PROBLEM STATEMENT: STUDENT APP

TEAM NAME:

IDEA:

1. Tracking Attendance:

Tracking attendance manually is a tedious task. Thus, our app will be designed so as to automate the tedious task of calculating each student's attendance.

The app includes features separate Parents login, Teacher login and Student login.

The Teacher version of the app will the options like **take attendance, edit attendance** (in case of missed or mistaken attendance), and **view attendance** to view the attendance of every student.

First, when the teacher clicks on the take attendance, it will ask the teacher the corresponding year, branch and section to take attendance of.

The Take attendance activity will be a **card swipe feature** where the data of students already stored in the database will be retrieved, date and time will be the current date and time fetched from either server or system. This can be implemented using the **Android PlaceHolder View** which can be easily implemented and is a feasible solution for the above problem.

Each Student's Photo, Roll no and Name will be shown at the time of taking attendance, and making **a right swipe will mark the student as present and a left swipe will result in absent.**

The Attendance will be stored in the database(like **Firebase**)for storage and retrieval as and when needed.

The Student logged in activity will contain view attendance, view results (mark sheet), Library Book Reminder

A student can view its attendance anytime which can be fetched subject wise.

It also features an **alert feature,** which will alert the students automatically by a notification whenever the attendance will be **less than 75%.**

Marks will be fetched from the college website and stored locally whenever available.

Each student's id will be synced with **the library's server** so that whenever the student takes a book from the library, a remainder will be set to remind him to return the book 1 or 2 days before the last date.

The Parent version will contain view attendance, view results (mark sheets), discussion forum where each parent can personally contact the corresponding teacher about the performance of the child.

There would be an option for the teachers to send a notification to the student as well as the parent if the students' attendance is below 75%.

2. **Fetching circulars, notices , results:**

The notices, circulars, results will be fetched in the app from the college website using **web crawling** in **Python** so that all the notices can reach the student.

The notices will be fetched and stored in the app so that the students and access anytime from the app without having to open the college website.

Also, a notification will be sent to the user whenever a new notice arrives so that one doesn't miss important updates.

3. **Library:**

This part will be implemented using the database of corresponding college.

It will sync each students' library record from the library database and show them

It will also show the list of availability of all the books that are currently present for issuing.

This will also feature a request zone where a student or a teacher can request a book and if the book is available then I will let them know.

If the book is currently unavailable, then it will send a **notification** from the app as well as it will send an **email** as soon as the book becomes available.

4. **Track Academic Progress:**

This will be a discussion forum where each student's progress will be given to the parent by the teacher on a monthly basis.

The parents can view the student's performance in the class as well as ask doubts or discuss with the teachers about the problems and the need of the student.

There will also be one to one chat between the parent and the teacher in special time or on weekends.

The discussion forum will also contain a special student's section where students can exchange notes, teacher can assign assignments and provide notes to the students.

This will also contain a doubt section where the student can ask doubts and relevant queries which can be resolved by both teachers and students.

5. **Admin Panel:**

It will be the main centre which will be handled by the Head of the Department. It will assign the teachers to their respective classes and then, respective students will be . It will have the option to add teachers, students etc. It will get the monthly updates of the attendance.

TECHNOLOGIES STACK:

1. ANDROID PROGRAMMING using Android Studio with Java
2. PYTHON
3. Google Firebase

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