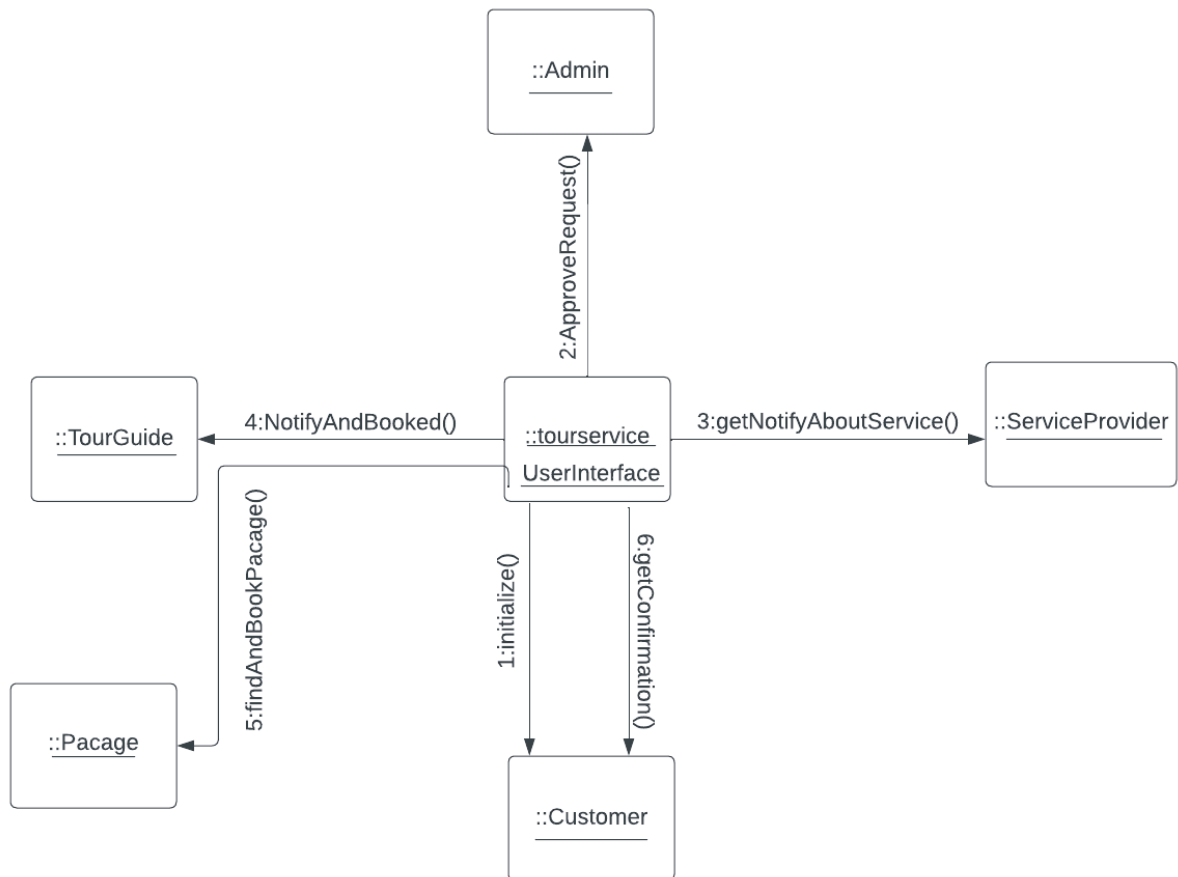
5.3 Sequence Diagram for "Translate"

