Model Driven Software Engineering

(COEN 6312)

Project Deliverable 4

Submitted to

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State Diagram

A state diagram defines the dynamic behaviour of the objects of any class. As the name suggests a state diagram indicates the various states of an object. At a time the object of a class remains in only one state until it receives a signal such as a method, operation, external or internal signals which triggers it into another state. An action is an instruction or a statement described using an action specification language.

2. User

2.1 State Machine Diagram

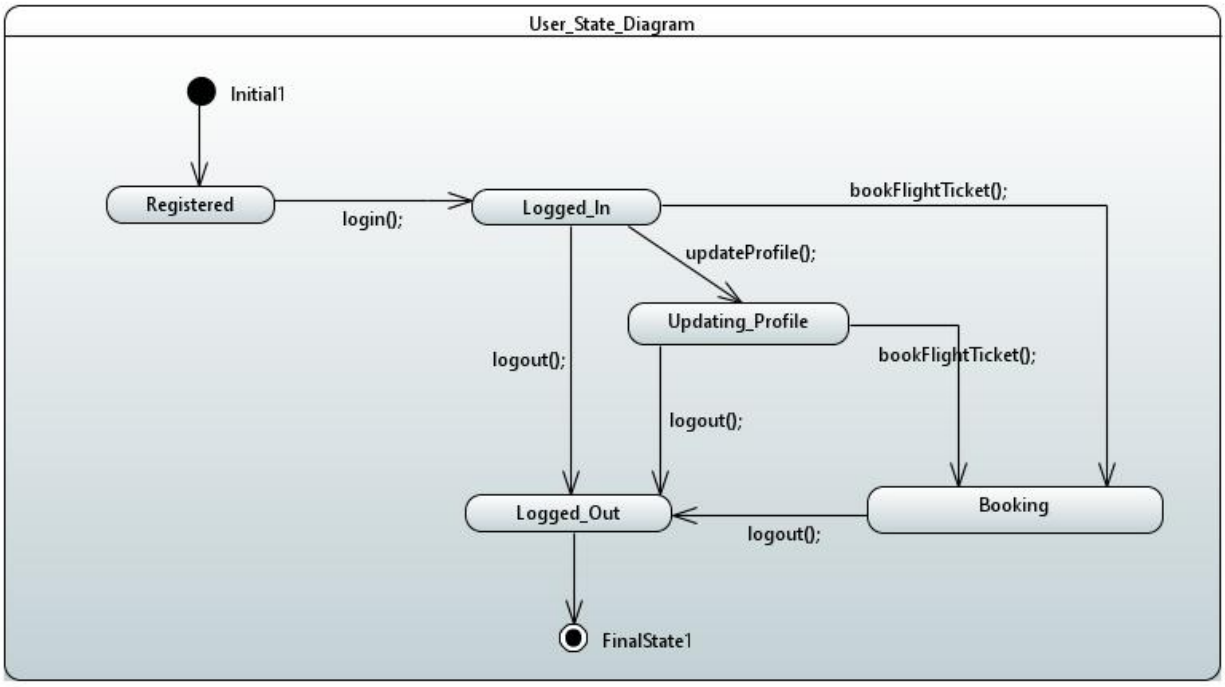

Figure 1: State Machine Diagram - User Class

2.2 Operations

- login(User usr)
    a. The user logs into the reservation system
- updateProfile(User usr)
    a. User can update his/her profile
    b. Subsequently the system is updated

- bookFlightTicket(Ticket tkt, User usr, Flight flt)
    a. The user can book the ticket
- logout(User usr)
    a. The user logs out on completion of task

