

EECS3311 Course Project – Deliverable 1

System: YorkU Conference Room Scheduler

Team Members:

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Part I: Requirements Elicitation and Modeling

Task 1 – Use Case Diagrams

Student

- Create an account with a unique email and strong password (REQ 1)
- Verify University account (REQ 1)
- See available rooms (REQ 7)
- Provide Student ID (REQ 8)
- Book room (REQ 3)
- Pay deposit and hourly rate of \$20/hr (REQ 3&4)
- Choose payment method (REQ 10)
- Edit booking before sign in (REQ 8)
- Cancel booking before sign in (REQ 8)
- Extend booking if possible (REQ 9)

Faculty

- Create an account with a unique email and strong password (REQ 1)
- Verify University account (REQ 1)
- See available rooms (REQ 7)
- Book room (REQ 3)
- Pay deposit and hourly rate of \$30/hr (REQ 3&4)
- Choose payment method (REQ 10)
- Cancel booking before sign in (REQ 8)
- Extend booking if possible (REQ 9)
- Edit booking before sign in (REQ 8)

Staff

- Create an account using a unique, valid email and a strong password (Req1)
- Book available rooms at an hourly rate of \$40/hr (Req3)
- Deposit a one hour fee, if not checked in within 30 minutes of start time, deposit is lost (Req4)
- Cancel/edit bookings before the start time (Req8)
- Check for available rooms based on capacity and room location (Req7)
- Extend room time before expiry if the room is available (Req9)
- Pay with credit cards or debit cards (Req10)

External Partner

- Create an account using a unique, valid email and a strong password (Req1)
- Book available rooms at an hourly rate of \$50/hr (Req3)
- Deposit a one hour fee, if not checked in within 30 minutes of start time, deposit is lost (Req4)
- Cancel/edit bookings before the start time (Req8)
- Check for available rooms based on capacity and room location (Req7)
- Extend room time before expiry if the room is available (Req9)
- Pay with credit cards or debit cards (Req10)

Admin Account (Chief of Events)

- Generate administrator accounts for room management (REQ 2)
- Create, enable and disable administrator accounts (REQ 2)
- View room management made by other admin (REQ 6)
- Review and change room status, maintenance status and admin actions (REQ 6)
- Access system logs for audits and accountability (REQ 2 & 6)

Secondary Actors:

University Verification

- Validate university email and credentials during account creation (Req1)
- Confirm student, faculty, or staff status before granting account access (Req1)
- Communicate verification results to the system for approval or denial (Req1)

Payment Processing

- Process deposits and booking payments for all users (Req4, Req10)
- Support credit card, debit card, and institutional billing methods (Req10)
- Refund or adjust payments when bookings are canceled before start time (Req8)
- Record and confirm successful transactions with the system (Req4, Req10)

