Group - 10
Project id - 82
Project name: Attendance Management System
Lab-2 - Identifying the needs and features of the system, functional and non-functional requirements, use case diagram and software process model.

Final Project Needs:
1> Student will be able to track his/her attendance coursewise
2> Alert to students, professors and admin for critical points and in general leave
3> Faculty or staff will be manually updating the attendance of students
4> Staff will be updating the attendance of professors manually.
5> Admin can see the report of course-wise attendance, attendance of particular students and faculty .
6> Leave management. Students and professors should be able to request a leave from the admin by attaching medical or other certificates and after approval, the attendance is automatically recorded.
7> After the class, staff will take data from biometric and update student attendance manually..
8> Faculty will have fixed number of leaves, faculty can ask for invalid leaves but that will alert professor that they're taking leaves more than allowed
9> Academic calendar and public holidays can be uploaded on the system by admin.

Final Project Features:
Student:
- See their attendance for specific class
- Get alert for student absence in class, also for low attendance overall for specific course
- Apply for leave for a date interval or for a specific class.

Professors:
- Start attendance for class
- See the report on class basis and average for all their courses
- Manually tick attendance

Admin
- View student leave request and approve or reject
- View report for professor, course, student

Take data from the e-campus for course management (students registered for different courses and sections).
Lab attendance will happen on a weekly basis.

People using the app:
1. Admin

2. student
3. Faculty
4. Staff

Admin gave passwords to students and faculty and staff.
Once they can update the password and after forgot again, permission will have to be taken for changing again
Students will have to register their course on application.
Will be able to ask for leave to admin by attaching medical or other certificates.

FR:

1. Provides log-in to all users.
2. Password change authority to all users for once only.
3. System allows the students to register in courses he has enrolled in.
4. Leave approval needs proper reason and documents if required.
5. Allows admin to approve or reject leave approval.
6. System can send automated mail if attendance is below a certain level.
7. Student gets an email when his/her leave is approved.
8. The system should be able to store and manage attendance and leave data securely.

NFR:

1. System should be able to scale over a thousand students and efficiently manage the data
2. System should be simple to use and understand with a basic interface.
3. System should be easy to maintain and update, enabling it to add new features to fix problems without disturbing the features.
4. The system should be compatible with different types of devices, browsers and operating systems.

Finalizing the choice of model:

The **waterfall model** is a traditional approach to software development that follows a linear and sequential process. In this model, each stage of the development process is completed before moving on to the next stage. The stages typically include: requirement gathering, design, implementation, testing, deployment, and maintenance.
Using the waterfall model can be a good choice when requirements are well understood and unlikely to change throughout the development process. It can also be useful in projects with a clear defined end goal and a well-established timeline. Additionally, this model can be beneficial in projects with strict regulations and compliance requirements, as it provides a structured and controlled development process.