

KASHMALA ZEB

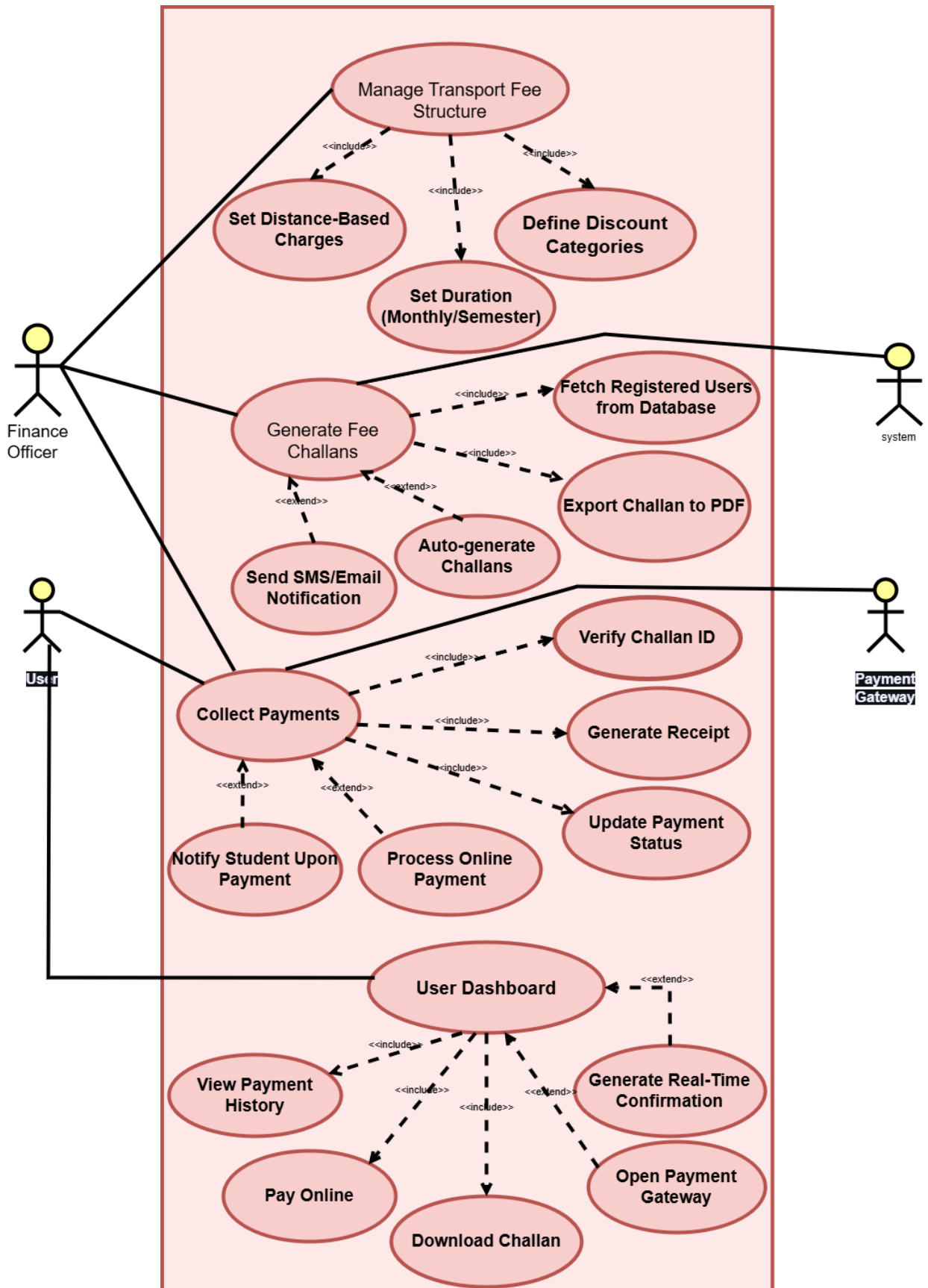
SP23-BSE-048

ASSIGNMENT :01

SUBMITTED TO: MUKHTIAR ZAMIN

DATE: 03/05/2025

USE CASE DIAGRAM:



Fully Dressed Use Cases

1. Manage Transport Fee Structure

Use Case ID	UC1
Use Case Name	Manage Transport Fee Structure
Actors	Primary: Finance Officer
Trigger	Admin/Officer wants to define or update transport fee structure
Description	Allows defining fee slabs based on user type, location, distance, and applicable discounts
Preconditions	Finance Officer must be logged in with permission

Postconditions	Fee slabs saved and reflected in challan generation
Main Flow	<ol style="list-style-type: none"> 1. Officer logs in 2. Navigates to fee config 3. Enters user-type, route, and slab details 4. Adds discounts if needed 5. Saves structure
Alternative Flow	Officer edits existing structure
Includes	<ul style="list-style-type: none"> - Admin authentication - User category validation
Extends	- N/A
Exceptions	<p>Fields missing</p> <p>Invalid input</p>

Business Rules	Only Admin/Finance roles can change fee structure
Assumptions	All fees are defined at the start of each semester

2. Generate Fee Challans

Use Case ID	UC2
Use Case Name	Generate Fee Challans
Actors	Primary: Finance Officer, Students/Staff (receive challan) Secondary: system

Trigger	Start of semester/month triggers challan generation
Description	Generates transport challans (manually/automatically), sends to students/staff
Preconditions	Fee structure must exist User must be registered
Postconditions	Challan PDF generated, sent via SMS/email, and saved in system
Main Flow	<ol style="list-style-type: none"> 1. Officer logs in 2. Selects user/batch 3. System fetches fees 4. Challan generated 5. Sent to users
Alternative Flow	Users download challan manually

Includes	- Generate PDF - Send Notification
Extends	- Manual download option
Exceptions	SMS/email failure Data not found
Business Rules	Must follow correct fee mapping rules
Assumptions	Internet/email system is functional

3. Collect Payments (Online & Offline)

Use Case ID	UC3
Use Case Name	Collect Payments (Online & Offline)
Actors	Primary: Finance Officer, Students/Staff (FOR ONLINE),

	Secondary: payment gateway
Trigger	User submits payment manually or via portal
Description	Allows both manual collection at office and online payment through gateway
Preconditions	Valid challan must exist System must be online
Postconditions	Payment status updated Receipt generated
Main Flow	Offline: <ol style="list-style-type: none"> 1. User pays at office 2. Officer enters transaction 3. Receipt printed Online: <ol style="list-style-type: none"> 1. User logs in