Sensor System

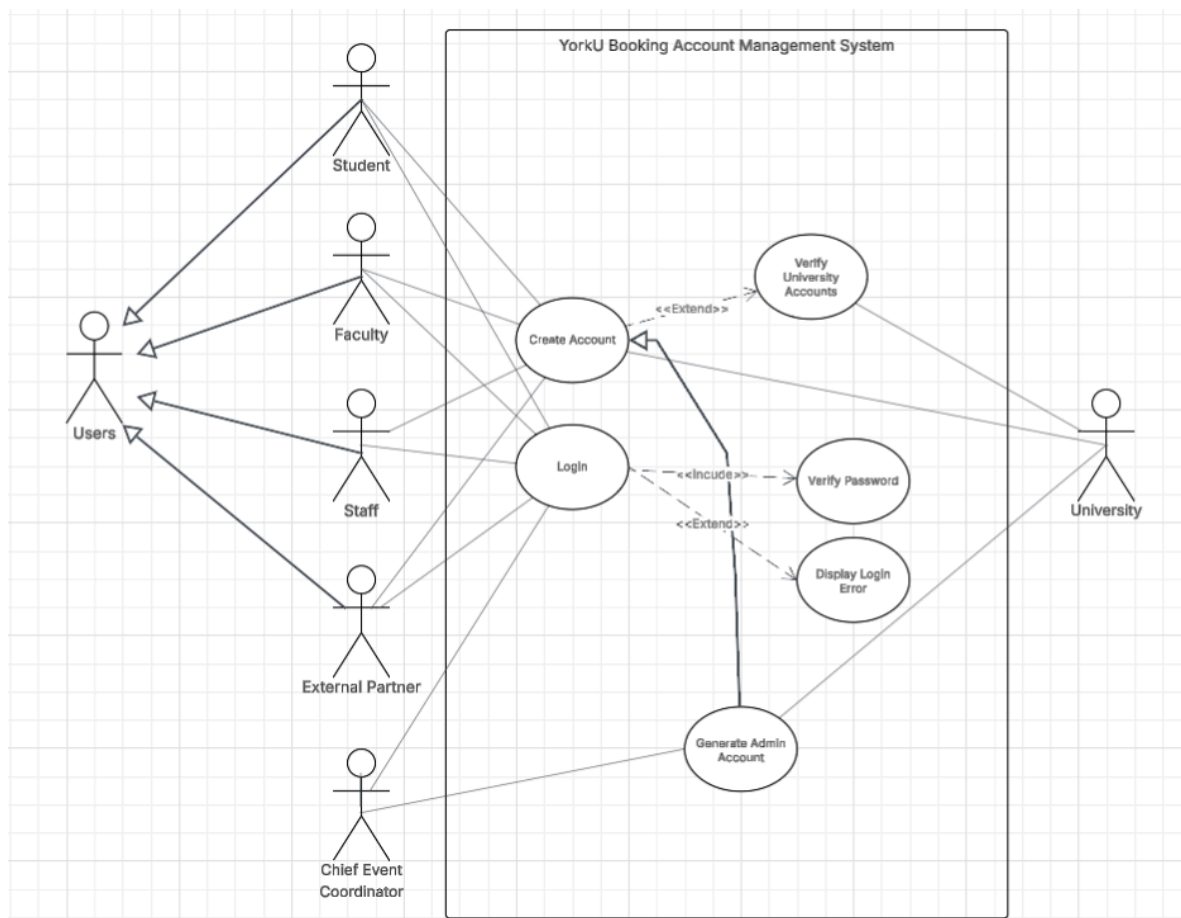
- Detect room occupancy through motion or presence sensors (Req5)
- Scan user ID badges to confirm check-in and validate booking (Req5)
- Report no-shows if check-in does not occur within 30 minutes (Req4, Req5)
- Send real-time occupancy data to the reservation system (Req5)

Reservation System

