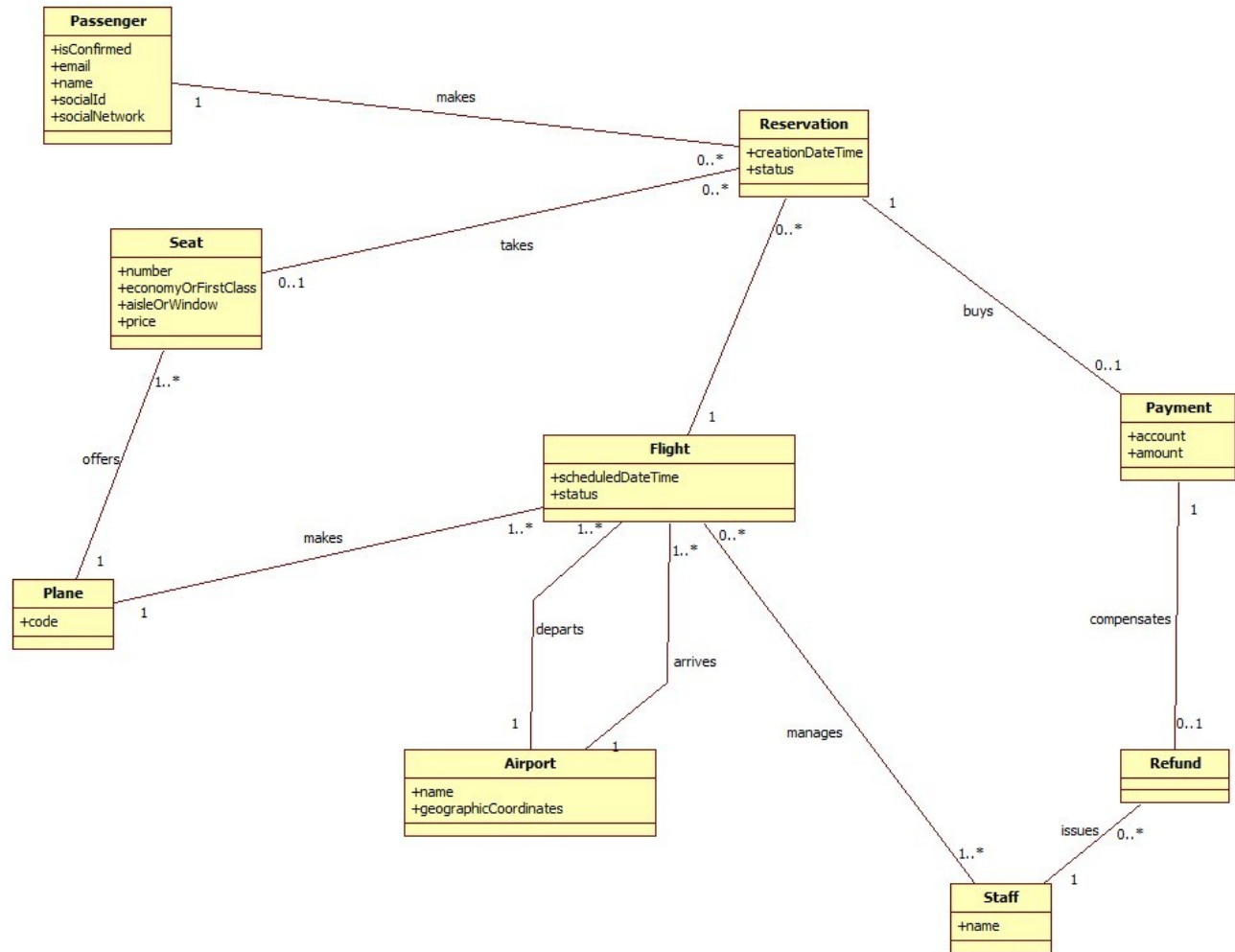


Air Ticket Reservation System Architecture and Design

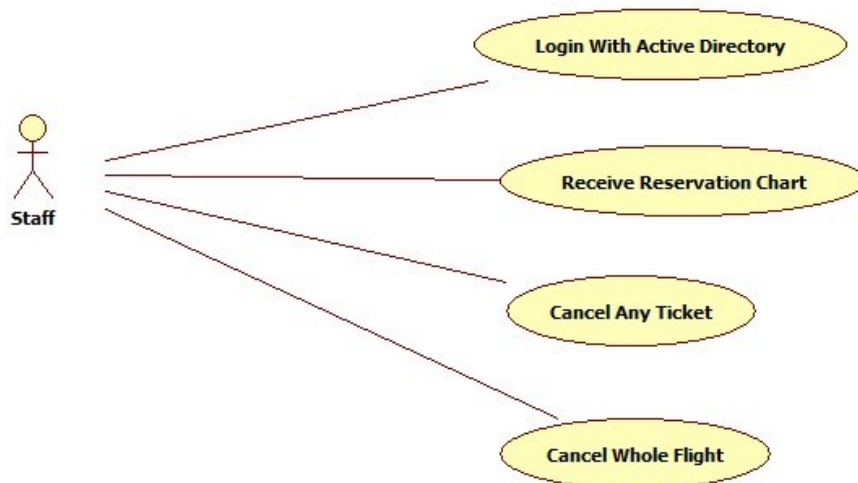
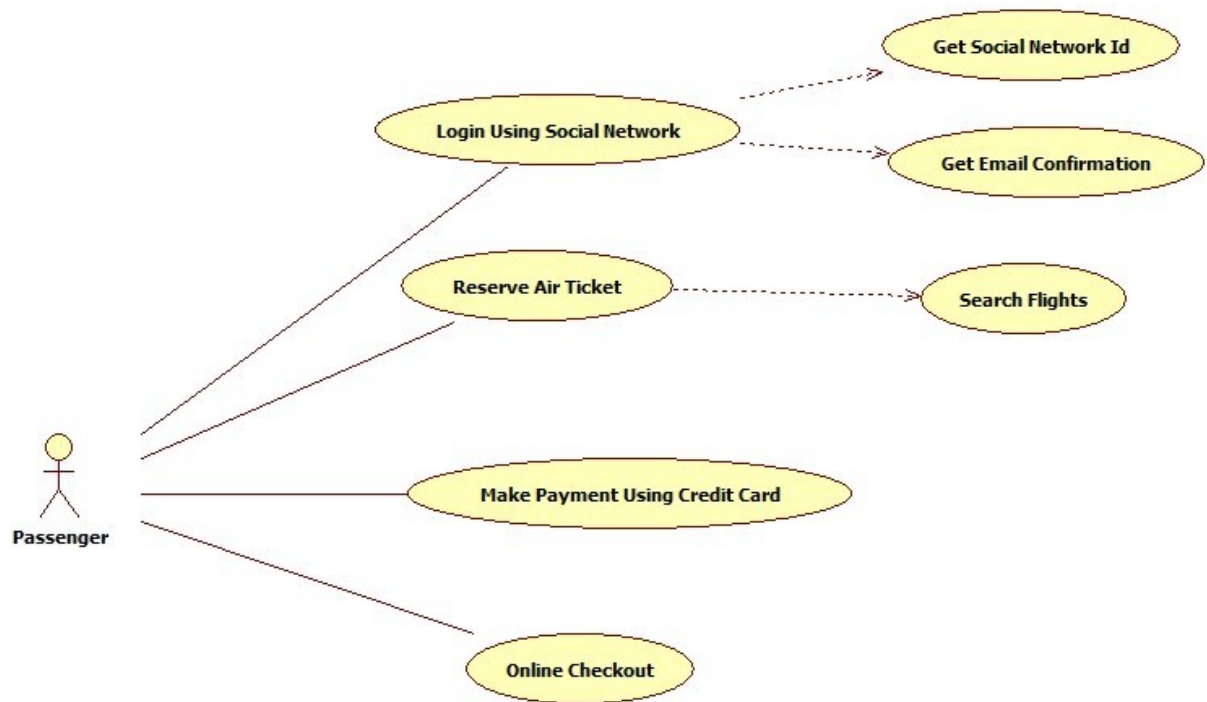
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Logical Data Model

This diagram illustrates the main persistent entities and their relationships.