6.Communication Diagram

6.1 Communication Diagram for "Booking Hotel"

6.2 Communication Diagram for "Packages"

6.3 Communication Diagram for "Translate "

```
            ┌─────────────┐
            │   ::Admin   │
            │             │
            └─────────────┘
                  ▲
                  │
            2:ApproveRequest()
                  │
┌──────────┐  ┌─────────────┐        ┌──────────────────┐
│::TourGuide│◄─│ ::tourservice│──────►│ ::ServiceProvider│
│          │  │ UserInterface│        │                  │
└──────────┘  └─────────────┘        └──────────────────┘
  4:NotifyAndBooked()  │  │  3:getNotifyAbout Service()
                       │  │
              1:initialize()  6:getConfirmation()
                       │  │
                       ▼  ▼              5:translate()
                  ┌─────────────┐   ┌──────────────┐
                  │ ::Customer  │   │  ::Translate │
                  └─────────────┘   └──────────────┘
```

7. Class Diagram

Login Class

+ user_id: int
+ user_email: string
- user_password

+login()

Admin

-admin_id: int
+admin_name: string
-password: int

+ add_hotel(): void
+remove_hotel(): void
+add_tricket(): void
+remove_tricket(): void
+add_package(): void
+remove_package(): void
+all_customerinfo(): void

Customer

+customar_id: int
+customar_namr: string
-password: int

+booking_package(): void
+booking_hotel(): void
+buy_tricket(): void
+map(): void