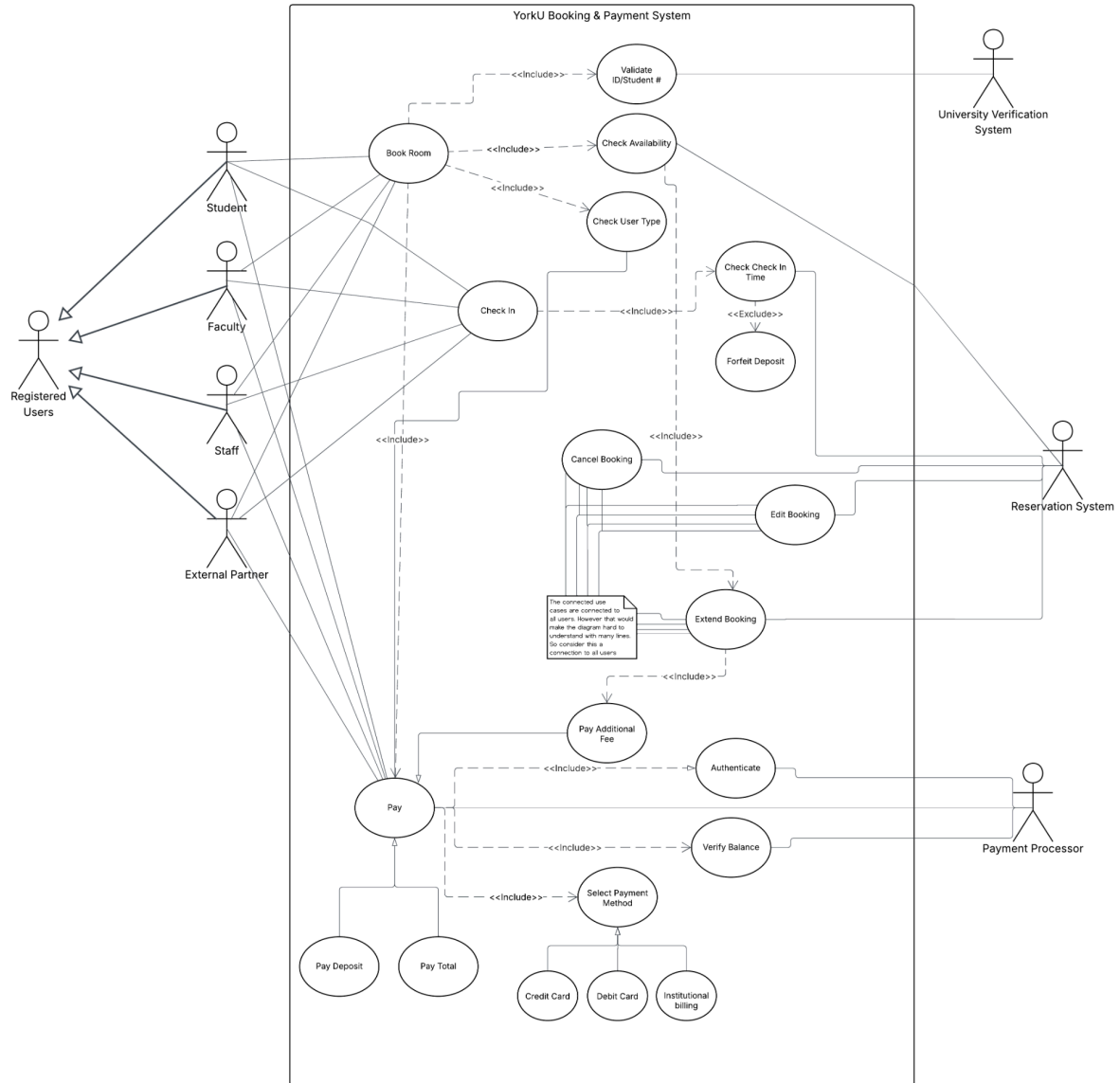
- Store and manage room details such as ID, capacity, and location (Req7)
- Handle booking creation, modification, and cancellation requests (Req8)
- Update room availability and handle extensions before expiry (Req9)
- Integrate with payment, sensor, and verification systems for full functionality (Req4, Req5, Req10)