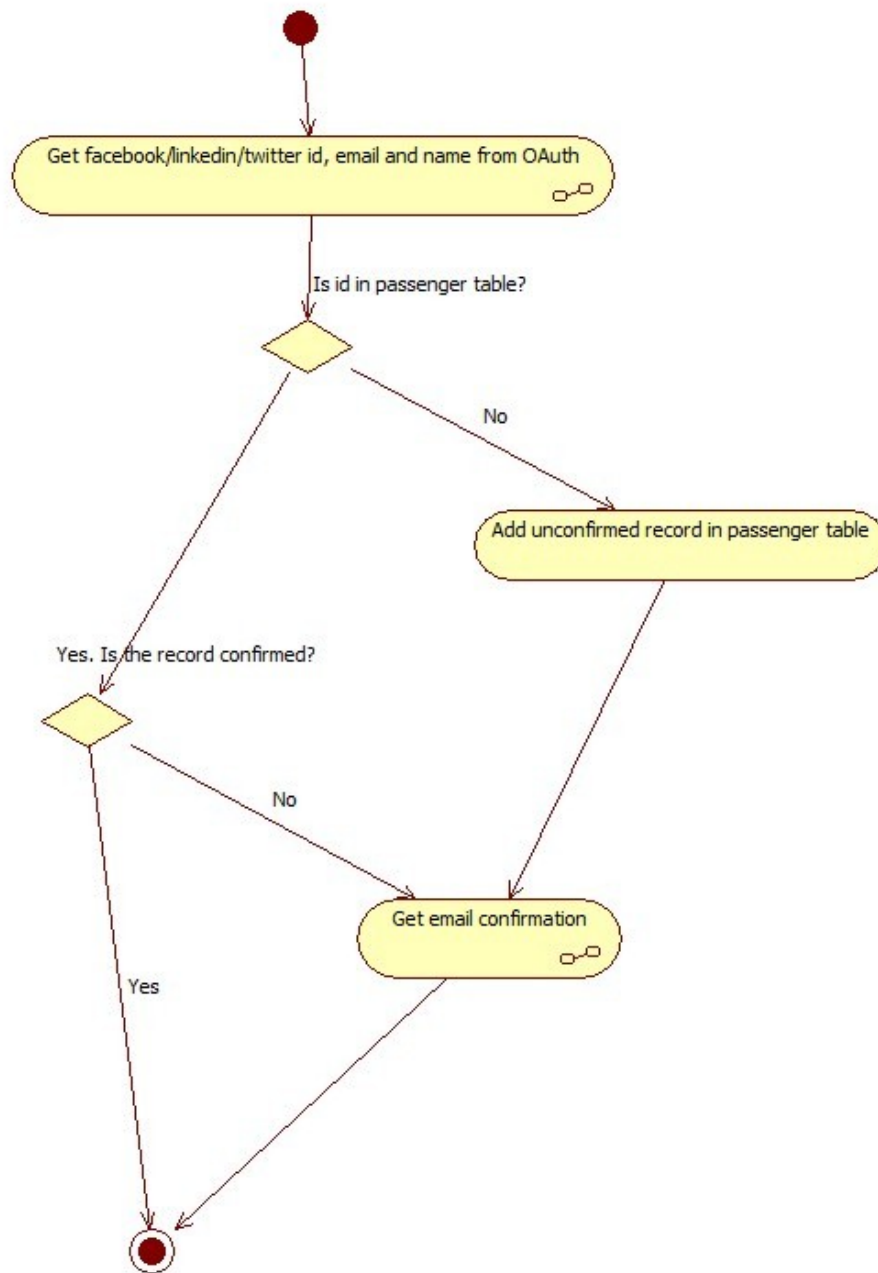


Use Case Diagram



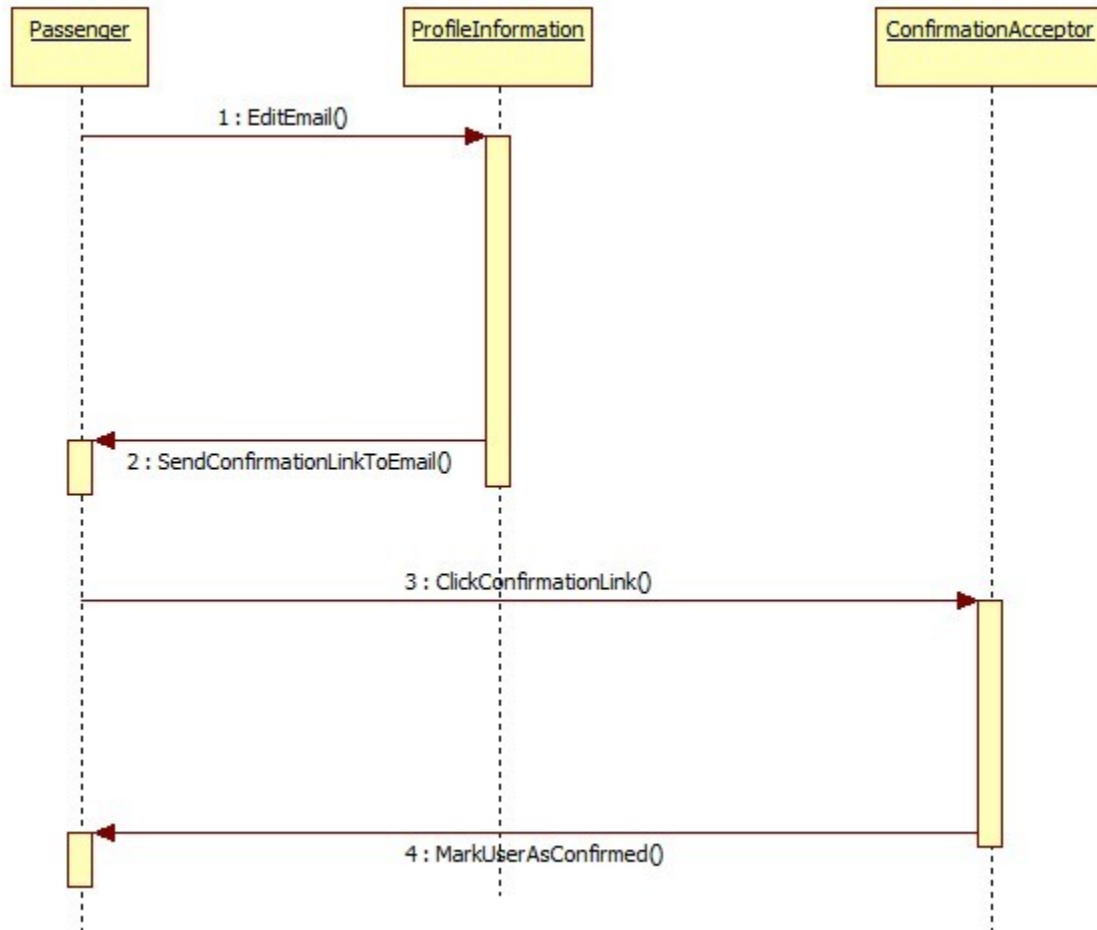
Login Using Social Network

Goal: create accounts to connect social media id with email.



