Khidmat: TCF Alumni Pathways Project

Ahmed Ali   Ahsan Azeemi

aa07600   aa07729

12th May 2025

1 Introduction

1.1 About the Khidmat

This project is to develop a mobile application for The Citizens Foundation (TCF) to guide their alumni through educational and career pathways.

1.2 About the client

TCF is one of Pakistan's leading organisations in the field of education for the less privileged. TCF also maintains a dedicated alumni network and support ecosystem. www.tcf.org.pk.

1.3 About the project

The project involves the development of the TCF Alumni Pathways Mobile App — a user-friendly digital platform aimed at bridging the gap between TCF alumni and their academic goals. In its initial phase, the app will provide guidance on applying for matric and intermediate education, while later versions will assist alumni with university education. Deliverables include a working prototype app, a connected and populated database, an admin panel for managing the app's content and a server-side API to run the app. We will also guide on how to use and maintain the app, and provide documentation for future development.

1.4 Plan of work

We will follow a remote work model under the supervision of Jamila Khaskheli and Syed Asfand Hussain Shah from TCF.With regular bi-weekly check-ins. The project will span from February to May 2025. The project will be done slowly over the course of about 8 weeks.

2 Weekly Breakdown

2.1 Week 01: 27 Jan - 02 Feb 2025

We had our first meeting with the TCF team to discuss the project. We discussed the project scope, deliverables, and timeline.

Item	Activity	Time	ID
1	Meeting with TCF Supervisor	1 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	1 hour(s)
aa07729	1 hour(s)

2.2 Week 02: 03 Feb - 09 Feb 2025

We started working on the project. Created the SRS, reviewed the files and data shared by TCF anf finalized the proposal that was signed by TCF and submitted to the Khidmat committee.

Item	Activity	Time	ID
1	Requirment Gathering	2 hr(s)	aa07600, aa07729
2	Working on Proposal	1 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	5 hour(s)
aa07729	5 hour(s)

2.3 Week 03: 10 Feb - 16 Feb 2025

We created a small prototype of the app in Flutter to test the feasibility of the project.

Item	Activity	Time	ID
1	Proof of Concept App	3 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	3 hour(s)
aa07729	3 hour(s)

2.4 Week 04: 17 Feb - 23 Feb 2025

We had a meeting with the TCF team to show them the prototype and get their feedback.

Item	Activity	Time	ID
1	Meeting with TCF Supervisors	1 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	1 hour(s)
aa07729	1 hour(s)

2.5 Week 05: 24 Feb - 02 Mar 2025

We created the data model, figured all the features and use case scenarios and then created the database schema. We also created the API specification which will then be used to create the backend.

Item	Activity	Time	ID
1	Data Model Creation	2 hr(s)	aa07600, aa07729
2	Usecases and Scenario Validation	2 hr(s)	aa07600, aa07729
3	API Specification	3 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	7 hour(s)
aa07729	7 hour(s)

2.6   Week 06: 03 Mar - 09 Mar 2025

We had a progress update meeting with the TCF team. Discussed the data model and the API specification. Made changes according to their feedback.

Item	Activity	Time	ID
1	Meeting with TCF Supervisors	1 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	1 hour(s)
aa07729	1 hour(s)

2.7 Week 07: 10 Mar - 16 Mar 2025

Development work started. We divided the work between the backend and the app. The development of many things also required us to first learn about the technologies we are using. So it was a mix process of learning and development.

Item	Activity	Time	ID
1	Backend - Codebase setup	1 hr(s)	aa07600
2	Backend - User authentication APIs	3 hr(s)	aa07600
3	App - Theme and structure research	2 hr(s)	aa07729
4	App - Mvvm architecture setup	1 hr(s)	aa07729
5	App - Color theme and dark/light theme setup	2 hr(s)	aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	4 hour(s)
aa07729	5 hour(s)

2.8 Week 08: 17 Mar - 23 Mar 2025

Development work continued. We created the database and the schema. We also created the user management APIs. The app was also started and we created the home page and the settings page.

Item	Activity	Time	ID
1	MongoDB Database created with schema	2 hr(s)	aa07600
2	Data given by TCT cleaned and analysed	1 hr(s)	aa07600
3	Backend - User management APIs	3 hr(s)	aa07600
4	App - Home page	3 hr(s)	aa07729
5	App - Notifications (static)	2 hr(s)	aa07729
6	App - Settings screen	1 hr(s)	aa07729
7	App - Device UUID registration	1 hr(s)	aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	6 hour(s)
aa07729	7 hour(s)

2.9 Week 09: 24 Mar - 30 Mar 2025

No work was done this week due to last week of Ramadan and course workloads.