Scenarios:

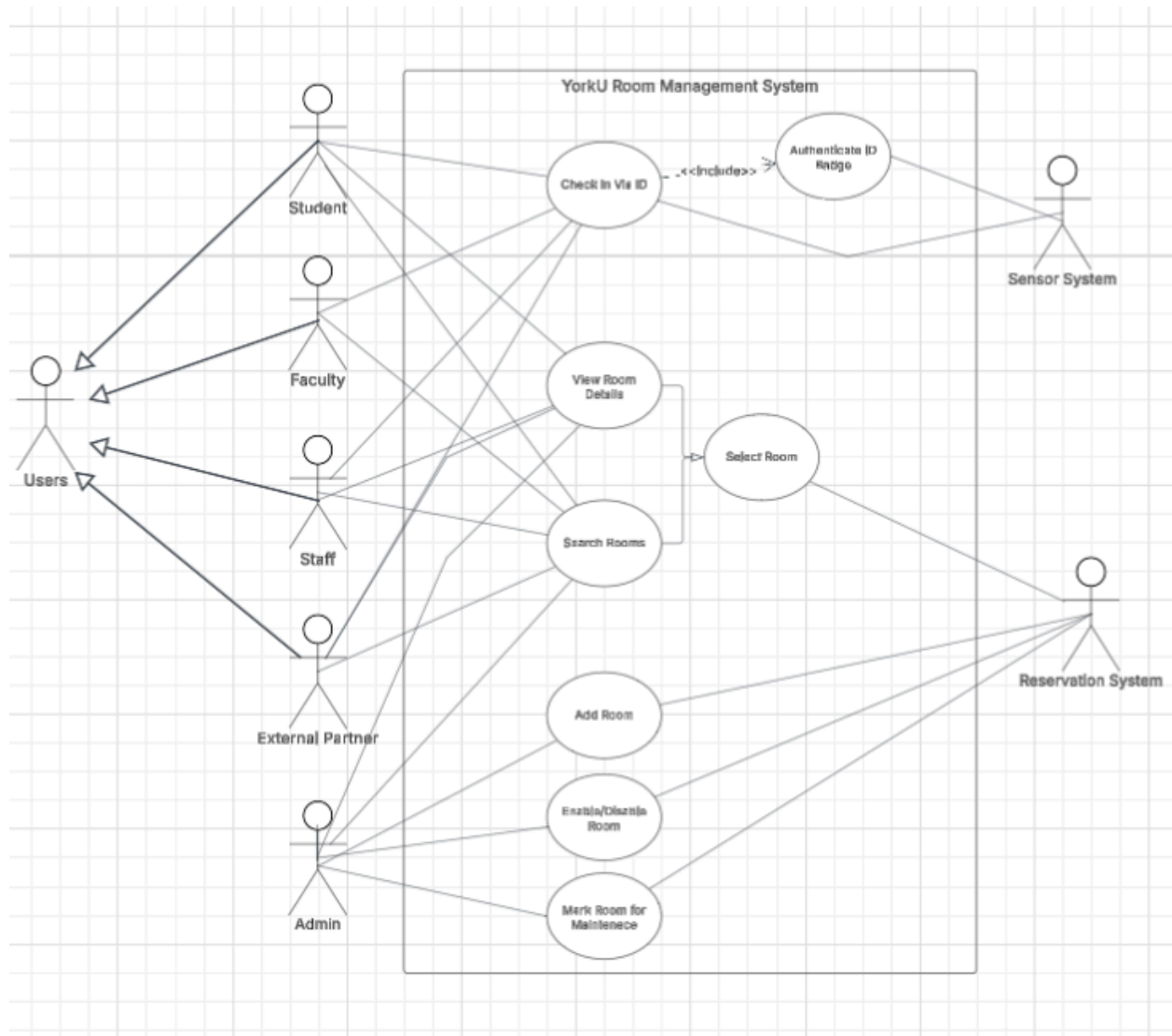
1. Account Management (REQ 1, 2)



