WebTechnology Project Report

Attendify App

Team Members:

Mytreyan 2022115102

Kaviya 2022115106

The **Attendify App** is an Android-based solution designed to help students efficiently manage their academic attendance. The app provides dynamic course management, attendance tracking, and low attendance notifications, enhancing student productivity.

App's Functionalities:

1. **Google Sign-In:**

   - Users log in using their Google accounts, with details such as username and email retrieved via Firebase Authentication.

2. **Department & Semester Selection:**

   - Upon successful login, users can choose their department and semester, which determines the courses displayed.

3. **Dynamic Course Management:**

- The app integrates with Firebase Firestore to fetch courses dynamically based on the selected department and semester.

- Each course displays:

  - Missed hours

  - Total hours

  - Attendance percentage

  - Remaining skips

4. **Attendance Tracking:**

- Users can update missed hours for each course, which recalculates the attendance percentage.

- If attendance falls below 75%, a notification alerts the user.

5. **Low Attendance Email Notification:**

- Automatic email alerts are sent to users when their attendance percentage drops below the threshold.

6. **Location-based Services:**

- The App utilizes Android's **LocationListener** and **Geocoder** to retrieve the user's geographical location and convert it into a detailed address, including the state.

7. **About Page:**

- This activity provides information about the app, its functionalities, and its development team.

8. **Logout:**

- Users can securely log out of the app through the Google Sign-In feature.

9. **Attendance Calculator:**

- A built-in calculator helps users manage missed hours and calculate remaining skips to stay on track with attendance requirements.

10. **Graphical Animations:**

- Smooth transitions and animations enhance the user interface, providing visual feedback during interactions.
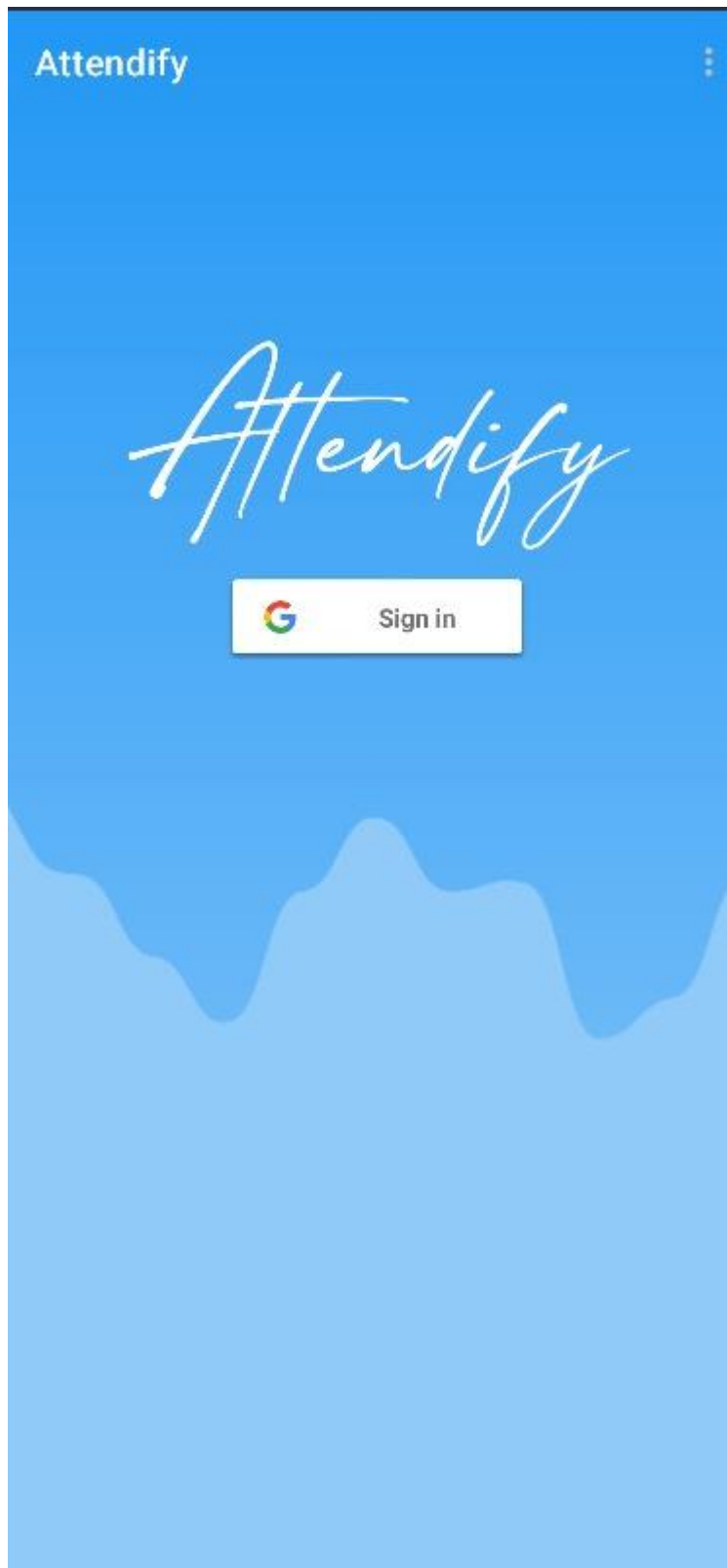

