

## **Title of the project: “Youth Compass Application”**

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**Keywords:** Mobile application, Volunteering, Analysis, Communication, Management, Flutter, Firebase.

### **Introduction:**

The Ministry of Health and Welfare's Volunteer Service Act defines volunteers as individuals who provide voluntary services without personal or legal obligations, with the sincere intention of contributing to society. These services aim to enhance public affairs and improve social welfare without seeking financial gain. Volunteering offers personal satisfaction, valuable experience, skill development, and opportunities to meet new people. Some volunteers engage infrequently, while others commit to regular, full-time contributions. Volunteering promotes self-confidence, social interactions, skill utilization, and the pursuit of one's passion. Key principles include freedom of choice, respect for others' rights and culture, and sharing knowledge and experiences. Volunteerism fosters cohesive communities, strengthens social networks, and eases the burden on the government by supporting economic development. Non-profit organizations often face resource shortages, and volunteers supplement paid staff to achieve organizational goals. However, effectively managing volunteers can be challenging, leading to disorganization and difficulties in assigning suitable tasks. Reporting progress and maintaining records become burdensome due to the high volume of volunteers. Manual submission of proof poses data integrity issues, and tracking long-term progress becomes challenging for volunteers. The goal of this project is to bridge the gap between various levels of volunteer management organizations and provide a centralized application to do so.

### **Objective:**

The main objective of our work is to facilitate communication between the different layers of management of an NGO. The objective of this project is to develop a full-functioning mobile application that bridges communication between the administrators, trainers, and volunteers that are involved in volunteering activities. The app should enable seamless and timely communication

between volunteers and trainers. It should provide features like notifications, and alerts to ensure that volunteers and trainers can easily exchange information, clarify doubts, and receive updates on tasks or assignments. This application can eliminate the manual labour involved and thus automate the process of assigning tasks to different tasks to volunteers and monitoring the progress of completion. However, the objectives can be categorized as below:

- The app should provide a platform for trainers and volunteers to communicate easily and efficiently.
- To facilitate the functionality of enabling trainers to assign various tasks to eager volunteers that are to be performed by them.
- To facilitate the process of evaluating volunteers' performance and gathering feedback. Trainers can use the app to conduct assessments or surveys, and volunteers can provide feedback on the quality of training or suggest improvements.
- To enable real-time updates on task statuses and progress. It should allow volunteers to update the status of their assigned tasks, mark them as completed, or seek assistance if needed.
- Trainers should be able to monitor the progress of tasks and provide guidance or feedback to volunteers as required.

## **Methodology:**

- **Frontend Service**

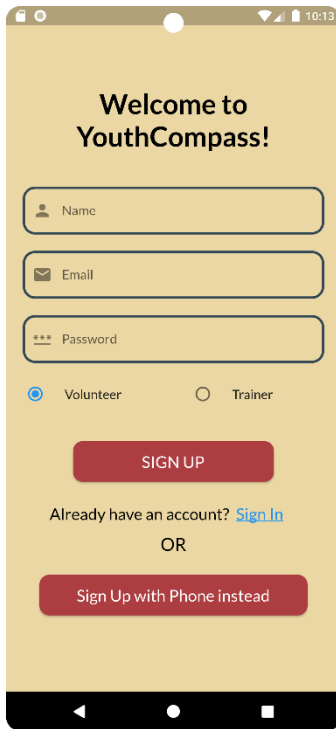
For administrators, the frontend service provides a range of functionalities. They can monitor their organization's reach through volunteer programs and gather valuable feedback. Administrators can add tasks that need to be completed and assign them to available volunteers using the web interface. The service also offers in-depth analysis of targets reached and activities completed by the volunteers, empowering administrators to strategically plan their next steps and understand where critical resources are being utilized. By offloading manual work to the server, the service significantly improves efficiency and speeds up the entire workflow. Volunteers, on the other hand, can utilize the frontend service to access and manage their schedules for the day. They can easily check their assigned tasks, update the progress or completion status in the database, and provide prompt responses to administrators. The location-independent nature of the system allows volunteers in different locations to coordinate their tasks effectively and receive real-time updates while working in the field. The service also enables volunteers to plan their tasks, prioritize them as they are received, and ensure efficient utilization of their time and resources. Once a task is completed, the same service can be used by volunteers to upload proof of task completion, such as photos or documents, and provide

any additional feedback related to the task.