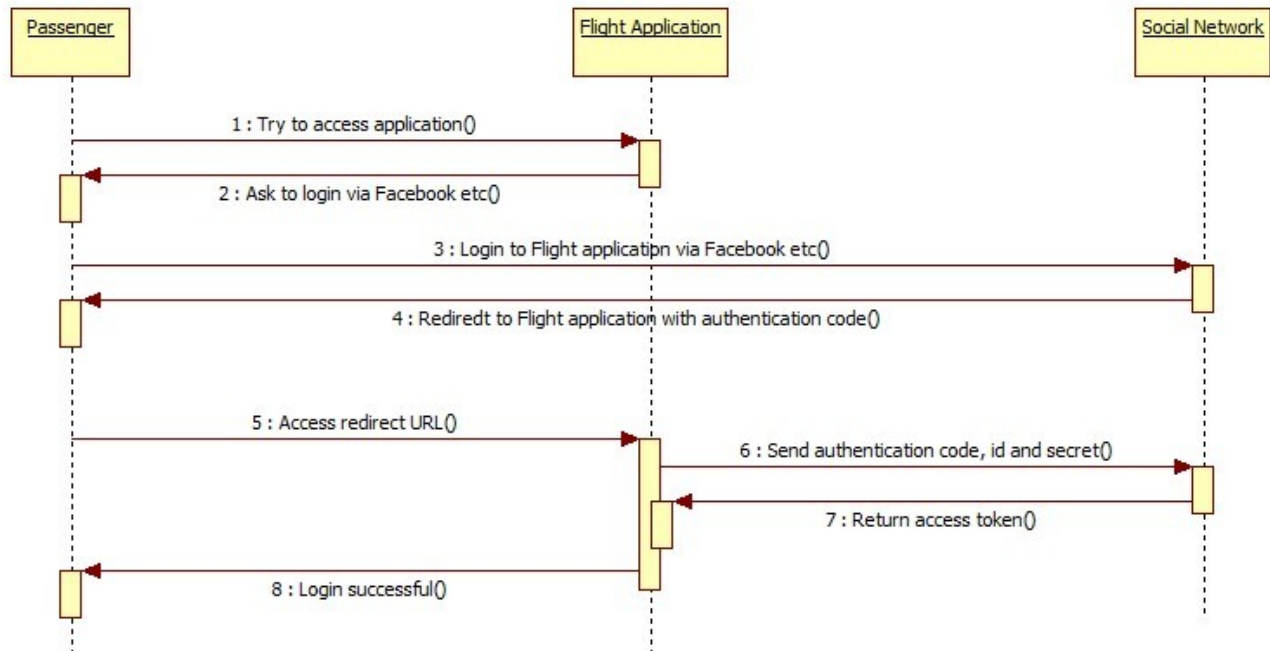
Get Email Confirmation

Goal: Get a working email address, which is essential for further communication.