2. Booking & Payment (REQ 3, 4, 8, 9, 10)



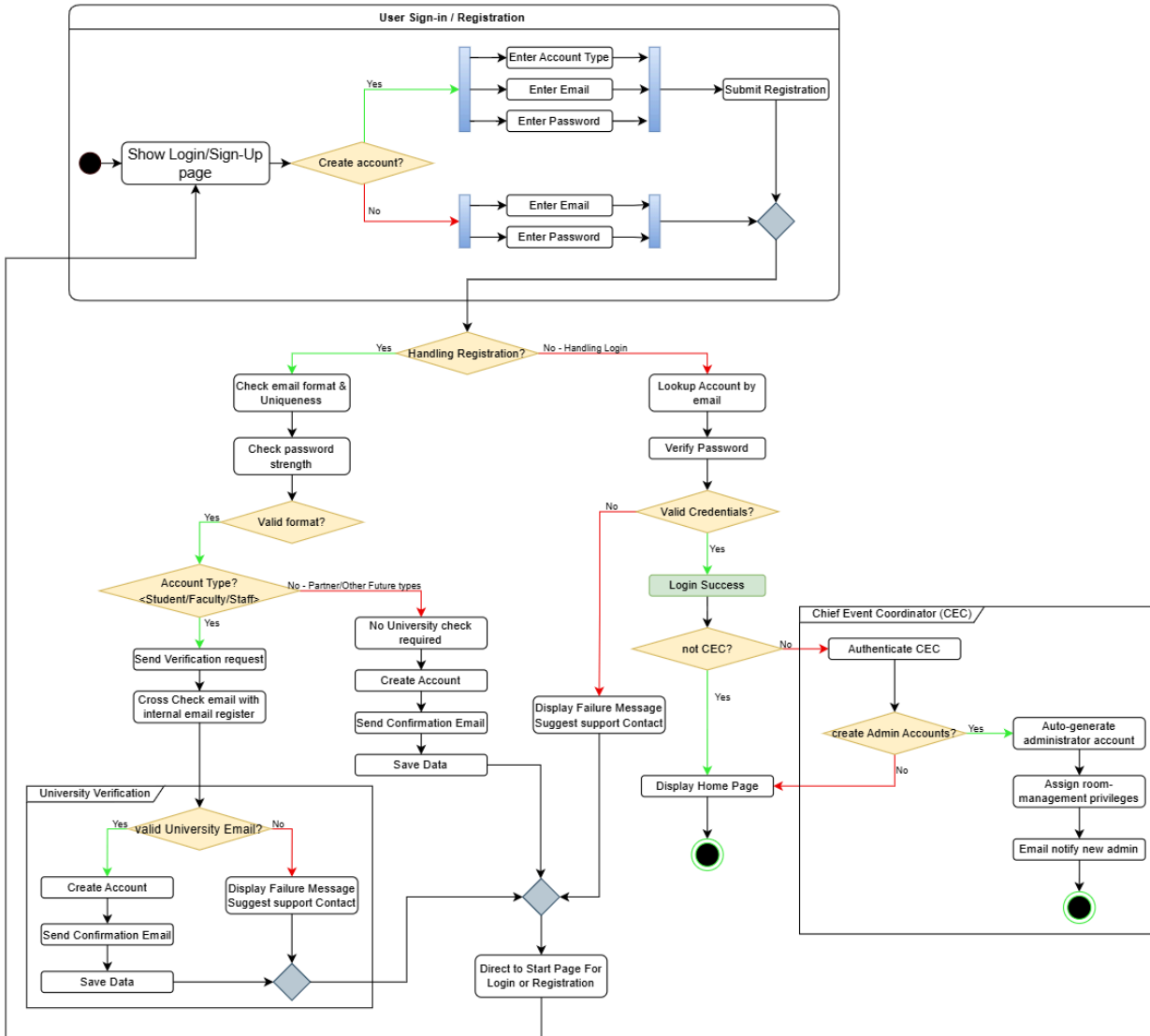
3. Room Management (REQ 5, 6, 7, 8)



