4.3 Design

After all the users' requirements are successfully analyzed, the project will proceed in design phase. In this phase, both interface and database had been designed to help visualize the system before proceeding with coding the system.

4.3.1 System Architecture

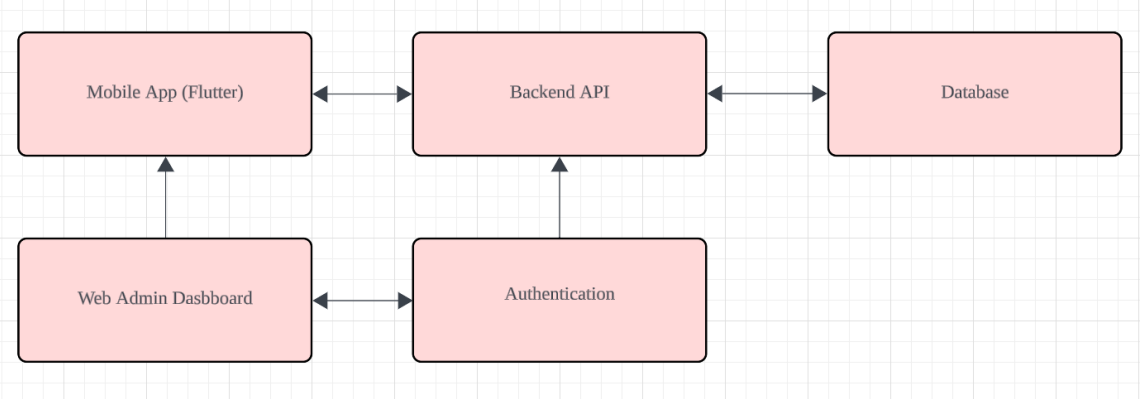


Figure 4.3.1 shows the system architecture of system-based block diagram

4.3.2 Database Design

Schema Table and data dictionary

The following are the tables from the database that have been designed and extracted from the class diagram. The data using MySQL technology to handle it.

i. `Tbl_user: (userID, username, password, role, email, fullName)`

ii. `Tbl_profile: (profileID, userID, talentCategory, skills, achievements)`

iii. `Tbl_achievement: (achievementID, userID, achievementName, date, category, proofFile)`

iv. `Tbl_feedback: (feedbackID, userID, postID, commmentText, date)`

4.3.2.1 `User` Table

`Users` in the showed table 4.3.2.1 include student and lecturer information such as name and password to login in the system for next time. This also applies to the administrator to store all the required information.

Table 4.3.2.1: `User` table

	Data Type	**Size**	**Key**	**Descriptions**
`userID`	VARCHAR	N/A	Primary Key	`Primary key, unique identifier for each user.`
`Username`	VARCHAR	50	Unique	`User's login name`
`Password`	VARCHAR	255		`Encrypted password for authentication`
`role`	VARCHAR	20		`User's role`
`email`	VARCHAR	100	Unique	`User's email address`
`fullName`	VARCHAR	100		`Full name of the user.`

4.3.2.2 profile Table

profile table in 4.3.2.2 shows data stored when user creating profile in the system.

Table 4.3.2.2: `profile` table

Attributes	Data Type	Size	Key	Descriptions
profileID	INT	N/A	Primary Key	Primary key, unique profile identifier
userID	INT	N/A	Foreign Key	Foreign key from TB1_user, link to the user's ID
talentCategory	VARCHAR	100		Talent category
skills	TEXT	N/A		Skill listed in the profile
Achievement	TEXT	N/A	Unique	List of achievements

4.3.2.3 achievement Table

Table 4.3.2.3 shows the data for achievement when the user added or edit to show it in profile.

Table 4.3.2.1: `achievement` table

Attributes	Data Type	Size	Key	Descriptions
achievementID	INT	N/A	Primary Key	Primary key, unique achievement identifier
userID	INT	N/A	Foreign Key	Foreign key from TB1_user, link to the student
achievementName	VARCHAR	100		Name of the achievement
date	DATE	N/A		Date the achievement was awarded
Category	VARCHAR	50	Unique	Category of the achievement
proofFile	VARCHAR	255		Path to the supporting file or certificate

4.3.2.4 feedback Table

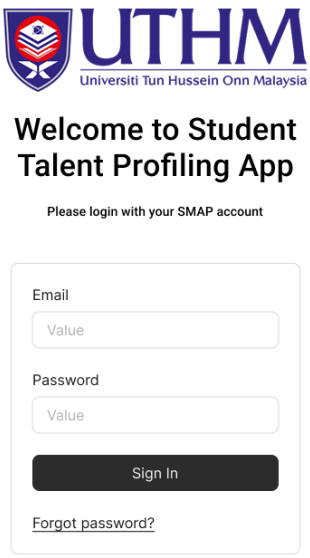
This table 4.3.2.4 stores feedback or comments from lecturers or students on talent showcase posts.

Table 4.3.2.4: feedback Table

Attributes	**Data Type**	**Size**	**Key**	**Descriptions**
feedbackID	INT	N/A	Primary Key	Primary key, unique feedback identifier
userID	INT	N/A	Foreign Key	Foreign key from TB1_user, identifier user providing the feedback
postID	INT	100	Foreign Key	Foreign key to a specific talent showcase post
commonText	TEXT	N/A		Feedback text
date	DATE	N/A	Unique	Date the feedback was posted

4.3.3 Interface Design

The following are the interfaces wireframe that have been designed based on each process in Figure 4.2. The wireframe is designed using Figma software.