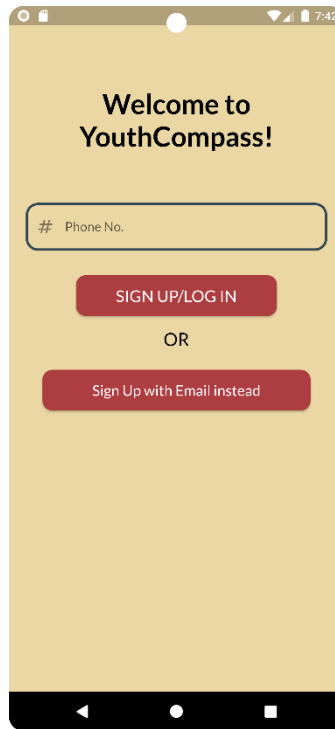
- **Backend Service**

The backend service is the foundation of the volunteer program management application, providing data storage, processing, and analysis capabilities. It collects real-time data from users, including volunteers and administrators, storing information on tasks, volunteer lists, availability, and schedules. Feedback provided by users is captured for program evaluation and improvement. The backend service enables data analysis on the cloud server, deriving meaningful insights for informed decision-making. Secure access is ensured through authentication, verifying user credentials and granting appropriate privileges based on roles. This protects sensitive data and maintains confidentiality. The backend service is crucial for the application's functionality, supporting data management, analysis, and secure access. Its role is to provide the infrastructure needed to power the application and ensure the success of the volunteer program management.

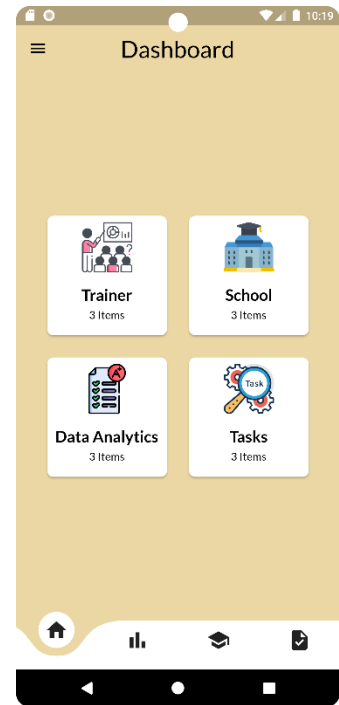
## Results and Conclusion:



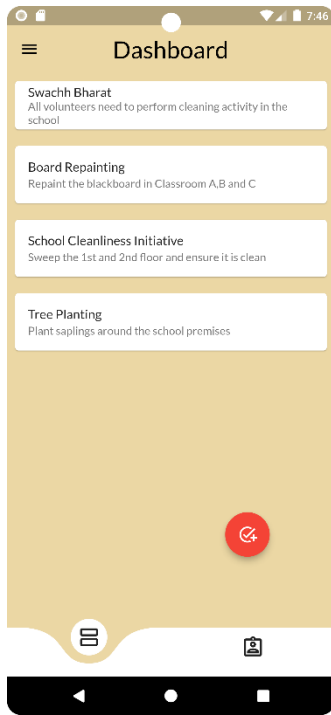
**Fig.1 Signup via Email**



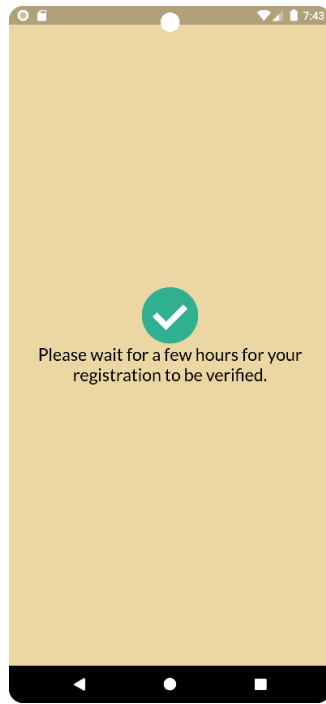
**Fig.2 Signup via Phone**



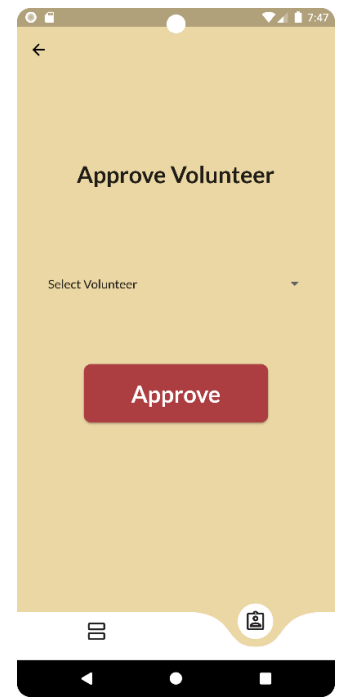
**Fig.3 Administrator dashboard**



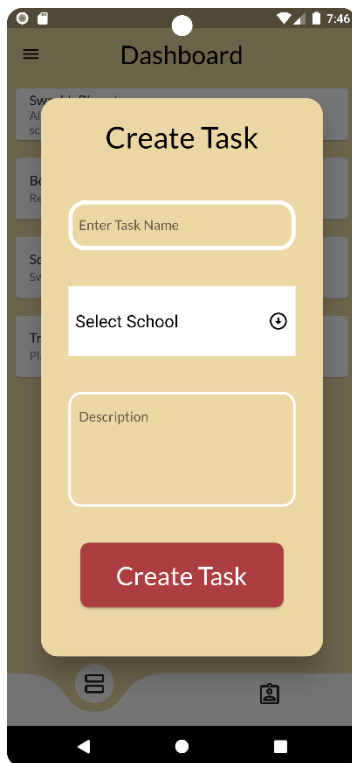
**Fig.4 Trainer dashboard**



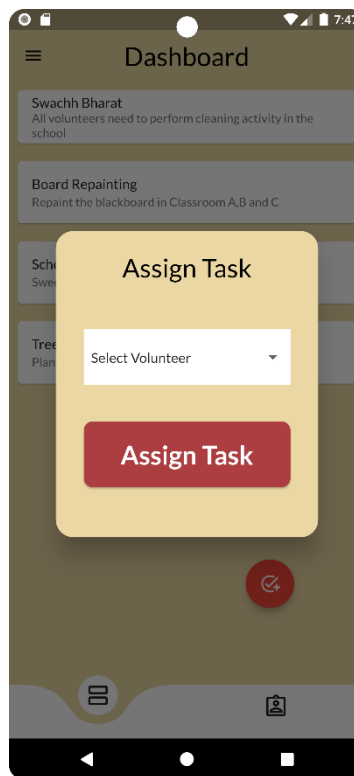
**Fig.5 Verification Pending**



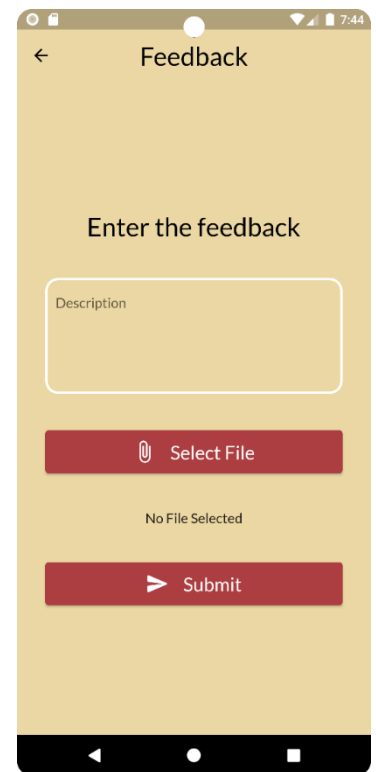
**Fig.6 Verification Approval**



**Fig.7 Create Task**



**Fig. 8 Assign Task**



**Fig.9 Feedback Submission**

The Youth Compass application is a tool designed to simplify the day-to-day volunteering processes done by an organization. The web interface provided provides a familiar and consistent experience to all volunteers, both new and experienced. Tracking progress and updating records are more streamlined and efficient when compared to traditional pen and paper methods. As an organization implements and takes advantage of the technology provided by this application, their experience will be enhanced even further since the number of task and activity logs collected increase, providing a historical record of the achievements of the organization, as well as to demonstrate measurable progress in their field of choice. Ultimately, it is a great tool that features a large array of benefits and is a smart approach to tackling some of the major hurdles commonly present in such endeavours.

### **Future work:**

The future suggestion is as listed:

- Hosting the application on Google Play Store.
- Adding features to allow volunteers to choose tasks based on their interests and choices.
- Making the UI/UX of the application responsive to fit multiple screen sizes.