Get Social Network Id

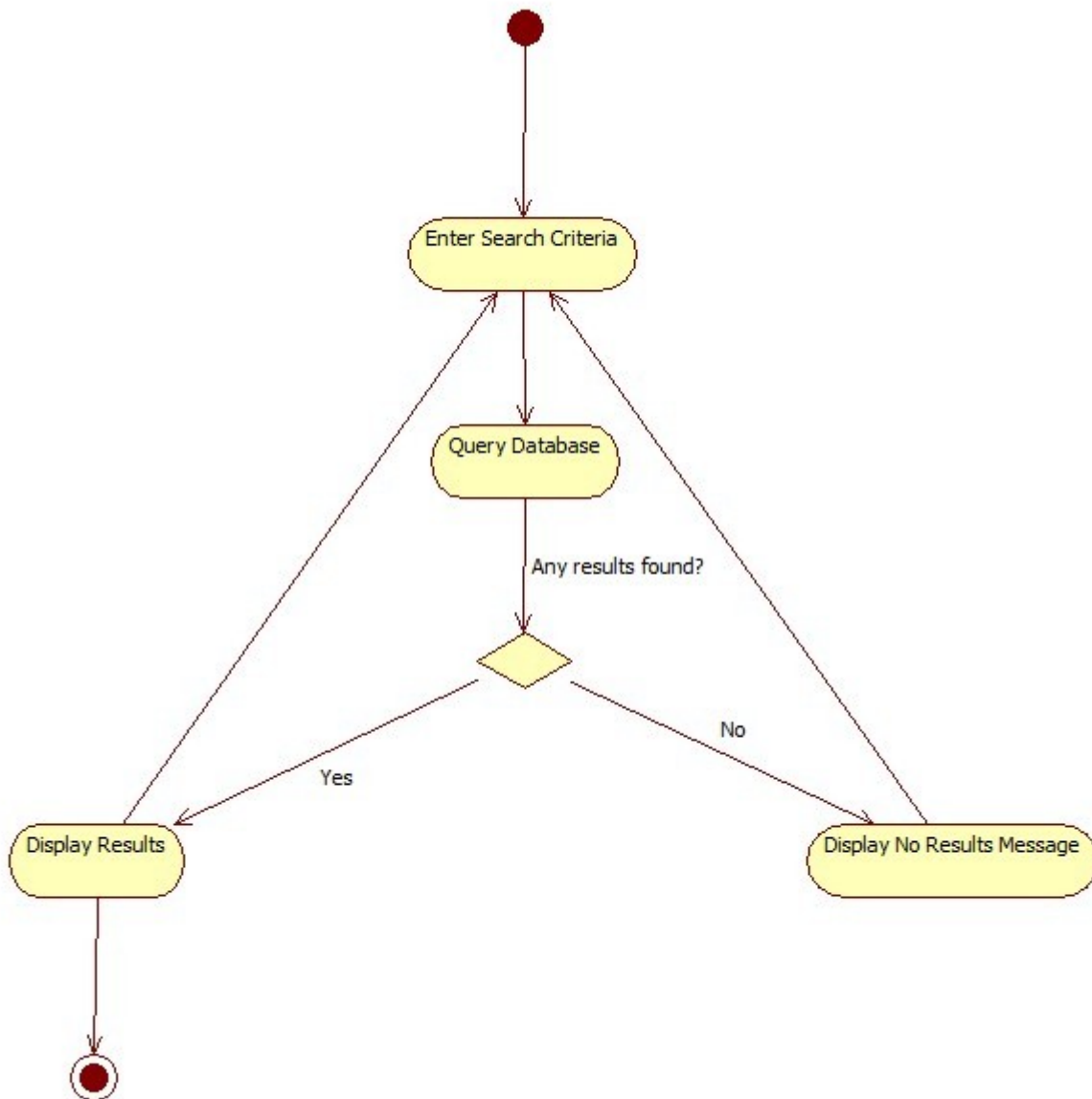
Goal: Obtain an access token, which can be sent to the Facebook etc. to access resources in these systems, related to the passenger who logged in.



Search Flights

Goal: obtain list of suitable flights.

Inputs: departure, arrival, class (economy/first), price, date and time interval.



Make Payment Using Credit Card

Goal: Obtain authorization and charge credit card.

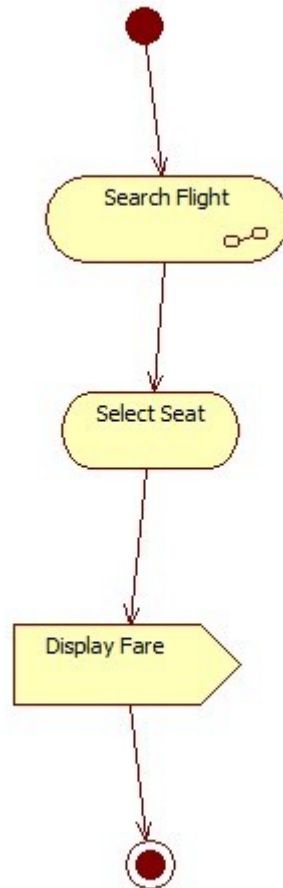
Main success scenario:

1. The customer enters and submits card details.
2. The system validates these values and either returns to the customer if there is an error or submits the payment to the Credit Card Service.
3. If the card payment is accepted, then the system notifies the customer of success. If not, then the error is logged, and the customer is notified of the failure.

