22nd March 2023
Group-5

Lab-6

Members:

202001012 - PRAKARSH MATHUR **(Group Leader)**
202001013 - FAGUN VORA
202001018 - PATEL KAMAL HITESHBHAI
202001026 - TEJANI ROMIT BHUPESHBHAI
202001032 - HARSH CHIRAG PATEL
202001039 - SHAH VISHRUT KUNAL
202001043 - SHAH KIRTAN RAKESHKUMAR
202001054 - BHAVSAR VUSHIL RAKESHKUMAR

1. Identify boundary, entity, control object.

Boundary Objects:

a. User Interface (UI) - The different pages of the website act as the boundary objects for the student and the administrator.
b. Web Browser - The user interacts with the interface via the web browser
c. Database Management System - The system accesses the database for various information to give it to the user.

Entity objects:

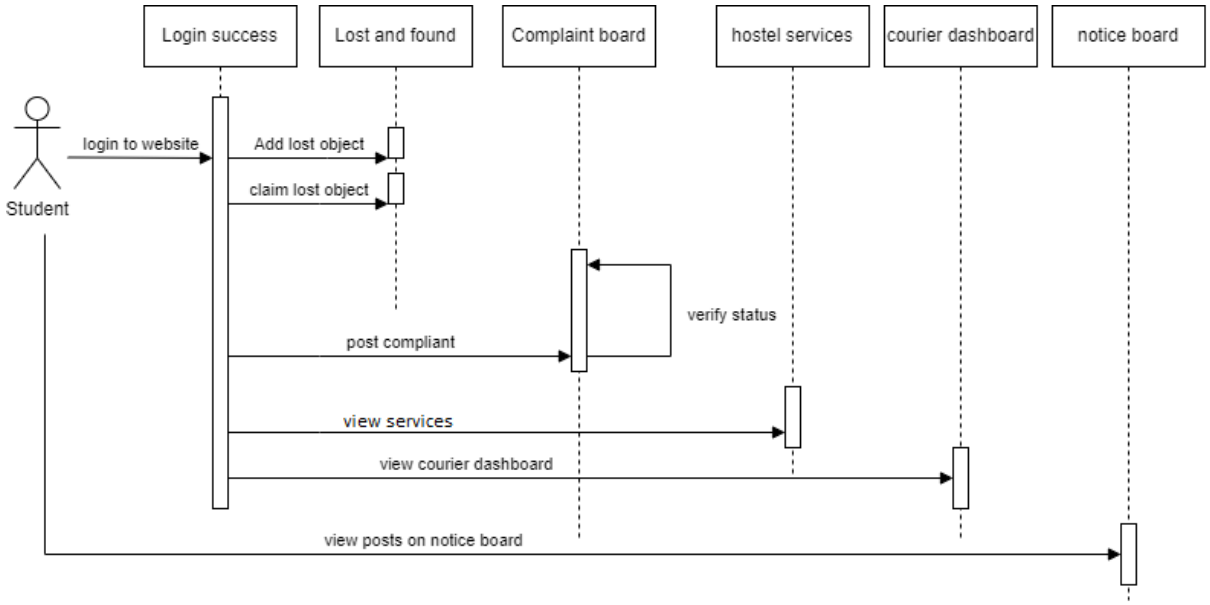
a. Student records
b. Notice board
c. Lost and Found
d. Complaint board
e. Hostel services
f. Courier dashboard

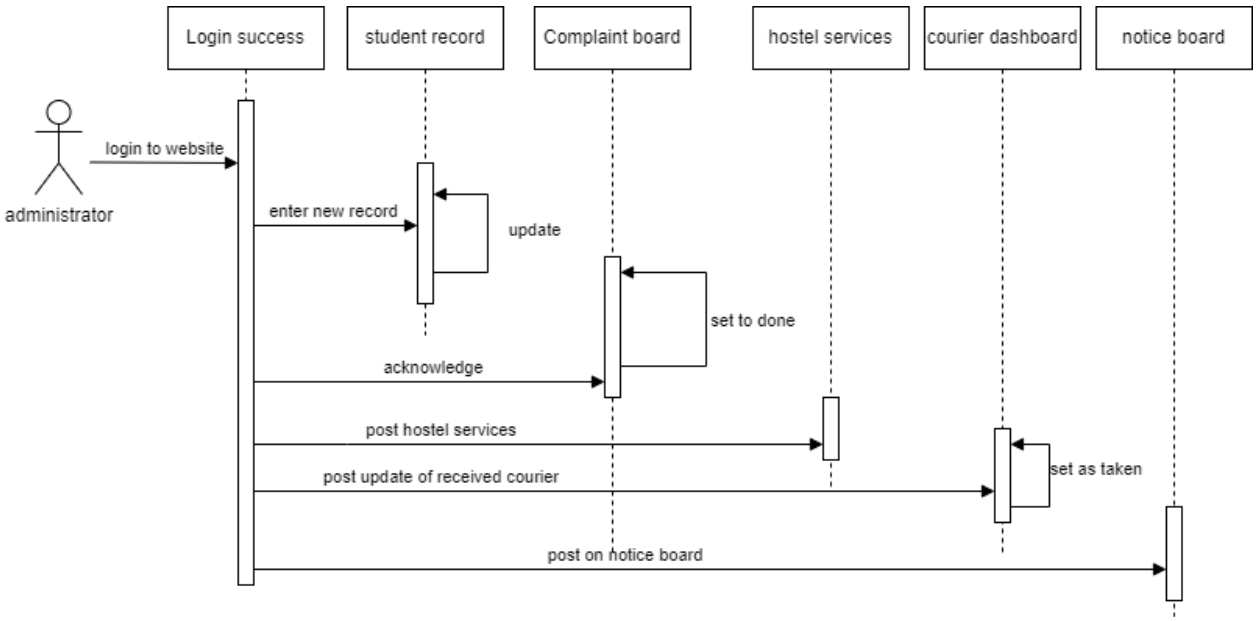
Control objects:

a. User Authentication
b. User Authorization based on role
c. Database Connection Manager
d. Password Manager