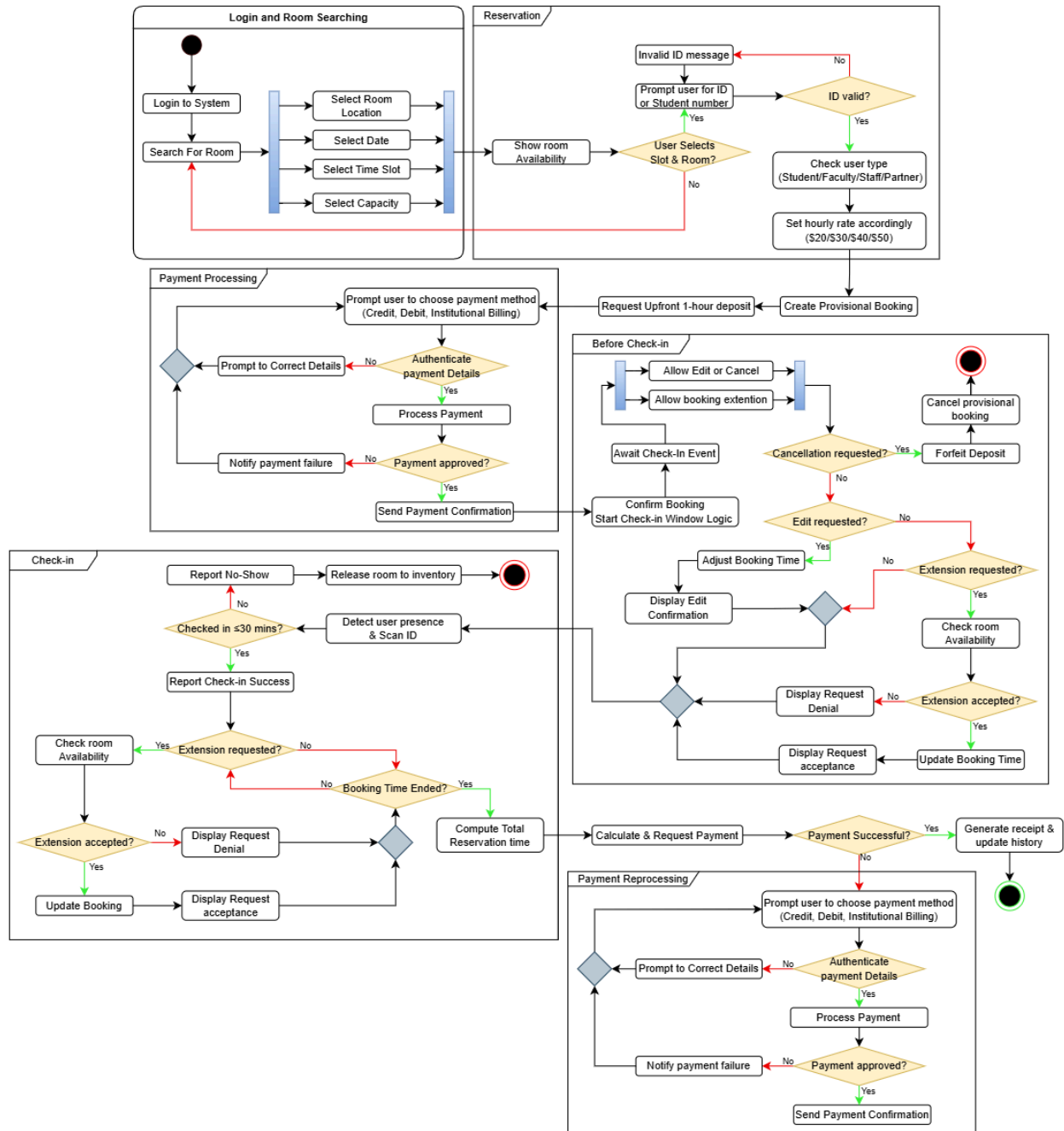
Activity Diagrams

Scenarios:

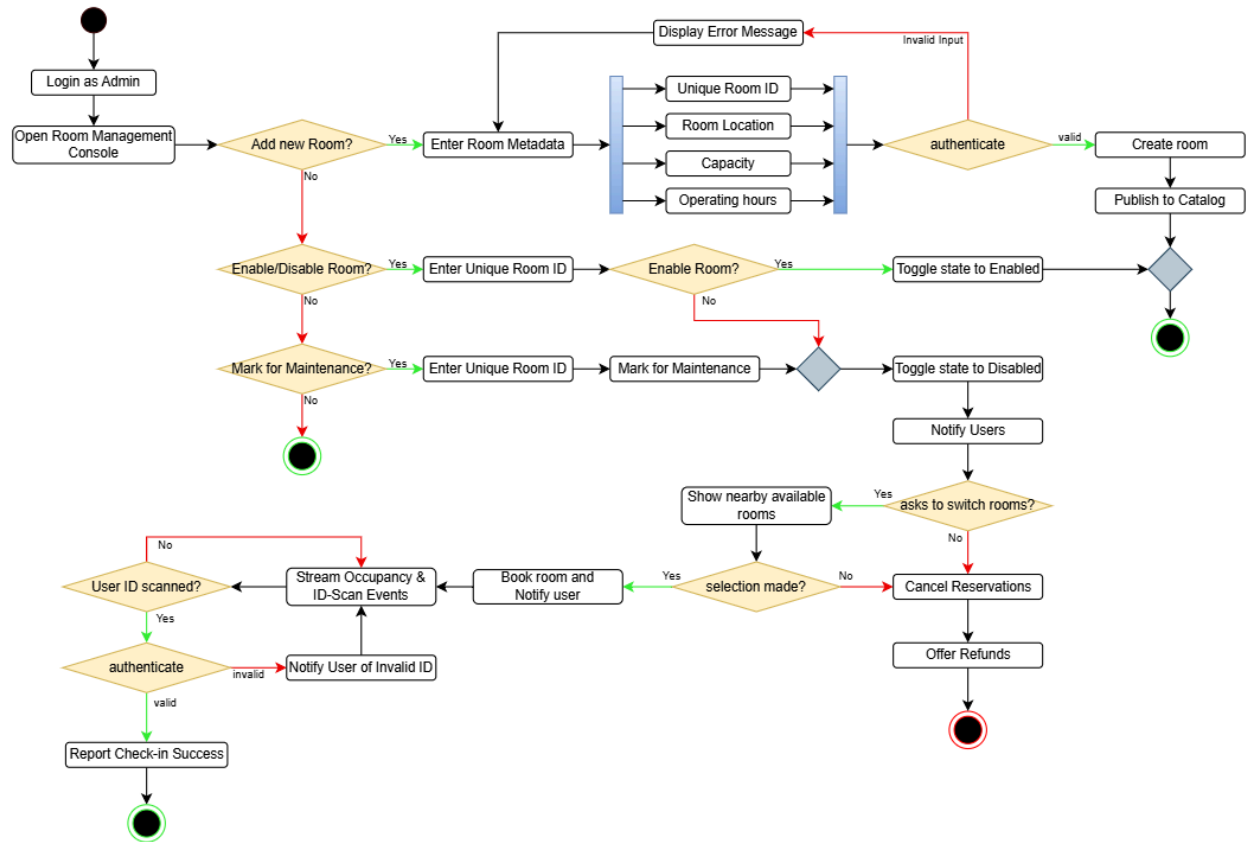
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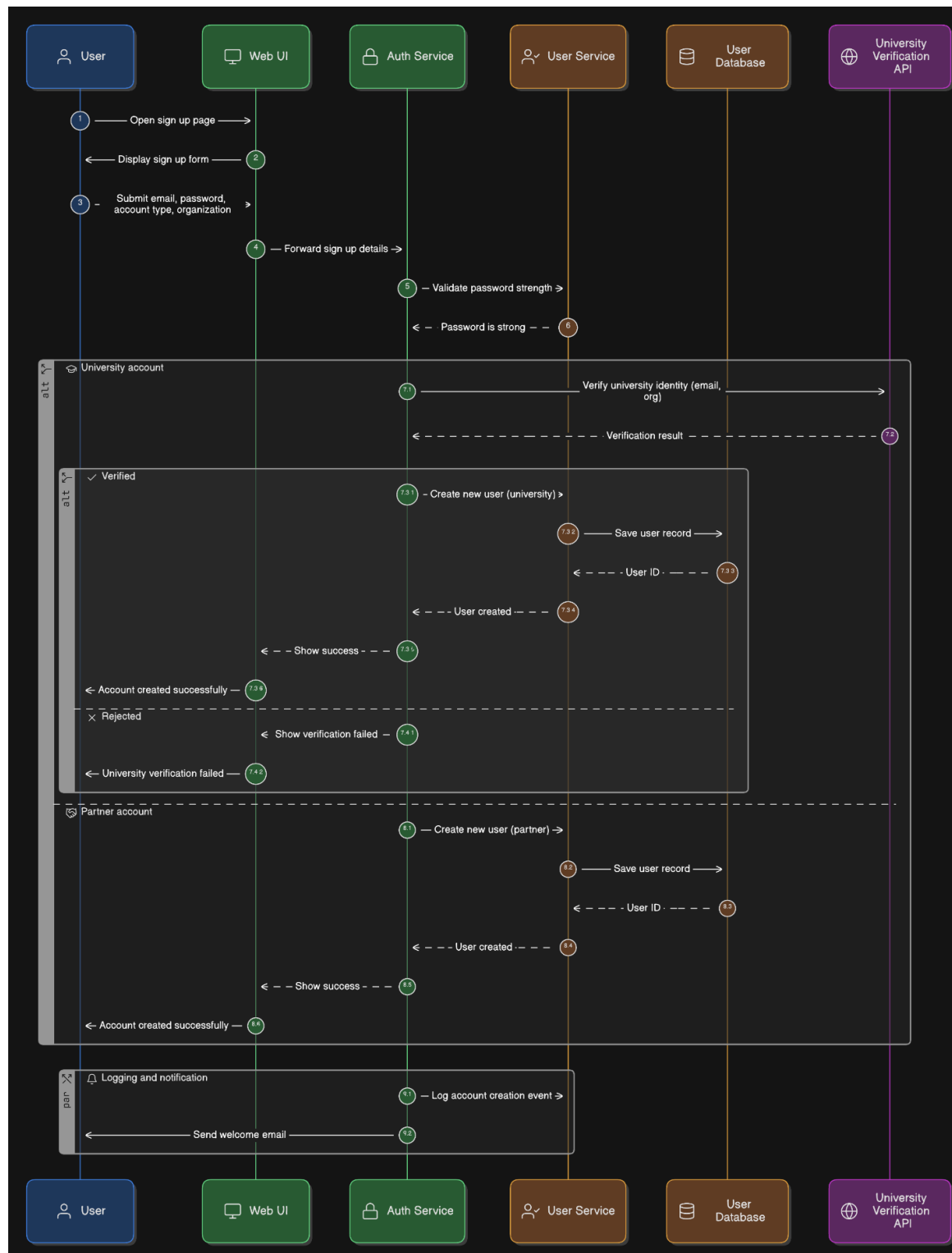