Shadule

+pachake_date: int
+package_time: int

+date():void
+time():void

Hotel

+ hotel_id: int
+hotel_name: string
+hotel_type: string
+hotel_address: string

+ add_hotel(): void
+remove_hotel(): void
+edit_hotel

tricket

-tricket_id: int
+vehicle_name:string
+tricket_type: string
+vehicle_id:int

+add_tricket(): void
+remove_tricket(): void
+exchange_tricket(): void

Package

+package_id:int
+package_name:string
+package_type: string

+add_package(): void
+edit_package():void
+remove_package(): void

purches

-order_id: int
+quantity: int
+customer_id: int
+order_name: string

+purches_details(): void

Bus

+bus_id:int
+bus_name:string
+bus_time:int

+add_bus(): void
+add_seat(): void
+remove_bus: void

Train

+train_id:int
+train_name:string
+train_time:int

+add_air(): void
+add_seat(): void
+remove_air: void

Air

+air_id:int
+air_name:string
+air_time:int

+add_bus(): void
+add_seat(): void
+remove_bus: void

Pyment

-bill_id: int
-total_bill: int

+payment(): void

UML Class Diagram

8 Statechart Diagrams

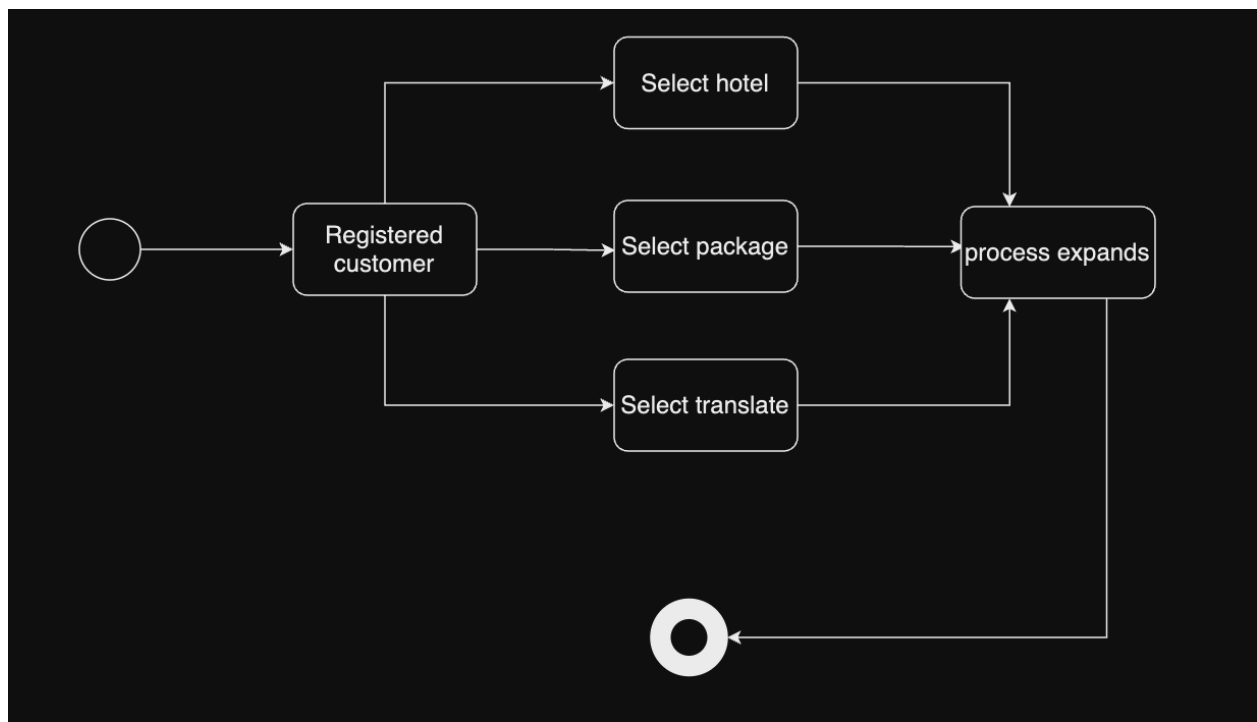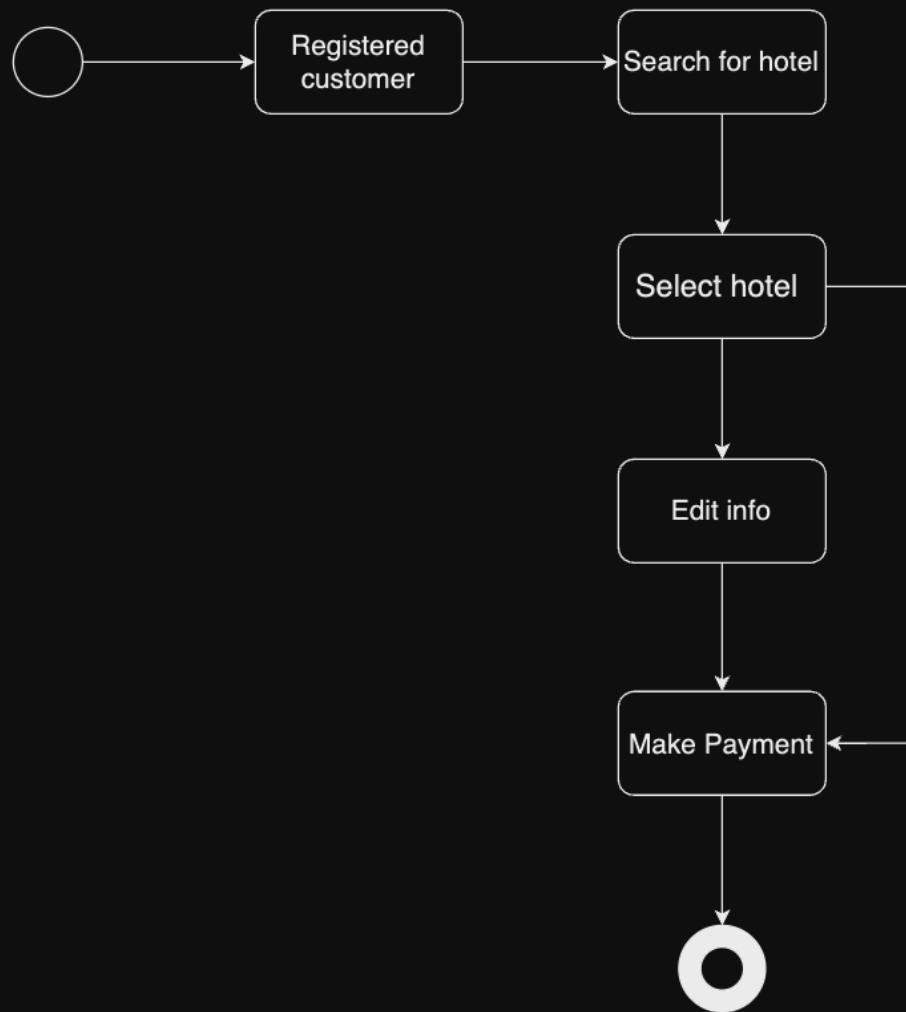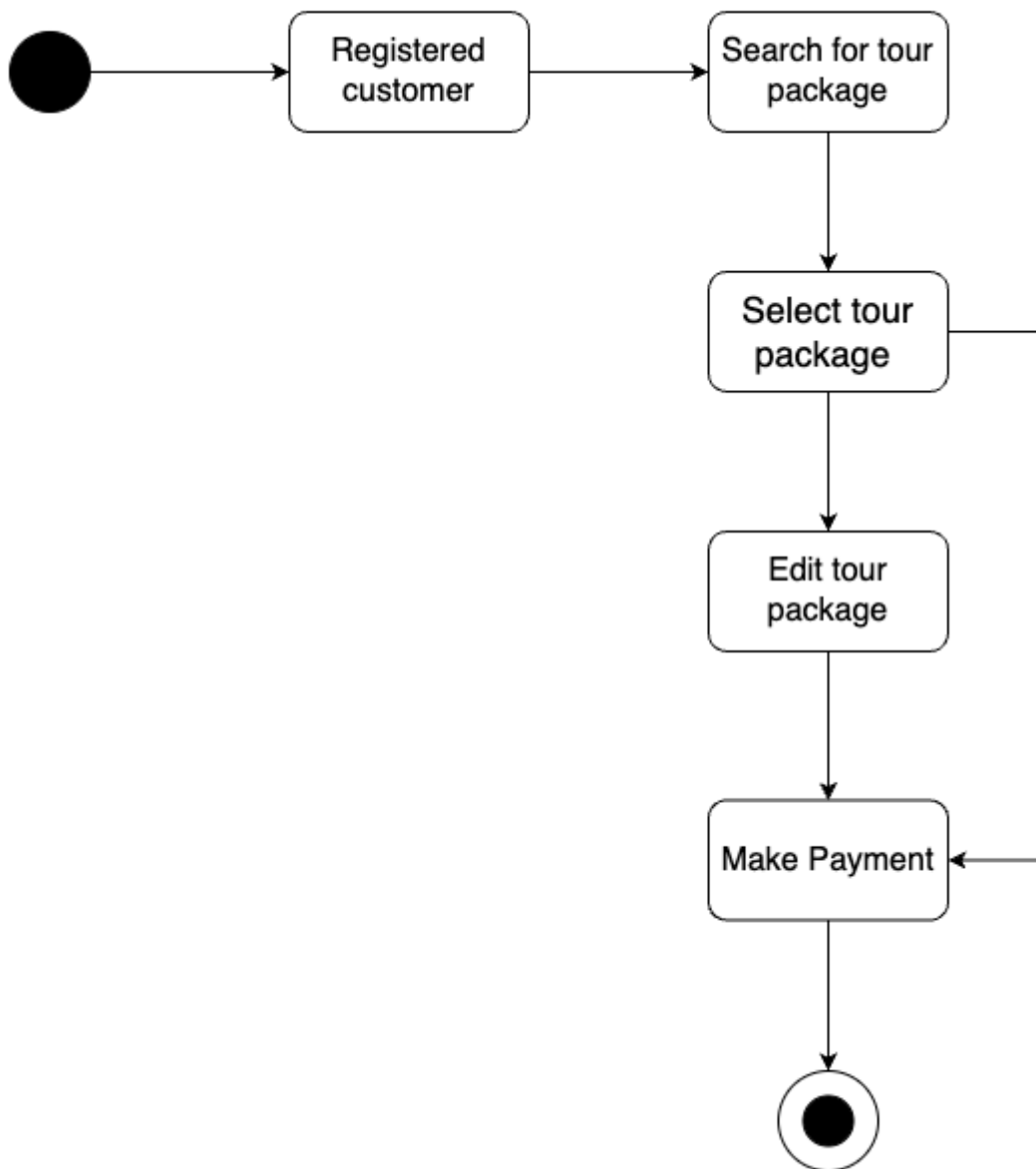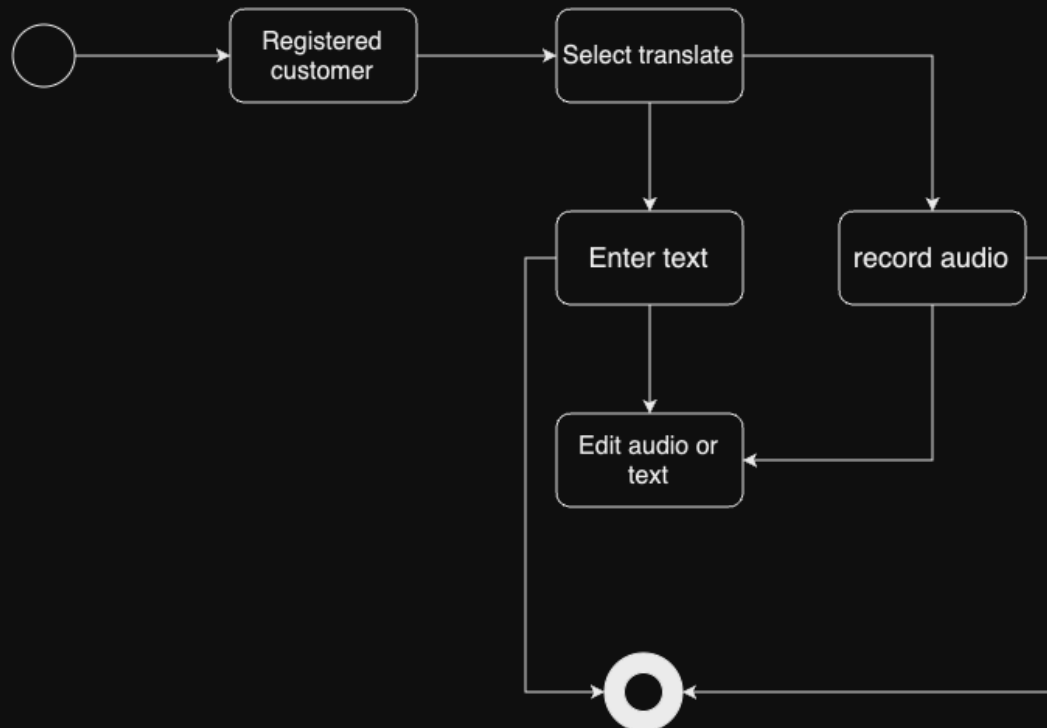## 8.1 Statechart Diagrams For "Booking Hotel"

8.2 Statechart Diagrams For "packages"

8.2 Statechart Diagrams For "Translate"

9. CRUD Matrix

CRUD MATRIX					
ACTIVITY	CUSTOMER	SERVICE PROVIDER	TRAVEL AGENT	ORDER	PAYMENT
ACCOUNT	CRUD	CRUD	CRUD		
LOGIN	R	R	R		
BOOKING	UD	R	R	C	
BOOKING STATUS	R	RU	R		
BOOKING DETAILS	R	RU	R	U	R
PAYMENT	CR	R	R	R	C
MAKE COMPLAIN	CR	R	R		
PROVIDE FEEDBACK	R	CR	CR		
ADD FEATURE	R	CRUD	R		
RATING	CR	R	R		