Item	Activity	Time	ID
-	-	-	-

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	-
aa07729	-

2.10 Week 10: 31 Mar - 06 Apr 2025

No work was done this week due to Eid holidays.

Item	Activity	Time	ID
-	-	-	-

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	-
aa07729	-

2.11   Week 11: 07 Apr - 13 Apr 2025

We had a progress update meeting with the TCF team. We demoed the app and shared the current working version of the app. We also discussed the next steps and the timeline for the project.

Item	Activity	Time	ID
1	Meeting with TCF Supervisor	1 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	1 hour(s)
aa07729	1 hour(s)

2.12 Week 12: 14 Apr - 20 Apr 2025

Main development focus on institute features on both the backend and the app. The admin panel dashboard was intialized.

Item	Activity	Time	ID
1	Backend - Institute management APIs	5 hr(s)	aa07600
2	Backend - Institute Rating APIs	2 hr(s)	aa07600
3	Admin panel - Codebase setup	1 hr(s)	aa07600
4	Admin panel - Main dashboard	3 hr(s)	aa07600
5	App - Student search settings form	3 hr(s)	aa07729
6	App - Mapbox api documentation and research for pricing model	1 hr(s)	aa07729
7	App - find institutes screen	2 hr(s)	aa07729
8	App - Institute view on map via mapbox api screen	5 hr(s)	aa07729
9	App - Iinstitue favorites screen	2 hr(s)	aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	11 hour(s)
aa07729	13 hour(s)

2.13   Week 13: 21 Apr - 27 Apr 2025

No work was done this week due to final week of classes and course workloads.

Item	Activity	Time	ID
-	-	-	-

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	-
aa07729	-

2.14 Week 14: 28 Apr - 04 May 2025

We had a progress update meeting with the TCF team.

Item	Activity	Time	ID
1	Meeting with TCF Supervisor	1 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	1 hour(s)
aa07729	1 hour(s)

2.15 Week 15: 05 May - 11 May 2025

Many other core features were worked on. Development of backend almost completed and admin panel was updated. The app was also updated with the new features. The deployment of the backend and admin panel was also done on Digital Ocean.

Item	Activity	Time	ID
1	Backend - AppFeedback APIs	2 hr(s)	aa07600
2	Backend - Institute Add requests APIs	1 hr(s)	aa07600
3	Backend - Admin dashboard APIs	3 hr(s)	aa07600
4	Backend - Resource management APIs	2 hr(s)	aa07600
5	Admin panel - User management	2 hr(s)	aa07600
6	Admin panel - Institute management	3 hr(s)	aa07600
7	App - Saving favorites insitute	2 hr(s)	aa07729
8	App - Institute add request form	2 hr(s)	aa07729
9	App - Institute details screen	2 hr(s)	aa07729
10	App - Release size optimization, branding updated	2 hr(s)	aa07729
11	App - Backward compatibility check	2 hr(s)	aa07729
12	Backend and Admin Panel deployed on Cloud	3 hr(s)	aa07600, aa07729

The total time spent on the Khidmat this week is as follows.

ID	Total Hours
aa07600	16 hour(s)
aa07729	13 hour(s)

2.16 Week 16: 12 May - 18 May 2025

We had a demo meeting with the TCF team. Shared the admin panel and app package with them. We now completed all the other remaining features of the app.

Item	Activity	Time	ID
1	Meeting with TCF Supervisors	1 hr(s)	aa07600, aa07729
2	Backend - Notification APIs + Firebase integration	2 hr(s)	aa07600
3	Admin panel - Institute rating management	1 hr(s)	aa07600
4	Admin panel - Resource management	1 hr(s)	aa07600
5	Admin panel - App feedback management	1 hr(s)	aa07600
6	Admin panel - Institute add requests management	1 hr(s)	aa07600
7	App - Institute rating screen	1 hr(s)	aa07729
8	App - Resource screen dynamically updated	1 hr(s)	aa07729
9	App - Live push notifications	2 hr(s)	aa07729

The total time spent on the Khidmat this week is as follows.

