22nd February 2023
Group-5
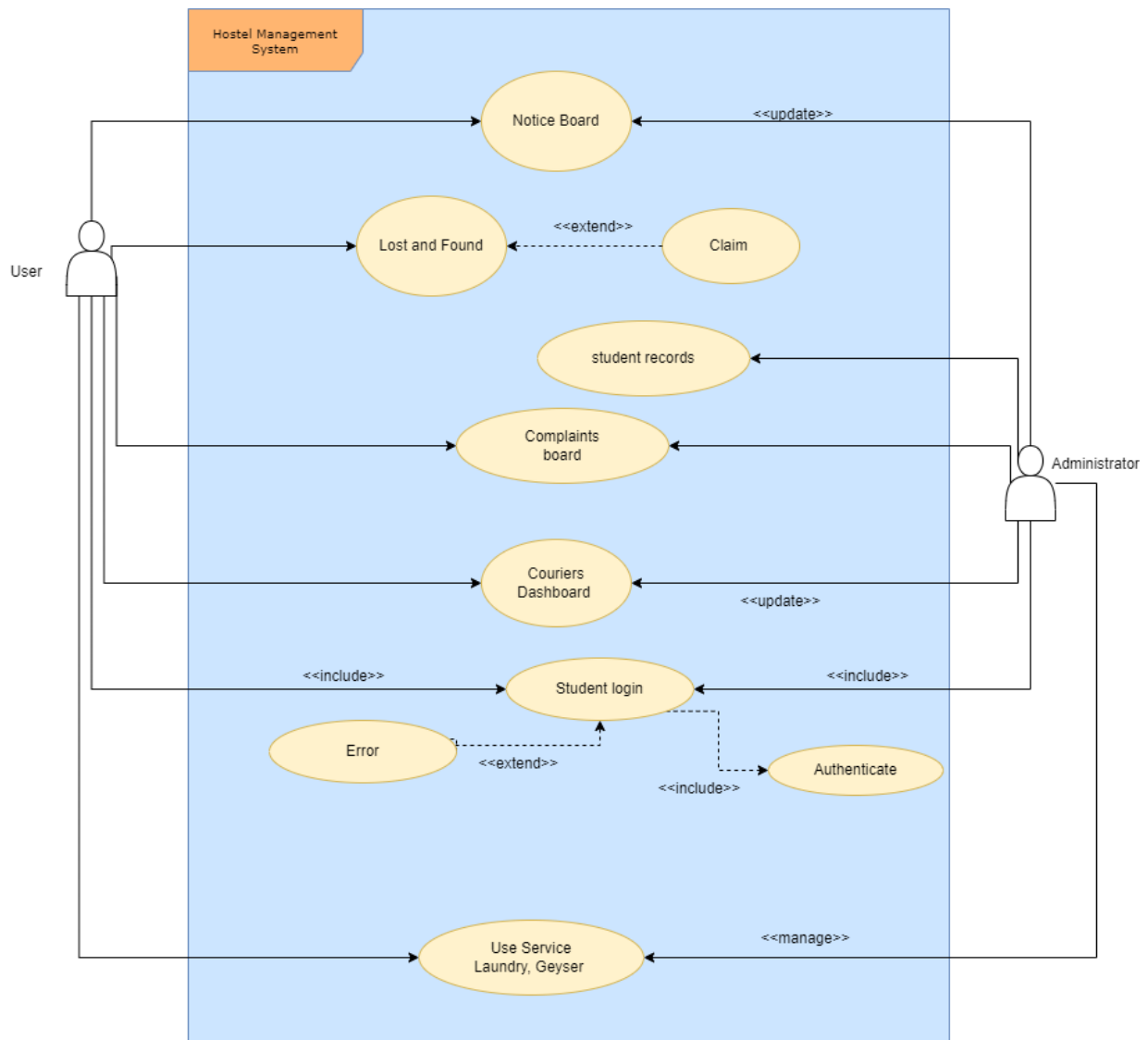
Lab-3

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) Draw the use case diagram. State the relationship among the use cases and actors, if applicable.

- The user can view notices on the notice board and the admin can post notices.
- Lost and Found can be accessed by the users to find lost items. They can also claim the item.
- Admin can edit and view student records and can also allocate rooms using this function.
- The Complaints Board will hold the complaints of the users. The admin can change the status of the complaints (Posted, In progress, Completed)
- Courier Dashboard will contain the notifications of the couriers that have arrived.
- Users and Administrators will have to login to their accounts.
- Services page will contain information about the laundry services, geyser timings, water timings etc.

(2) Develop the use case textual description for each use case.

1. Notice Board

- Name: Notice board
- Identifier: UC1
- Actors: Administrator, Student
- Goal: Post important announcements on website visible to all students
- References to requirements: <number in requirement>
- Pre-conditions: None
- Description:
    1. Administrator selects to make the announcement.
    2. The HMS asks the administrator to enter the title and description of the announcement.
    3. Administrator selects post option.
- Post-conditions:
    - All students can see the announcement.
    - Students can comment on the announcement.
- Exceptions:

3.a. Administrator tries to post without filling in all the information
3.a.1. HMS continues to step 2.

2. Lost Found

- Name: Lost Found
- Identifier: UC2
- Actors: Student
- Goal: Students should be able to Post lost items.
- Pre-conditions: None
- Description:
    1. Student selects to add lost items to the list.
    2. The HMS asks the Students to enter the title and description of the item lost.
    3. Student selects the post option.
- Post-conditions:
    ○ All students can see the found items list.
- Exceptions:
    3.a. Student tries to post without filling in all the information
    3.a.1. HMS continues to step 2.