3. Ticket

3.1 State Machine Diagram

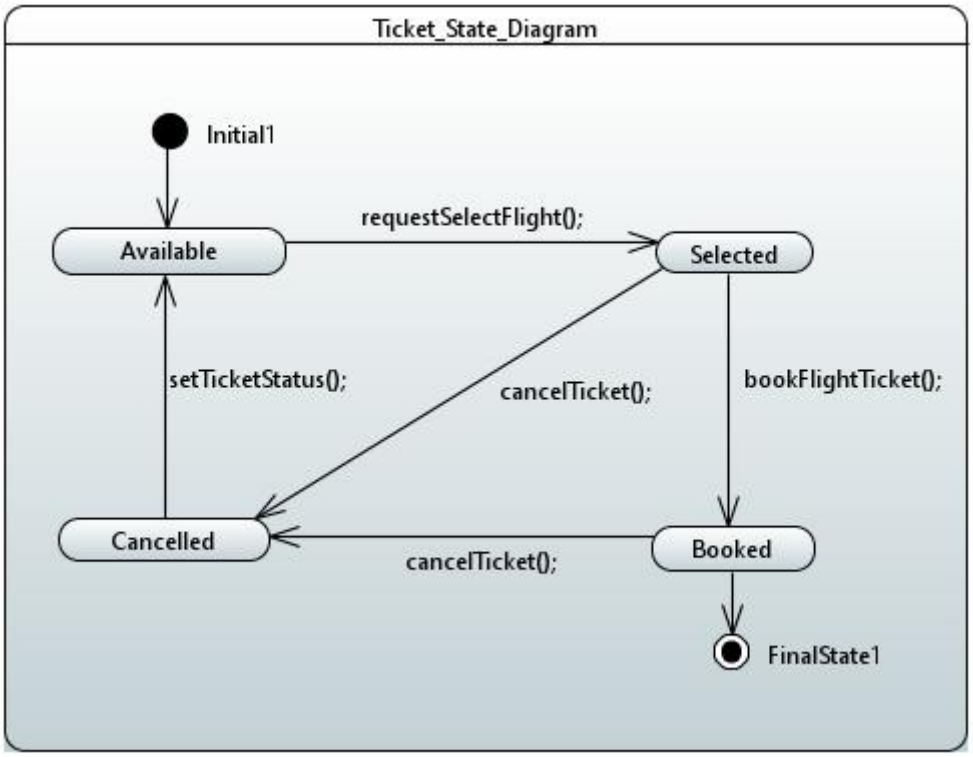

Figure 2: State Machine Diagram - Ticket Class

3.2 Operations

- requestSelectFlight(Ticket tkt, User usr, Flight flt)
    a. Desired flight can be requested by the user
- bookFlightTicket(Ticket tkt, User usr, Flight flt)
    a. The user can book the ticket
- cancelTicket(Ticket tkt, User usr)
    a. Ticket can be cancelled by the user
- setTicketStatus()
    a. Ticket status gets updated to available if ticket is cancelled

4. Payment

4.1 State Machine Diagram

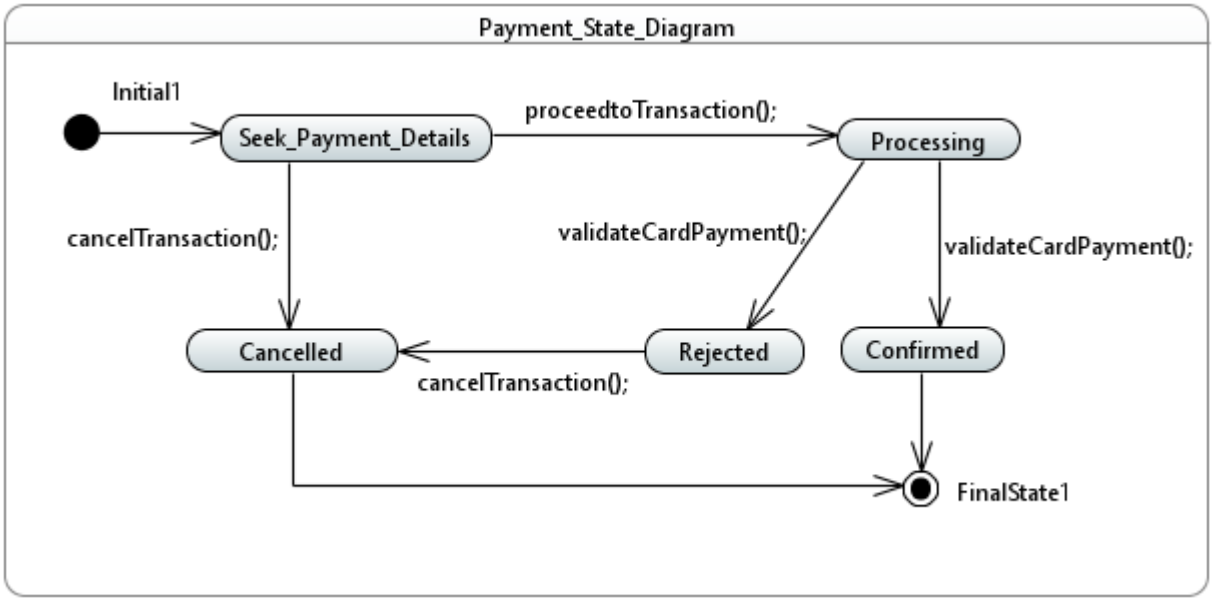

Figure 3: State Machine Diagram - Payment Class

4.2 Operations

- cancelTransaction(Payment pmt, User usr)
    a. Transaction can be cancelled by the user.
- validateCardPayment(Payment pmt, User usr)
    a. Card Payment is validated
    b. Status is updated - Confirmed or Rejected
- proceedtoTransaction(Payment pmt, User usr)
    a. User enters card details to book flight ticket and proceeds to transaction