4.3.3.1 *Login the app* Interfaces

This is the wireframe interface for login module, where students will fill in their information using SMAP to login to the system. If the account is valid, then they will bring it to the dashboard for normal users but for new users, they will bring it to the registration section to create their own profile.

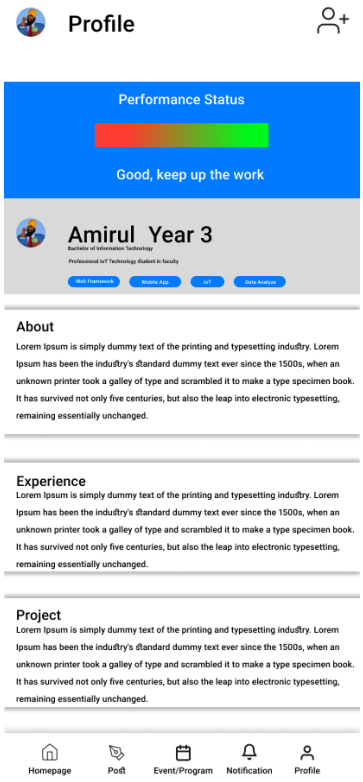


Figure 4.3.3.2: `Profile Management` Interfaces

For the second module, which is profile management, the page will show user information including experience, project etc. It also shows the status of student performance to monitor based on grade and curriculum activities for students to balance it.

Figure 4.3.3.3: `Achievement and Event Program` Interface

For the third module, achievement also can be seen from profile interface for quick view. For any student that wants to look for new achievement or volunteering in any events and program, they can explore any events UTHM currently has in the campus for students. Figure 4.3.3.3 shows example of events and programs faculty held to look for student participation.

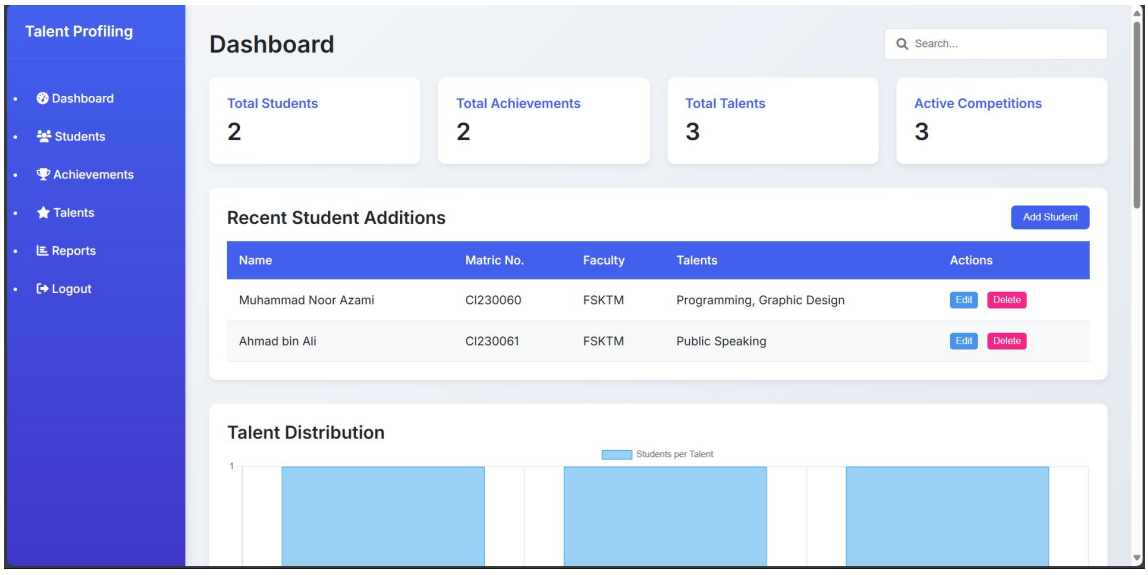


Figure 4.3.3.4: `Web Admin Dashboard` Interfaces

For the next module, reporting and analytic interfaces are available on desktop versions since it use web version for better experience due to ratio aspect and screen size. The web shows the main dashboard for admin to quicken view all data available from students. There is quick navigation for admin to navigate to other page for reporting and access full graph for full reporting.

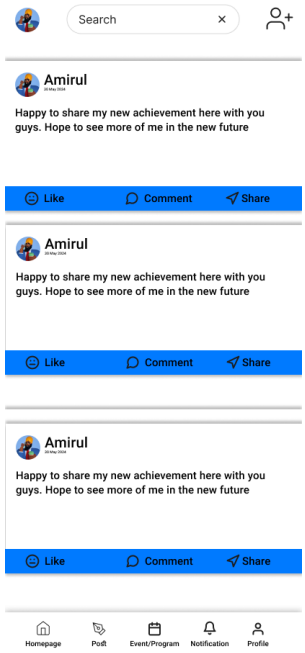


Figure 4.3.3.5: `Talent Showcase and Posting` Interfaces

For the last module, talent showcase is a section where students and lecturers can post any image, video or text to the public for impression and build strong connections community in the app, like social media as example. The user can like, comment and share the posting to anyone.

4.4 Chapter Summary

Tis chapter 4 is focused on Analysis and Design of the Student Talent Profiling App. It provides a comprehensive overview of system design, covering the system modules, functional and non-functional requirements, user requirements, hardware and software specifications, system architecture, and database design. All of this to ensure seamless experience for all users.