3. Claim

- Name: Claim
- Identifier: UC3
- Inherits from: UC2
- Actors: Student
- Goal: Claim item that has been lost by that student
- Pre-conditions:
    ○ The item lost by the student is present in the lost and found.
- Description:
    1. Student selects the item to claim.
    2. The HMS prompts to confirm the claim
- Post-conditions:
    ○ All students can see who claimed it.

4. Student Records

- Name: Student Records
- Identifier: UC4
- Actors: Administrator
- Goal: See details of each allottee, edit if needed, and add new students
- Pre-conditions: Admin can edit details of students who are already in the database.
- Description:
    1. Administrator selects to view, edit, add Records.
    2. The HMS asks the administrator to enter a name, id to edit or add.
    3. Administrator selects Save changes option.
- Post-conditions:
    - Administrator can see details alottes.
- Exceptions:
    3.a. Administrator tries to post without filling in all the information
        3.a.1. HMS continues to step 2.

5. Complaint Box

- Name: Complaints board
- Identifier: UC5
- Actors: Administrator, Student
- Goal: Students can enter their complains and see its status
- Pre-conditions: None
- Description:
    1. Student selects to lodge a complaint.
    2. The HMS asks the student to enter the title and description and concerned department of the complaint.
    3. Student selects the post option.
    4. Administration can change the status of the complaints (Posted -> In progress -> Completed)
- Post-conditions:
    - All students and administration can see the complaint and its status.

- Exceptions:
    3.a. Student tries to post without filling in all the information

3.a.1. HMS continues to step 2.
6. Courier Dashboard

- Name: Courier Dashboard
- Identifier: UC6
- Actors: Administrator, Student
- Goal: Post couriers received on website visible to all students
- Pre-conditions: None
- Description:
    1. Administrator chooses to update the courier information.
    2. The HMS asks the administrator to enter the courier details and specify the respected owner.
    3. Administrator selects post/update option.
- Post-conditions:
    - All students can see the courier details.
- Exceptions:
    - 3.a. Administrator tries to post without filling in all the information
        3.a.1. HMS continues to step 2.

7. Use Services

- Name: Services
- Identifier: UC7
- Actors: Administrator, Student
- Goal: Students should have access, and the administrator should be able to modify service information.
- Pre-conditions: None
- Description:
    1. Administrator selects to add or edit services available .
    2. The HMS asks the administrator to enter the title and description of the services.
    3. Administrator selects save changes option.
- Post-conditions:
    - All students can see the service details.
- Exceptions:
    3.a. Administrator tries to post without filling in all the information
        3.a.1. HMS continues to step 2.

8. Login

- Name: Login
- Identifier: UC8
- Actors: User, Administrator
- Goal: Users and Administrator can access all the appropriate functionalities of the system after successful login.
- Pre-conditions: User must have institute email id.
- Description:
    1. The HMS asks the administrator/user to enter an email address and password.
    2. User enters its email address and password to login and view the dashboard when verified.
- Post-conditions:
    - All students can access the HMS functionalities.
    - Admin can access its functionalities.
- Exceptions:
    3.a. Administrator/Users enters email address and password to signup
        3.a.1. HMS continues to step 2.

9. Authentication

- Name: Authentication
- Identifier: UC9
- Actors: Administrator, Student
- Goal: When a user tries to login, check whether the entered details match with the database.
- References to requirements: <number in requirement>
- Pre-conditions: None
- Description:
    1. The HMS checks the entered password with their database.
- Post-conditions:
    - User or Administrator redirected to the home page.
- Exceptions:
    1.a. User enters invalid password, redirect to login page.

10.   Error

- Name: Error
- Identifier: UC10
- Inherits from: UC8
- Actors: Administrator, Student
- Goal: Show error message if the login fails.
- Pre-conditions: None
- Description:
    1. Display login failure message
- Post-conditions:
    ○ All students can see the courier details.
- Exceptions:
    ○ 3.a. Administrator tries to post without filling in all the information
        3.a.1. HMS continues to step 2.

(3) Write the non-functional requirements of your system. Justify each of them and why those are applicable.

- **Security constraint:**
    i.   No confidential information(passwords) in plain text.
    ii. Cyber security.
Student information should be made encrypted in order to maintain security.

- **File type constraint:**
    i.   It should be a web application.
The development of web application is more feasible otherwise in android application will affect the economical constraints. Considering the application must be compatible in IOS too.

- **Accessing:**
    i.   The users can access the web application from anywhere.
A student is allocated a room, the information has to be accessible from anywhere. In order to get access to the notice board from anywhere too.
- **Ease of use:**
    i.   The application aids users to easily communicate with the staff.
    ii. An easy to operate interface should be implemented to facilitate satisfied user experience.
- **Maintenance:**
    i.   Post deployment the smooth functioning of the application is desired.
    ii. Every functionality of the system should be up and running as expected.
- **Reliability**:
    i.   The system should be available and reliable 24/7, with minimal downtime for maintenance or upgrades.
    ii. The system should be able to recover from any failures or errors without losing data or causing disruption to hostel operations.
- **Compatibility:**
    i.   The system should be compatible enough to different user devices and different operating systems when it is accessed.