

Khidmat: Student Report & Financial Assessment Tool for Taleem Gah

Abeer Khan
ak05419

Akeel Ather Medina
am05427

Faiz Haseeb
fh06224

Ali Adnan
aa05432

28th March, 2023

The objective of this project is to create a website for Taleem Gah, a school that provides education to underprivileged children. The school faces challenges in managing students' grades and assessing its financial situation, primarily because their records are maintained on paper. This has led to inefficiencies in record-keeping, as well as difficulties in tracking and analyzing financial data and student performance. To address these issues, a proposed website has been developed with two main components. The first component is a financial module that enables the school to review its expenses and donors. This feature allows the school to make informed decisions regarding financial matters. The second component is an academic module that allows teachers and administrators to input and view students' grades. This feature is intended to provide updates on student performance and enable the generation of student performance reports.

This project was completed remotely, with communication established through either Whatsapp or email. Despite the challenges of remote work, the team was able to effectively collaborate and deliver a high-quality product. The website is now live and accessible via this link: <https://taleem-gah-school.onrender.com>.

The back-end functionality of the website is implemented using Flask, a Python web framework that provides a robust set of tools for building web applications. The front-end functionality is implemented using HTML/CSS/JavaScript, which provides an intuitive and user-friendly interface. A detailed summary of the development of the application is provided in each week's weekly report below.

Week 1: 21–27 June, 2022

We spent this week understanding Flask fundamentals and setting up the environment on our local systems, which we will then use to develop the application. Additionally, we spent this week configuring the application functional requirements.

Item	Activity	Time	ID
1	Understanding Flask fundamentals	2 hrs	ak05419, am05427, fh06224, aa05432
2	Setting up environment	1 hr	ak05419, am05427, fh06224, aa05432
3	Discussion on application system design	2 hrs	ak05419, am05427, fh06224, aa05432

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

ID	Total Hours
ak05419	5 hours
am05427	5 hours
fh06224	5 hours
aa05432	5 hours

Week 2: 28 June–4 July, 2022

We spent this week configuring PostgreSQL on our local systems, designing the database, and connecting it to our Flask application. Further discussions on application functional requirements were done this week and the database design was configured accordingly.

Item	Activity	Time	ID
1	Setting up PostgreSQL environment	1 hr	ak05419, am05427, fh06224, aa05432
2	Discussion on application system design	2 hrs	ak05419, am05427, fh06224, aa05432
3	Configure database	1 hr	ak05419, am05427, fh06224, aa05432

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

ID	Total Hours
ak05419	4 hours
am05427	4 hours
fh06224	4 hours
aa05432	4 hours

Week 3: 5–11 July, 2022

We spent this week finalizing the application functional requirements and other specifications. Furthermore, the back-end and front-end functionality of the login page of the application was implemented, and the components were thoroughly tested. The back-end functionality is implemented through the Flask framework, and the front-end functionality is implemented using HTML/CSS/JavaScript.

Item	Activity	Time	ID
1	Finalizing system design	1.5 hrs	ak05419, am05427, fh06224, aa05432
2	Login page back-end	4 hrs	ak05419
3	Login page front-end	2.5 hrs	aa05432, fh06224
4	Testing	1 hrs	ak05419, am05427

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

ID	Total Hours
ak05419	6.5 hours
am05427	2.5 hours
fh06224	4 hours
aa05432	4 hours

Week 4: 12–18 July, 2022

We spent this week implementing the front-end and back-end functionality of the admin and teacher homepages. Flask sessions were used to ensure successful implementation. Implemented components were then thoroughly tested.

Item	Activity	Time	ID
1	Homepage back-end	2 hrs	am05427
2	Homepage front-end	2 hrs	aa05432, fh06224
3	Testing	1 hr	ak05419, am05427

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

ID	Total Hours
ak05419	1 hour
am05427	3 hours
fh06224	2 hours
aa05432	2 hours

Week 5: 19–25 July, 2022

We spent this week implementing the back-end and front-end functionality for the Forgot Your Password and Reset Password pages. Implemented components were then thoroughly tested.

Item	Activity	Time	ID
1	Forgot Your Password page back-end	2 hrs	aa05432, fh06224
2	Forgot Your Password page front-end	1.5 hrs	aa05432, fh06224
3	Reset Password page back-end	2 hrs	aa05432, fh06224
4	Reset Password page front-end	1.5 hrs	aa05432, fh06224
4	Testing	1.5 hrs	ak05419, am05427

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

ID	Total Hours
ak05419	1.5 hours
am05427	1.5 hours
fh06224	7 hours
aa05432	7 hours

Week 6: 26 July–1 August, 2022

We spent this week implementing the back-end and front-end functionality of the Create A Report Card page. For successful implementation, an understanding of JavaScript and jQuery fundamentals was required. Implemented components were then thoroughly tested.