Reserve Air Ticket

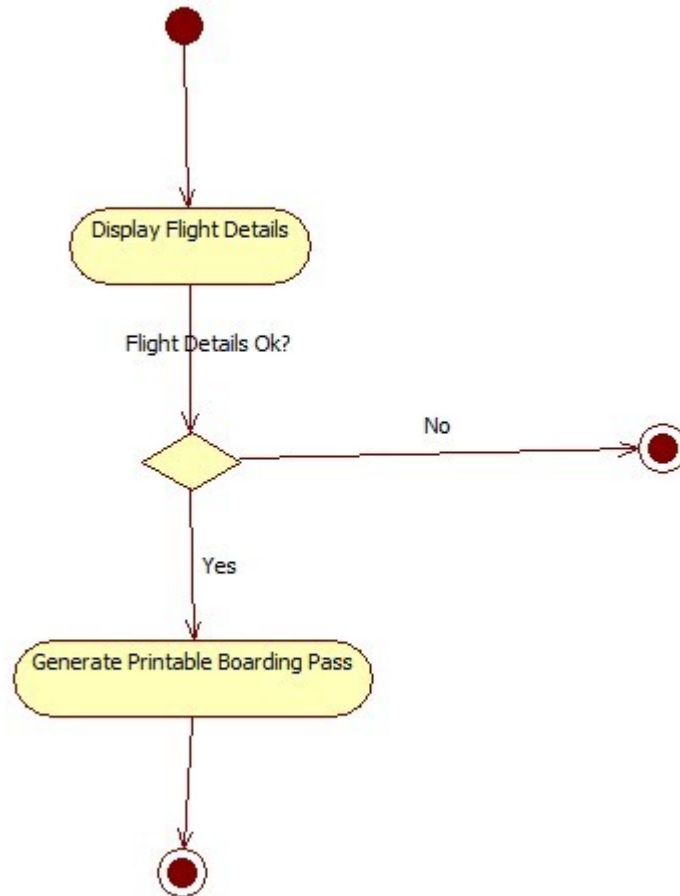
Goal: Mark a seat in chosen flight as reserved.

Outputs: Flight fare.



