COMSATS UNIVERSITY ISLAMABAD ABBOTTABAD CAMPUS

SOFTWARE DESIGN ARCHITECTURE
LAB MIDTERM

NAME :: FAHAD AHMED AHMED SHAH

REG NO :: SP23 BSE 063

SUBJECT :: SOFTWARE DESIGN ARCHITECTURE

SUBMITTED TO:: SIR MUKHTIAR ZAMIN

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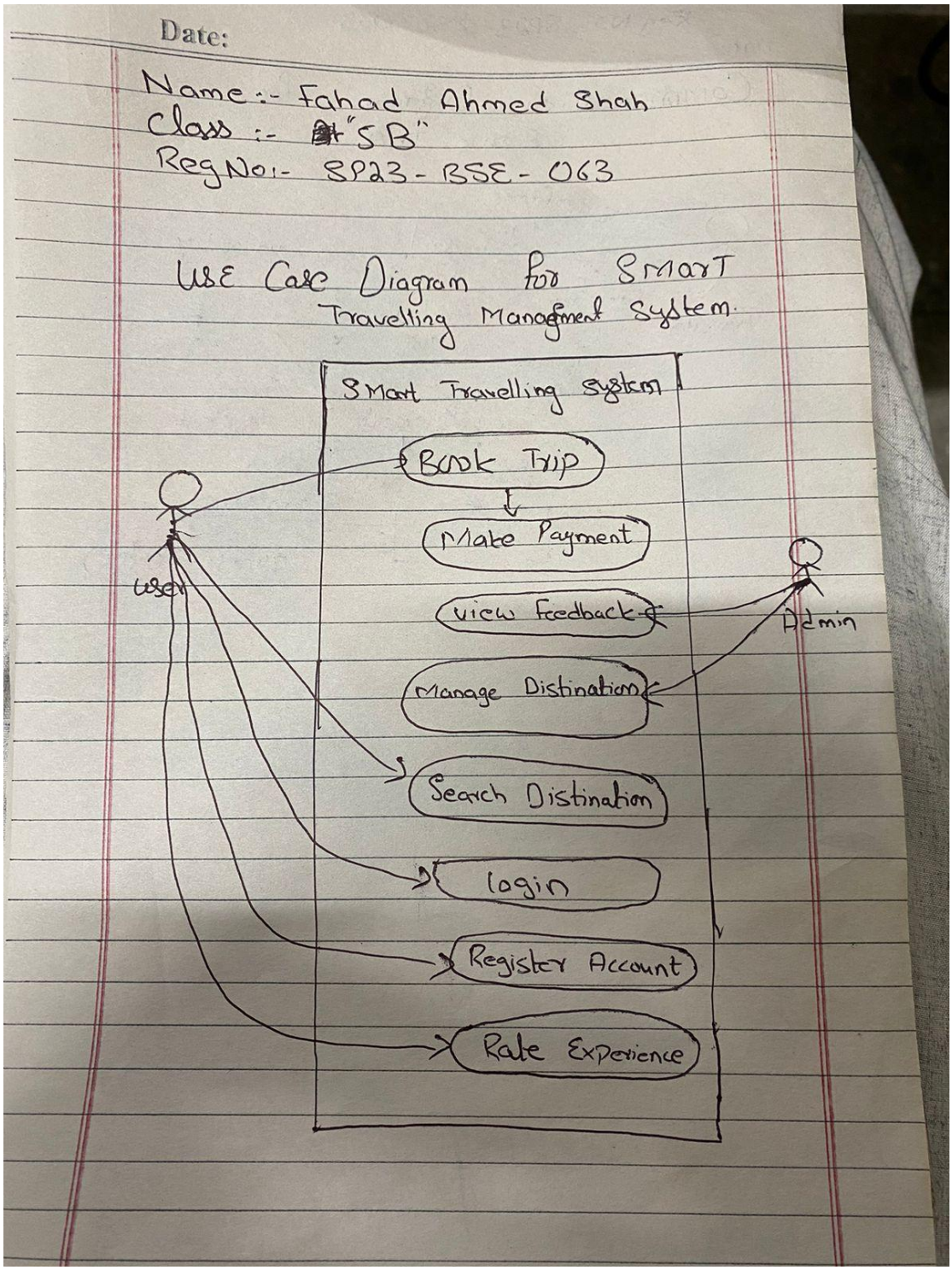
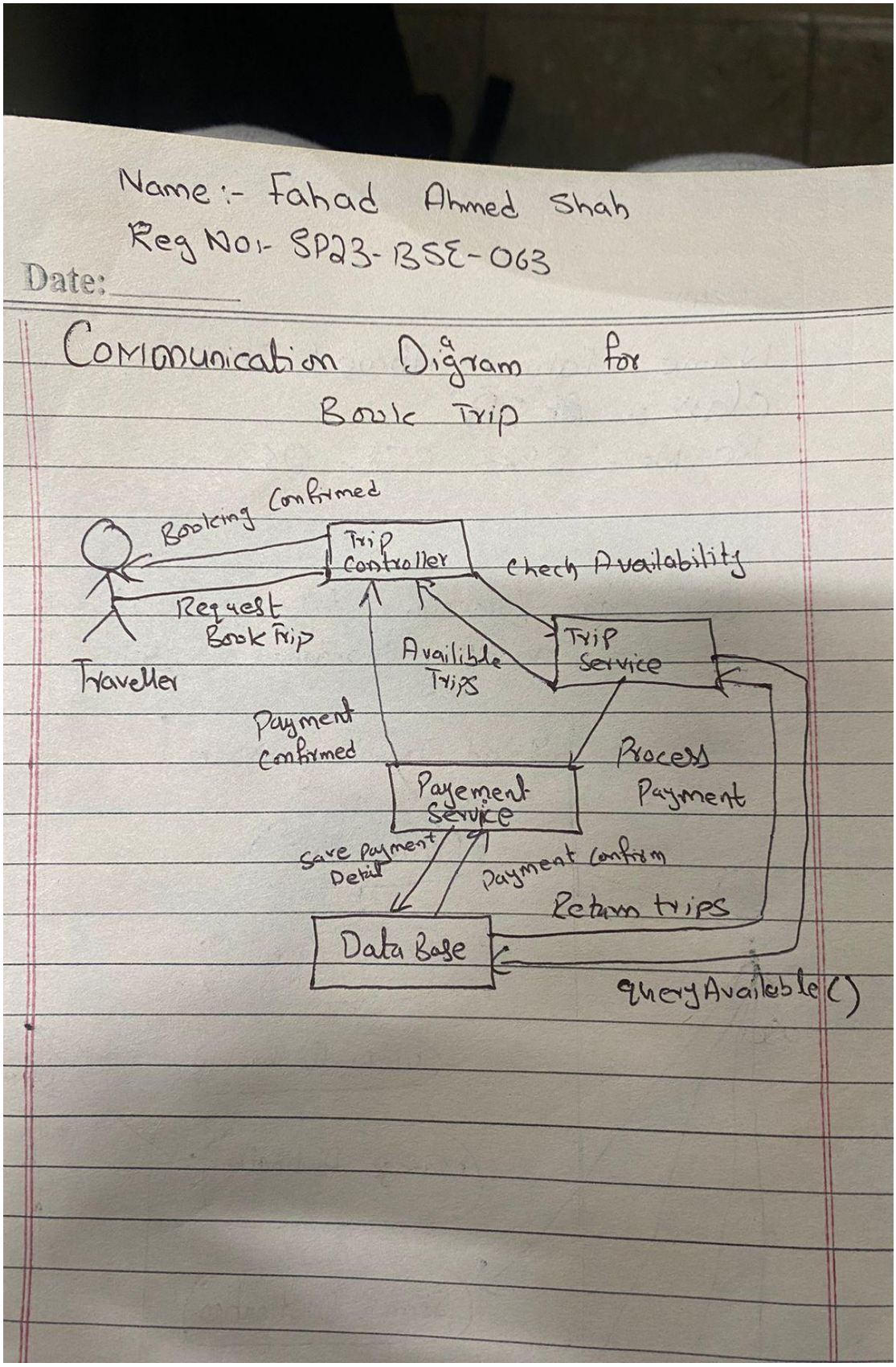
Usecase Diagram:



Communication Diagram:



Principles:

Low Coupling:

Components like payment and trip checking work independently, so changes in one won't break the others.

High Cohesion:

Each part (like TripService) is focused on a single task, so it works better and is easier to understand.

Single Responsibility Principle (SRP):
Each class (like TripService, PaymentService) does only one job.

Patterns:

Factory Pattern:
Used to create different types of trips or payments without changing the main code.

Controller Pattern:
TripController handles user requests and connects to services — like a traffic manager.
→ It controls the flow between user and backend logic.