Item	Activity	Time	ID
1	Understanding JS and jQuery fundamentals	1.5 hrs	ak05419
2	Create A Report Card page back-end	7 hrs	ak05419, am05427
3	Create A Report Card page front-end	2 hrs	ak05419
4	Testing	2 hrs	fh06224, aa05432

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

ID	Total Hours
ak05419	10.5 hours
am05427	7 hours
fh06224	2 hours
aa05432	2 hours

Week 7: 2–8 August, 2022

We spent this week implementing the back-end and front-end functionality of the View all Report Cards page. Implemented components were then thoroughly tested.

Item	Activity	Time	ID
1	View All Report Card page back-end	3 hrs	fh06224
2	View All Report Card page front-end	2 hrs	am05427
3	Testing	2 hrs	aa05432, fh06224

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

ID	Total Hours
ak05419	0 hours
am05427	2 hours
fh06224	5 hours
aa05432	2 hours

Week 8: 9–15 August, 2022

We spent this week implementing the back-end and front-end functionality of the View a Report Card page. Implemented components were then thoroughly tested.

Item	Activity	Time	ID
1	View a Report Card back-end	3 hrs	ak05419, am05427
2	View a Report Card front-end	2 hrs	aa05432
3	Testing	2 hrs	fh06224, am05427

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

ID	Total Hours
ak05419	3 hours
am05427	5 hours
fh06224	2 hours
aa05432	2 hours

Week 9: 16–22 August, 2022

We spent this week implementing the back-end and front-end functionality of the Create a Financial Record page. Implemented components were then thoroughly tested.

Item	Activity	Time	ID
1	Create a Financial Record back-end	11 hrs	ak05419, am05427
2	Create a Financial Record front-end	3.5 hrs	aa05432
3	Testing	3 hrs	aa05432, fh06224

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

ID	Total Hours
ak05419	11 hours
am05427	11 hours
fh06224	3 hours
aa05432	6.5 hours

Week 10: 23–29 August, 2022

We spent this week implementing the back-end and front-end functionality of the Edit a Financial record page. Implemented components were then thoroughly tested.

Item	Activity	Time	ID
1	Edit a Financial Record page back-end	8 hrs	am05427, fh06224
2	Edit a Financial Record page front-end	3 hrs	aa05432,
3	Testing	3 hrs	ak05419

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

ID	Total Hours
ak05419	3 hours
am05427	8 hours
fh06224	3 hours
aa05432	3 hours

Week 11: 30 August–5 September, 2022

We spent this week implementing the back-end and front-end functionality of the View Financials page. Implemented components were then thoroughly tested.

Item	Activity	Time	ID
1	View Financials back-end	5 hrs	aa05432
2	View Financials front-end	3 hrs	aa5432
3	Testing	2 hrs	aa05432, am05427

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

ID	Total Hours
ak05419	0 hours
am05427	2 hours
fh06224	0 hours
aa05432	8 hours

Week 12: 23–29 March, 2023

We spent this week completing the application. This consisted of performing code refactoring, and comprehensive system testing. Once that is completed, the entire application is deployed on a cloud-hosted service, such as Render, and documentation is completed.

Item	Activity	Time	ID
1	Code Refactoring	8 hrs	ak05419
2	System Testing	4 hrs	am05427, ak05419
3	System Deployment	6 hrs	fh06224
4	Documentation	8 hrs	aa05432

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

ID	Total Hours
ak05419	12 hours
am05427	4 hours
fh06224	6 hours
aa05432	8 hours

Conclusion

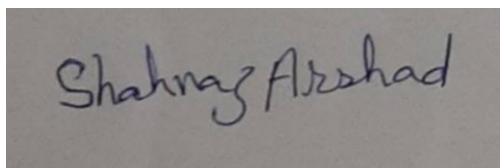
Our project was focused on building a website for Taleem Gah, a school that provides education to underprivileged children. The objective was to develop a system that could assist the school in managing student performance and financial data assessment. To begin, we worked on devising the functional requirements for the proposed application, which involved understanding the expectations of stakeholders. Once the requirements were finalized, we identified the necessary tools and technologies to build the required system and trained ourselves accordingly. Throughout the development process, we conducted rigorous testing to identify and address any shortcomings in the system. Despite the challenges of remote work, we were able to effectively collaborate and deliver a high-quality product that met the needs of Taleem Gah. The website is now live and accessible via this link: <https://taleem-gah-school.onrender.com>, enabling Taleem Gah to better manage student performance and financial data. Additionally, detailed documentation is available at: <https://github.com/AkeelMedina22/Taleem-Gah-School-Website>.

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.

I hereby certify that I supervised Abeer Khan, Akeel Ather Medina, Faiz Haseeb and Ali Adnan 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.



Shahnaz Arshad

71-S PECHS, Waris Shah
Road, Block 6, 28th March,
2023

Name and signature

Location and date