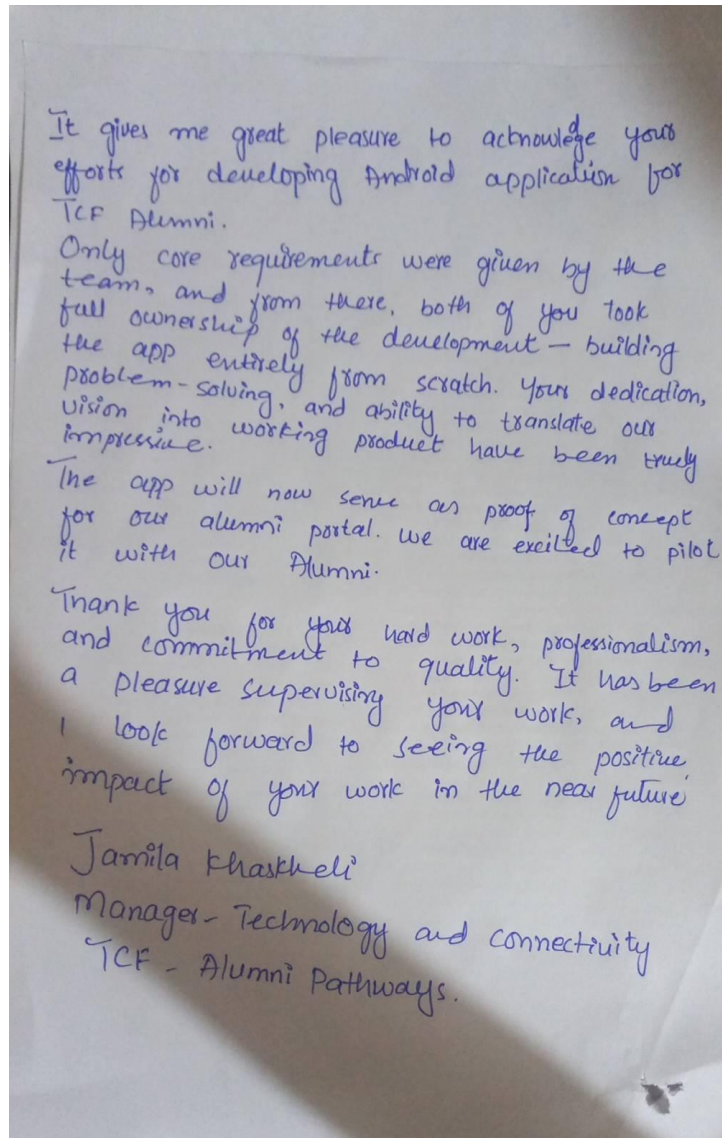| ID	Total Hours
aa07600	7 hour(s)
aa07729	5 hour(s)

3 Conclusion

The project was to develop a mobile application for The Citizens Foundation (TCF) to guide their alumni through educational and career pathways. The project was to create a MVP of the alumni pathways app system to propose the project to higher management. We will continue on the project on testing, bug fixing and maintenance. Over the course of the project we learned about a lot of different technologies and tools. We also learned about the importance of documentation and how to work in a team. We also learned about the importance of communication and how to work with a client. The project was a great learning experience for us and we are grateful to TCF for giving us this opportunity. Special thanks to our supervisors, namely Jamila Khaskheli and Syed Asfand Hussain Shah, for their guidance and support throughout the project.

Khidmat Completion Form

To be completed by the external supervisor.

Please use the space below to provide any comments you may have on the students' performance, the Khidmat program, or any other feedback you want to share with Habib University's Khidmat committee. We can also be reached at khidmat@sse.habib.edu.pk.

It gives me great pleasure to acknowledge your efforts for developing Android application for TCF Alumni.

Only core requirements were given by the team, and from there, both of you took full ownership of the development — building the app entirely from scratch. Your dedication, problem-solving, and ability to translate our vision into working product have been truly impressive.

The app will now serve as proof of concept for our alumni portal. We are excited to pilot it with our Alumni.

Thank you for your hard work, professionalism, and commitment to quality. It has been a pleasure supervising your work, and I look forward to seeing the positive impact of your work in the near future.

Jamila Khaskheli
Manager - Technology and Connectivity
TCF - Alumni Pathways.

I hereby certify that I supervised Ahmed Ali and Ahsan Azeemi for the Khidmat described in this report. Furthermore, that I have read and agree with the weekly updates included in this report. My signature below marks the successful completion of the work undertaken for the Khidmat.

_____   _____
Name and signature   Location and date