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Mid lab – software design and architecture

Case study: smart traveling management system

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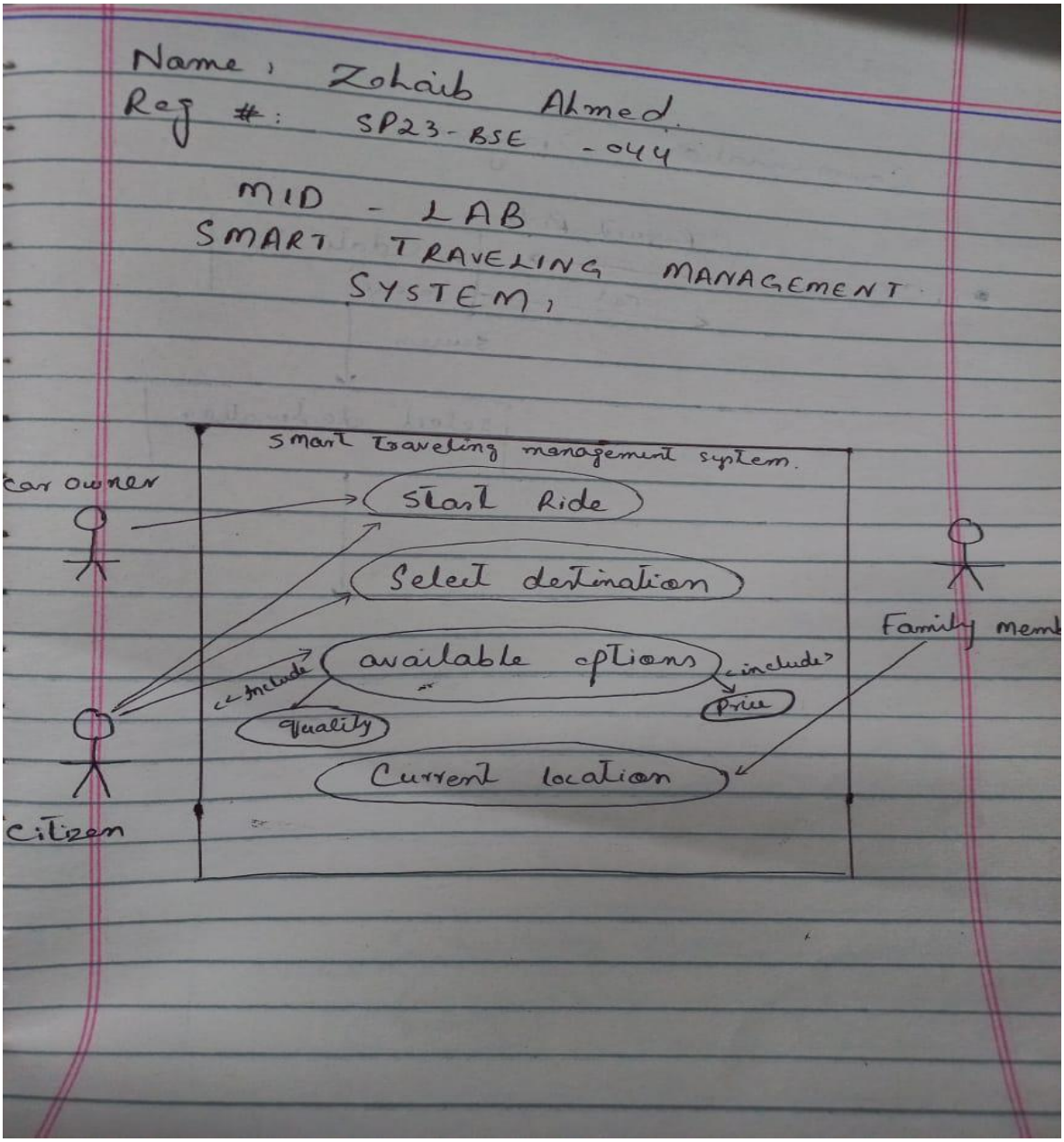
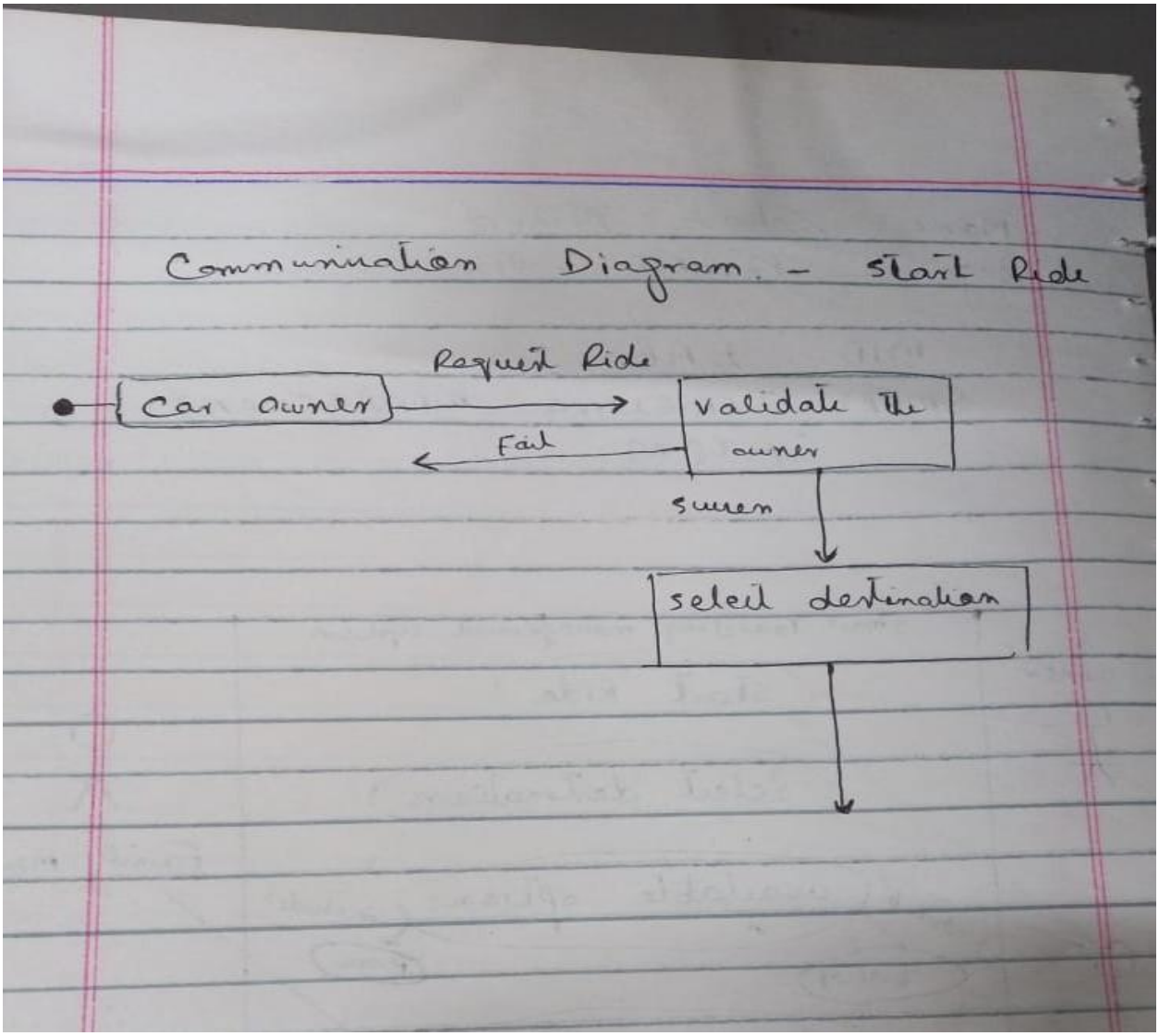
Use case diagram:



Communication diagram:



Design patterns used:

- Singleton: singleton pattern is used to ensures that services like “current location” have only one instance.

 Observer: observer pattern can be used so that the family members are notified when the ride status changes of their relative changes.

GRASP PRINCIPLES:

Low coupling:

Classes are independent so that changes in one class do not affect others

Controller:

Main class controls the overall flow of the application

Polymorphism:

Observer interface allows different types of observers to behave differently