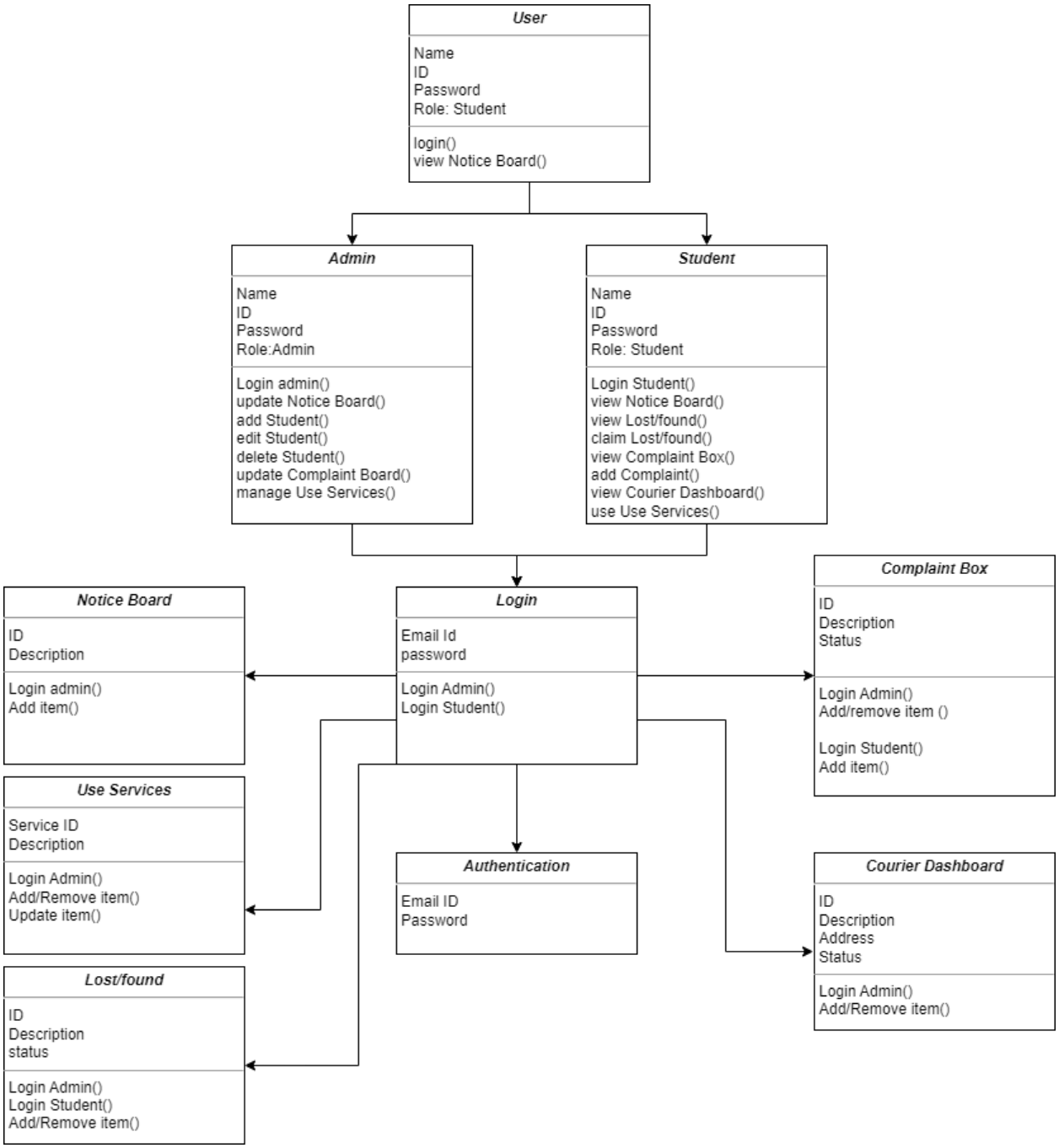
2. Draw a sequence diagram and class diagram

Sequence Diagram:





Class Diagram:



3. Design Goals:

1. Reliability:
    - The system should be available and reliable 24/7, with minimal downtime for maintenance or upgrades.
    - The system should be able to recover from any failures or errors without losing data or causing disruption to hostel operations.
2. User Friendliness
    - The system should be user friendly and easily accessible to a variety of users.
3. Ease of Learning
    - The system should be easy to learn with frequent usage.
4. Ease of use
    - An easy to operate interface should be implemented to facilitate satisfied user experience.
5. Security
    - The system should ensure the security and confidentiality of academic data, student data, and faculty data. This can include user authentication, access control, and data encryption.

4. Create a high level system design

High Level Diagram: **Three Tier Architecture**