

Lab Mid

Submitted By:

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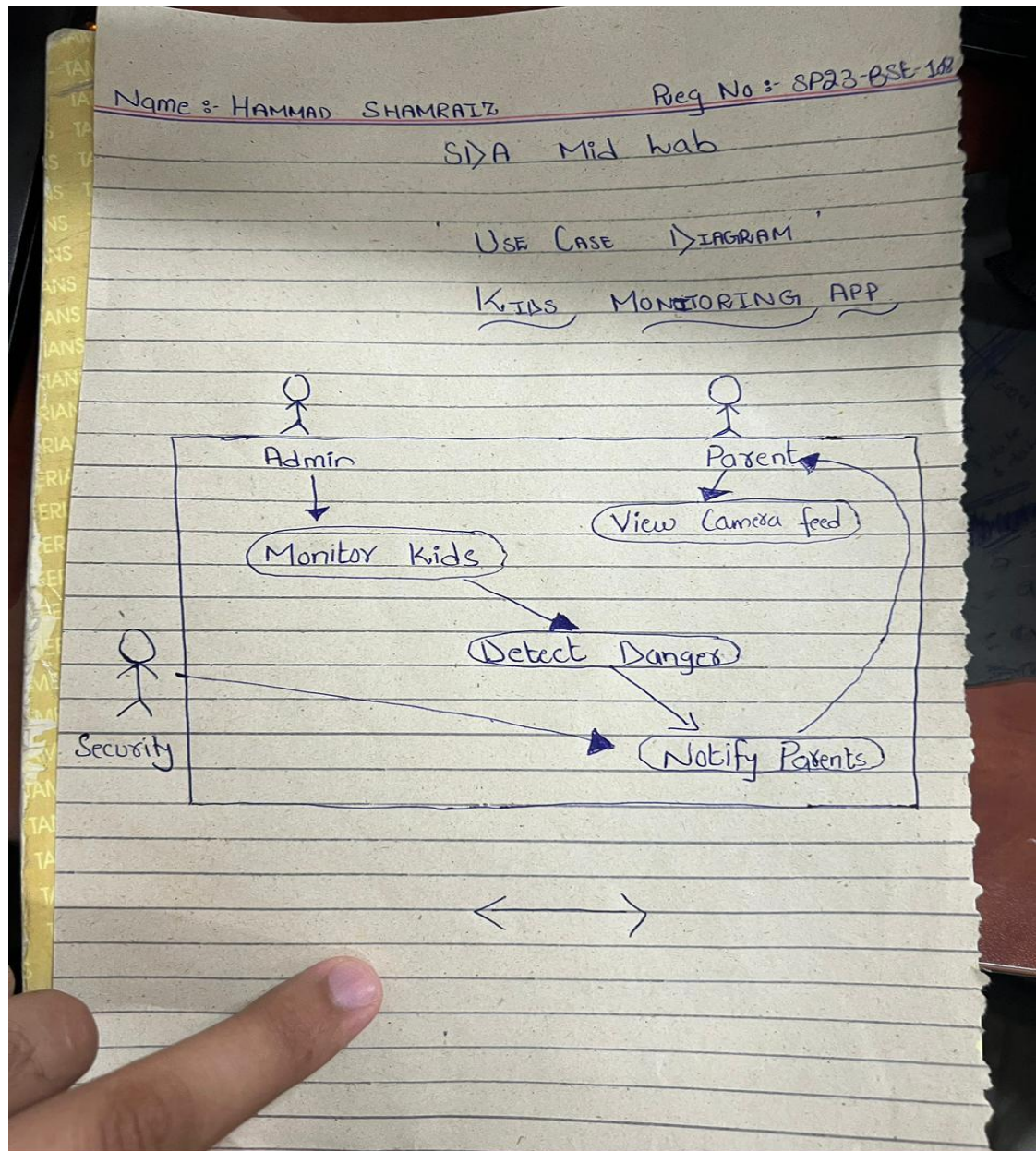
Submitted To:

Sir Mukhtiar Zamin

Department Of Software Engineering

Project Title: Kids Monitoring App

USE CASE DIAGRAM



USE CASE Picked: Detect Danger

Summary Of Pattern/Principles Used

Design Pattern Used: **Observer Pattern**

I have used this pattern to notify multiple stakeholders (Parents, Security staff) when a danger is detected. The NotificationManager acts as the Subject, and observers receive updates asynchronously.

Design Principles Applied:

- **Single Responsibility Principle (SRP):** Each component (Sensor, Server, DetectEngine, NotificationManager) has one well-defined responsibility.
- **Low Coupling and High Cohesion:** Each module is self-contained and changes in one module don't heavily impact others.

Communication Diagram