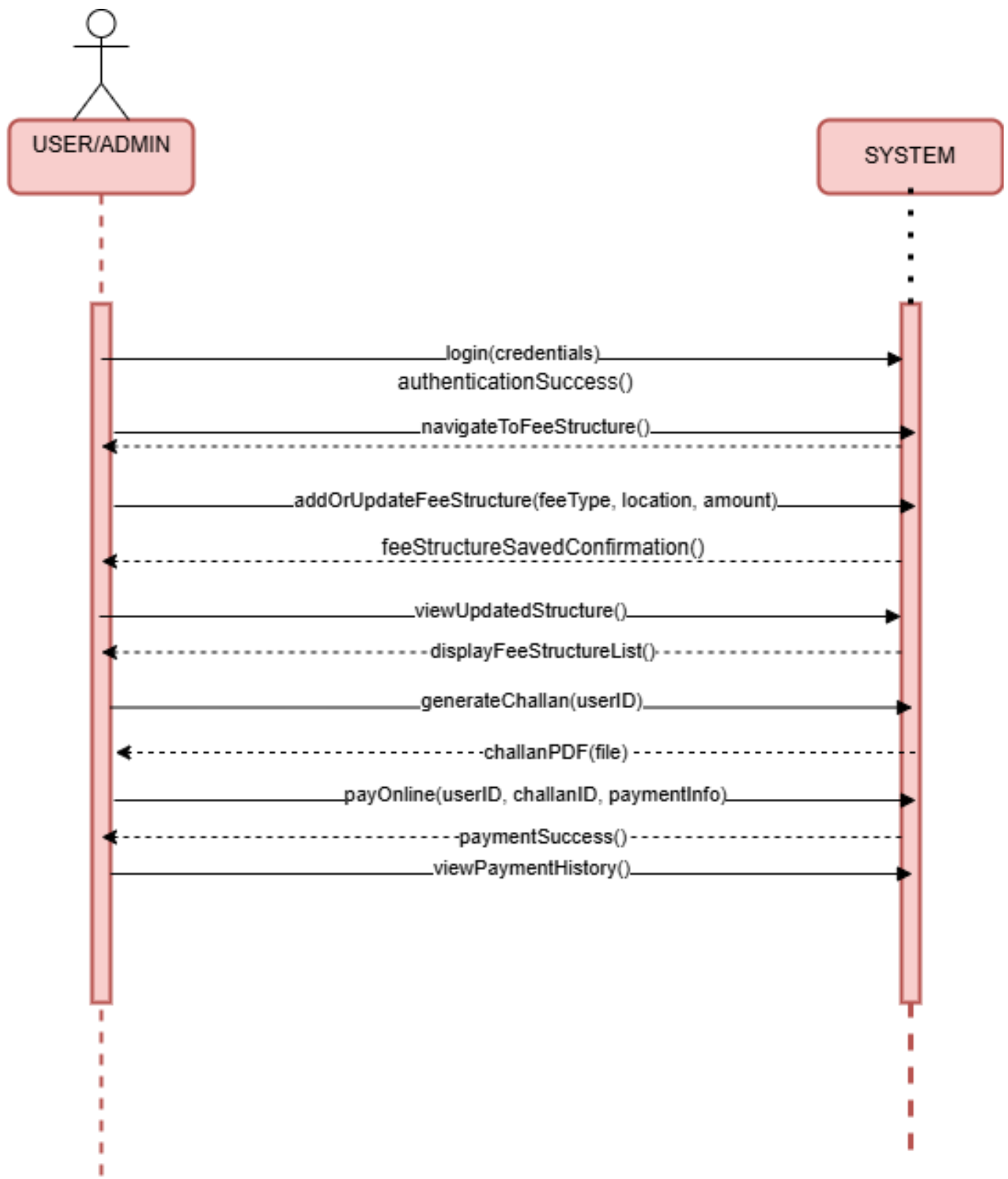
	2. Clicks “Pay Now” 3. Redirects to gateway 4. Completes payment 5. Receipt saved
Alternative Flow	Online payment fails → user retries or pays manually
Includes	<ul style="list-style-type: none"> - Payment Gateway API - Generate Receipt
Extends	<ul style="list-style-type: none"> - Online payment (optional extension)
Exceptions	Payment timeout Bank server failure
Business Rules	System must sync with payment gateway securely
Assumptions	User has stable connection for online payment