3. Room Management (REQ 5, 6, 7, 8)

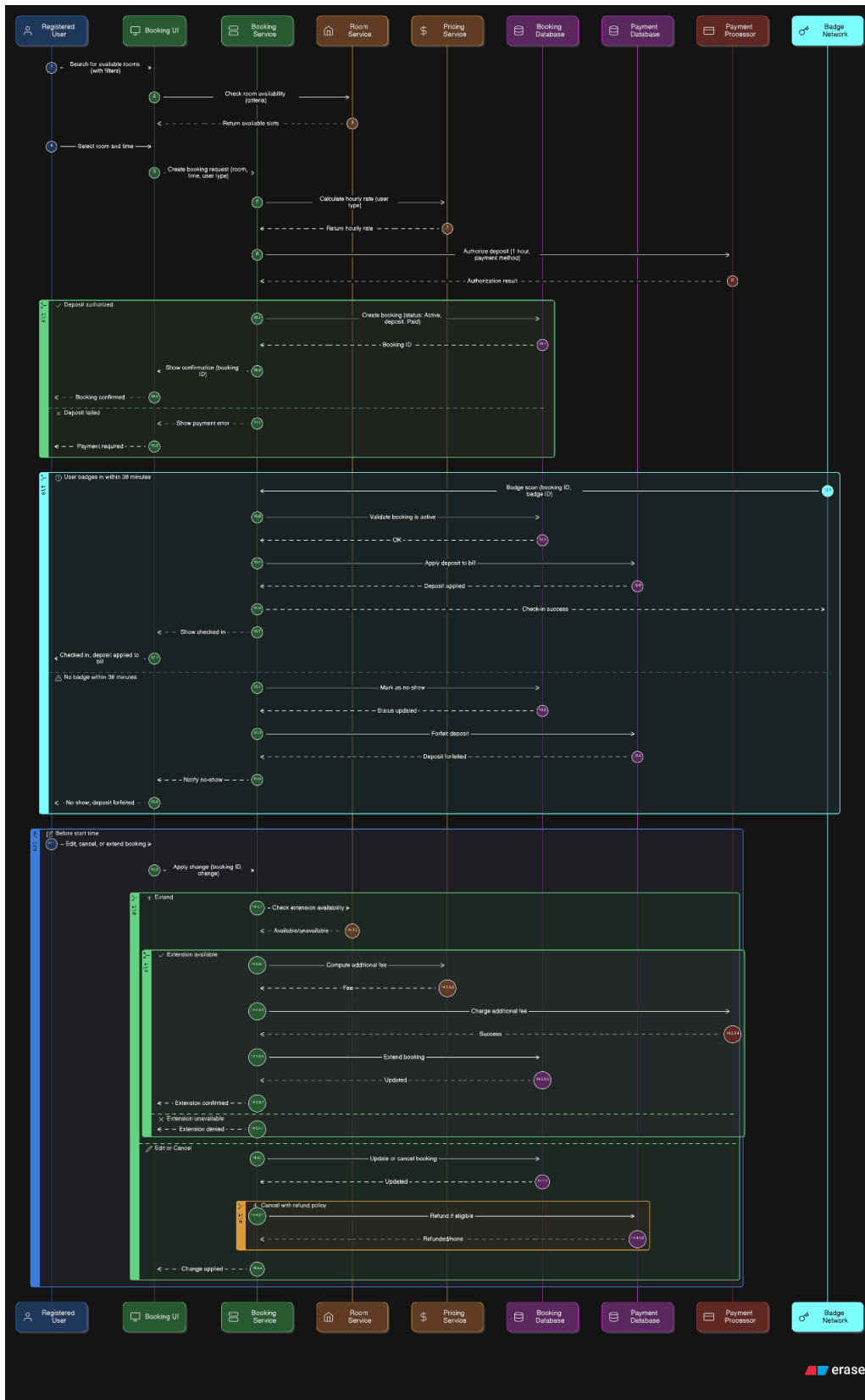


Sequence Diagrams:

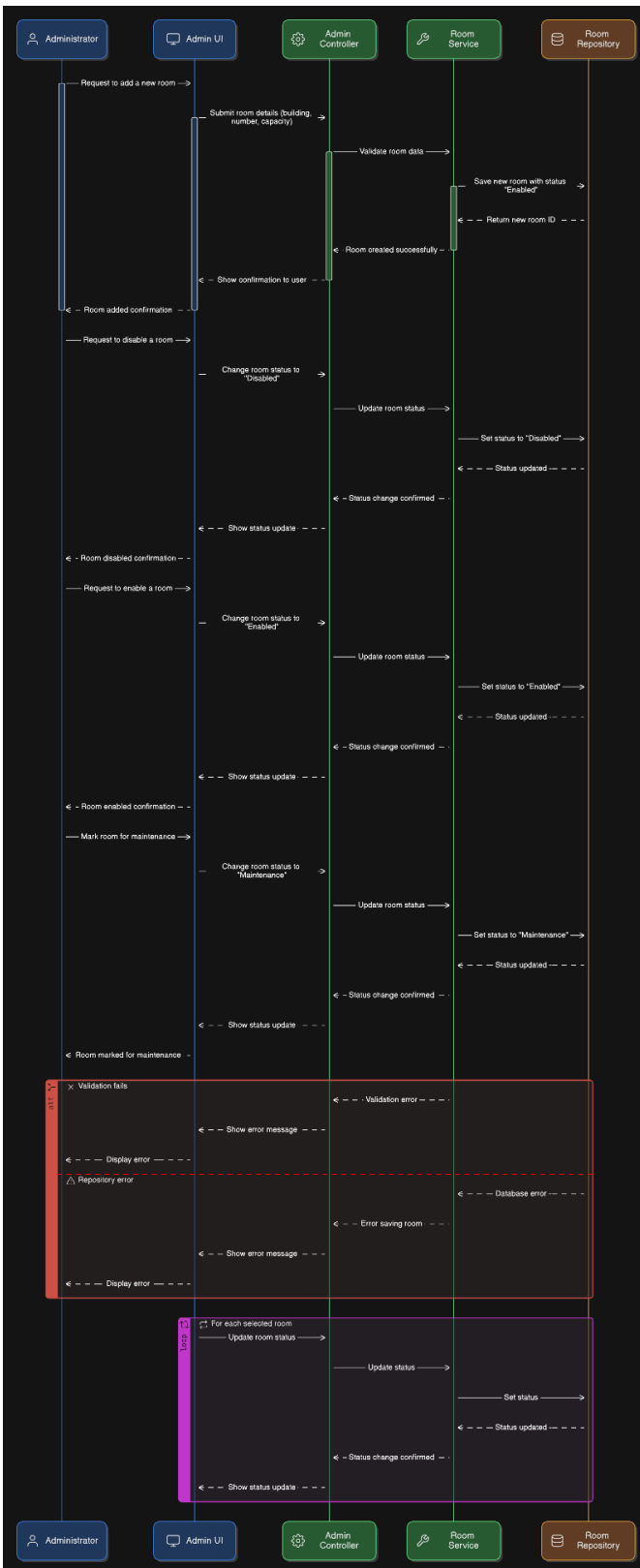
1:



2:



3:



Part 2:

