Attendance Dilemma

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Abstract - Attendance dilemma is a local software which is designed to out the attendance work of teachers. It eases teachers' work by managing students' attendance in an easy and efficient way. It takes attendance from Microsoft Teams app and stores required data in a database which is used to get record and defaulter list with a simple and single click.

Key Words: **Attendance, Microsoft Teams, Attendance Manager**

1.INTRODUCTION

Attendance Dilemma is a software used to maintain the attendance record of each student.This is a local software.This software provides a feature which allows teachers to create their own class and add students in that class. Teachers can either add a single student or upload an excel file which contains information of multiple students.It also has a defaulter's feature which returns the information of students having attendance below the required attendance criteria.This software also provides a feature in which teachers can check out the records of students between the dates provided by the teacher.

2. LITERATURE SURVEY

2.1 Survey of existing system

We tried to search for similar apps which address this issue. After looking for a few hours,
We have found a post by Zen Sajnani on LinkedIn where he made a website named teamsattendance.com which works in the similar ways which was faced by our teachers. It works on a similar system. First teacher needs to upload a team's attendance file and after that it processes it to display the time which attendees sat for the meeting.

2.2 Limitations of Existing system or research gap

This software gives us the output as an excel file which only has the active time of a student present in the class. But this is not enough because the user needs to do some manual work even after getting this output file. Another limitation of this software is that it only provides the defaulter list to the user but not the attendance percentage of the students who are not defaulters.

2.3 Mini Project Contribution

This project helps teachers in several ways. Less effort is required for teachers as manual work is reduced, thus results in saving more time. Also Data accuracy is maintained by the system. Data stored in the Database can be used in multiple places. We can also get a Defaulter list of students (i.e. student with attendance less than 75%) and student record from a date range.

3. ARCHITECTURE AND FRAMEWORK

The home page of Attendance Dilemma consists of five options:

Add record:
This option allows you to add an attendance file as input and saves the data of the file in the database.

Add class:
This option allows you to add a new class in the database.

Add student:
When the user clicks on this option, the software asks the details of the student that has to be added. Users can also add the details of multiple students by just passing a csv file as input that consists of information of students.

Defaulters list:
With the help of the data stored in the database, the software generates a defaulters list of students who have

their attendance below the minimum required criteria. When the user selects this option, the software provides a file containing the details of students who are defaulters.

Show record:
This option provides the attendance record of students between particular dates provided by the user.

4. ALGORITHM

We wrote an algorithm for processing CSV files and calculated the time duration for which attendees sat for the meeting.
Our algorithm mostly depends on key-value pairs (HashMap).

1. Loop START

2. If HashMap already has the key (name in CSV)

    a. If the attendee had LEFT the meet then

        i. Get the duration from the map

        ii. Get the difference in minutes between left time and time from map (previous join time).

        iii. Set duration in map

        iv. Set LEFT status in map

    b. If the attendee JOINED the meet then

        i. Set the duration to the joined time

        ii. Set join to joined time

        iii. Set status to JOINED

3. If HashMap doesn't have the key

    a. Set the duration to 0

    b. Set join to joined time

    c. Set status to JOINED
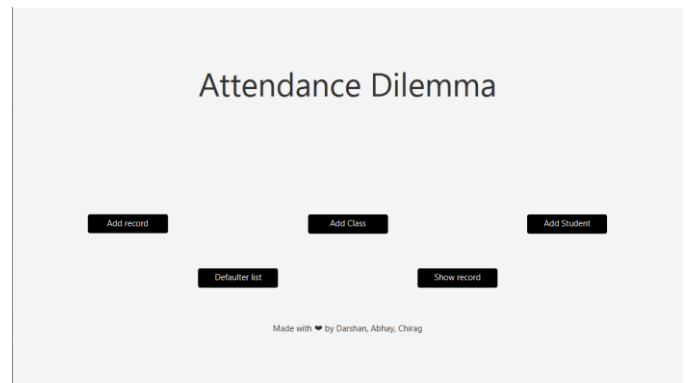
4. Loop END

5. WORKING

Fig 1. Home page

The figure above shows the home page of the application Attendance Dilemma. It has various options such as add record, add class, add student, defaulter's list and show record.
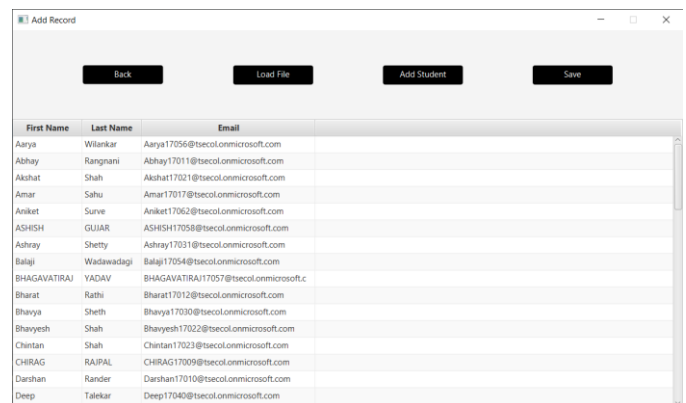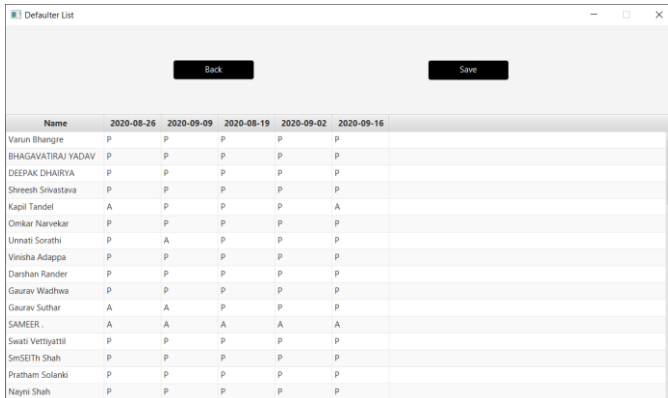

Fig 2. Student details

The figure above shows the details of students that have been saved in the system.

Fig 3. Defaulters list

The figure above shows the defaulters list, which has been created on the basis of minimum attendance criteria provided by the user.

Fig 4. Attendance record

The figure above shows the attendance record of students between the dates provided by the user.

6. CONCLUSION

Attendance Dilemma was developed to reduce the workload on teachers which came due to the online attendance sheet from teams. This application helps to reduce a lot of work for teachers and allows them to do more with their time.

Features offered by are: Easy attendance addition, Defaulter list, Attendance record.

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