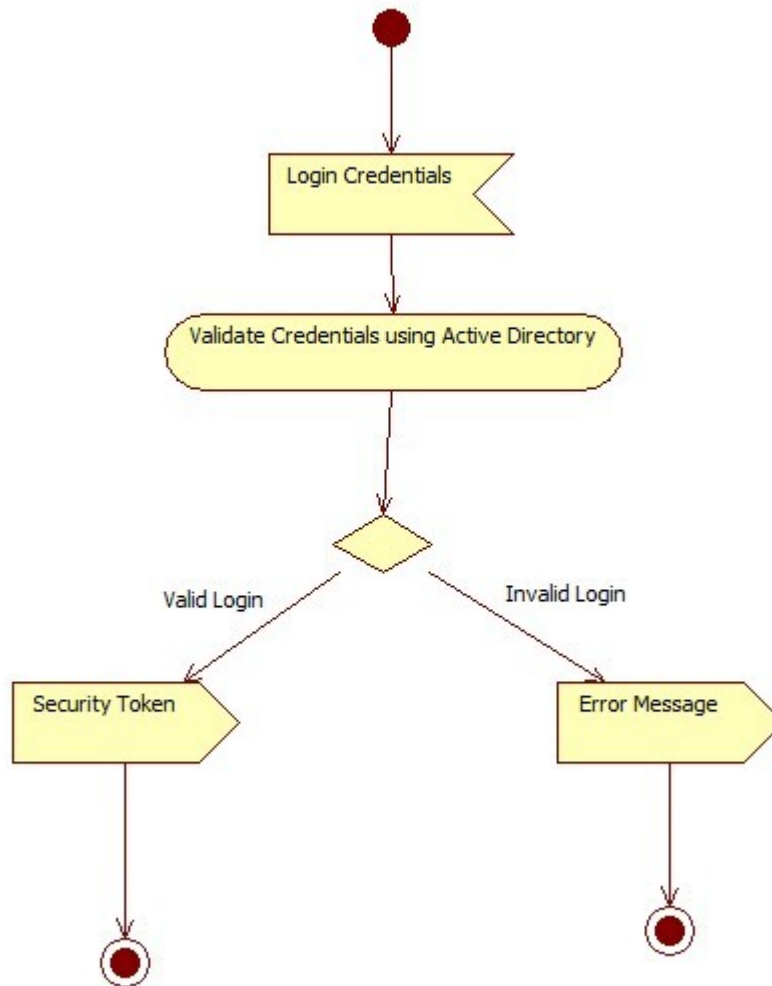
Online Checkout

Goal: print a boarding pass.



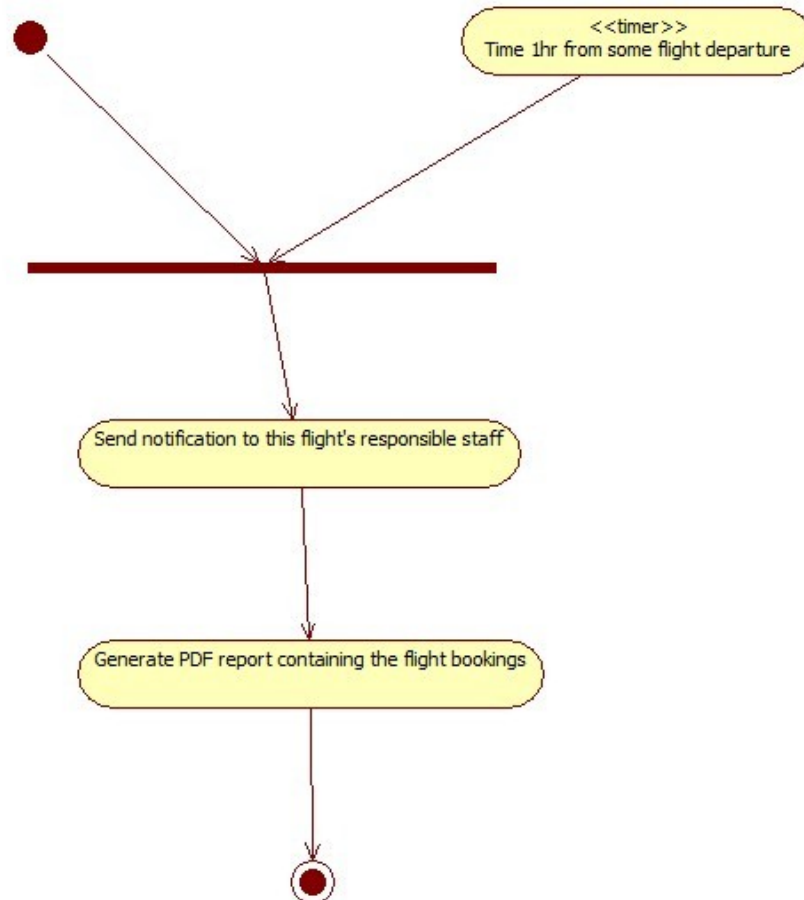
Login With Active Directory

Goal: access the system using Active Directory credentials.



Receive Reservation Chart

Goal: Get information to staff members who manage the flight.



Cancel Any Ticket

Goal: Manage passenger requests who want to get refund.

Main success path:

1. Mark reservation as cancelled, thus freeing up seat.
2. Send cancellation message in email.
3. Generate refund.

Cancel Whole Flight

Goal: Manage problem situations

Main success path:

1. Mark the flight as cancelled, so it no longer can be booked.
2. Mark all the reservations as cancelled.
4. Generate refunds for all the reservations.

TODO

- **Specify how to generate and process links, that do not require authentication**
- **Specify how to book a trip, that contains several flight legs.**