4. User Dashboard

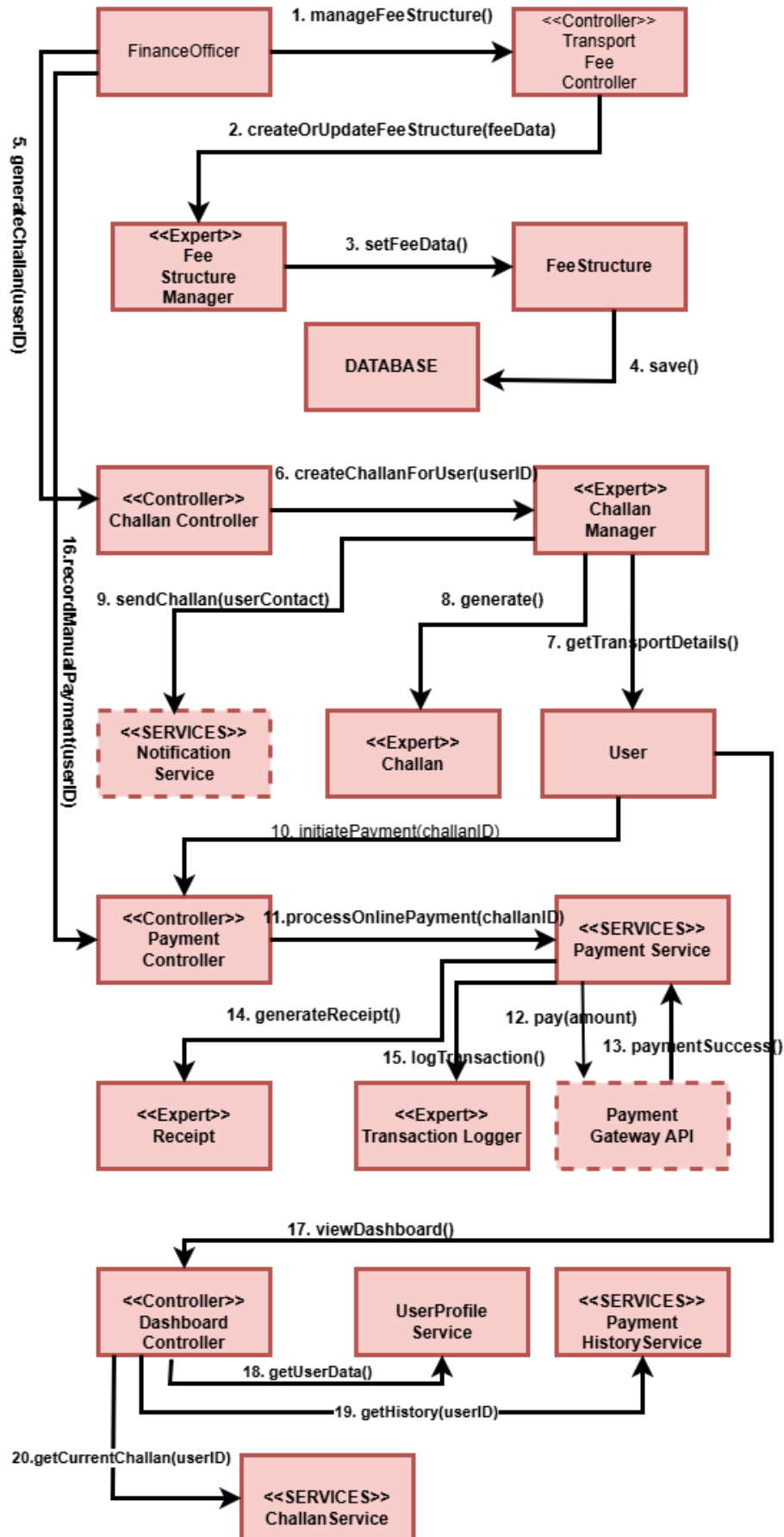
Use Case ID	UC4
Use Case Name	User Dashboard
Actors	Primary: user
Trigger	User logs into portal
Description	Enables users to view payment history, download challans, and make online payments
Preconditions	User must be registered and logged in
Postconditions	User actions recorded and system reflects updated views
Main Flow	1. User logs in 2. Views fee status 3. Downloads challan

	4. Pays online if needed 5. Views receipts/history
Alternative Flow	User has no previous payment history
Includes	<ul style="list-style-type: none"> - View Payment History - Download Challan
Extends	<ul style="list-style-type: none"> - Initiate Online Payment
Exceptions	User not registered Invalid session
Business Rules	Only registered users can access dashboards
Assumptions	Assumes stable user login and account mapping

SYSTEM SEQUENCE DIAGRAM



COMMUNICATION DIAGRAM USING GRASP



CLASS DIAGRAM