App source file:

Attendify

Execution Output Screenshots

Login Screen:

When the app is launched, the user is prompted to sign in using Google.

Department & Semester Selection Screen:

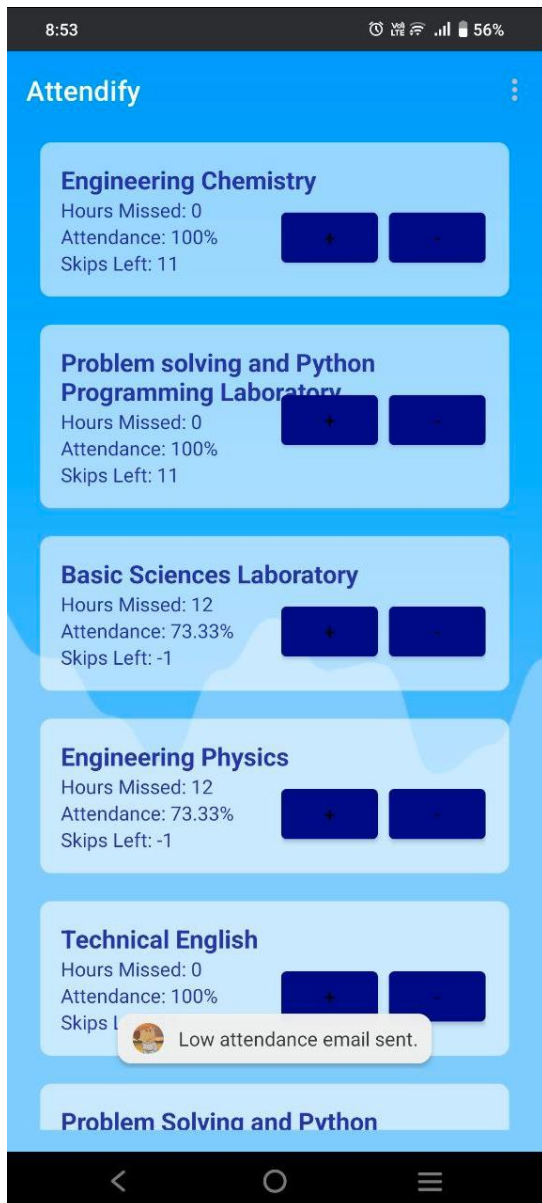After logging in, the user selects their department and semester.

Attendance Screen:

- Displays all courses dynamically fetched based on the selected department and semester.
- Includes missed hours, total hours, attendance percentage, and skips left.

Low Attendance Email Notification:

Screenshot of the app triggering a low attendance notification email.

About Screen

An informational page about the app and its functionalities, providing details about the app's purpose and usage.

Conclusion

The **Attendify App** effectively assists students in monitoring and managing their attendance, leveraging real-time database integration and intuitive UI/UX. The app's ability to send low attendance alerts

and dynamically fetch attendance details from Firebase enhances its utility for students.

Technologies Used:

- **Firebase Firestore:** Real-time database management for courses and attendance details.

- **Google Sign-In:** Secure user authentication and profile management.

- **Event Listeners:** To manage user interactions efficiently.

- **Email Notifications:** Alerts users about critical attendance issues.

- **Graphic Animations:** Improves the user interface experience.

- **Location Services:**