ASSIGNMENT 2 FRONT SHEET

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Unit number and title	Unit 30: Application Development		
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Student declaration I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.			
		Student's signature	Dat

Grading grid

P4	P5	P6	M3	M4	M5	D2	D3

❒ Summative Feedback:	❒ Resubmission Feedback:	
Grade:	**Assessor Signature:**	**Date:**
Lecturer Signature:		

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I. Introduction.

In this assignment, I'll guide colleagues through a thorough evaluation of my website training system, building on the Assignment 1 design. I've created a formal questionnaire to gather insights on aspects like business application, problem definition, proposed solution, and development strategy (P4). Colleagues' feedback will be crucial for refining the design. Afterward, I'll proceed to the development phase using chosen technologies and methodologies. The final product will undergo rigorous testing, scrutinizing its performance against the Software Requirement Specification (P5). This process aims to analyze factors influencing performance, reflecting on the design, development, and testing stages' strengths and weaknesses. In conclusion, a reflective discussion on previously identified risks will justify opportunities for improvement and further development, ensuring a robust and effective business application (P6).

II. Effectively reviews my business application (P4).

1. Survey

I've carefully designed a survey to gather valuable feedback from colleagues, focusing on crucial aspects of my business application. The questionnaire explores core components, such as the clarity of the problem definition, viability of the proposed solution, and effectiveness of the development strategy. Through structured questions, I aim to extract insightful opinions on the overall design and conceptual framework. This approach ensures a thorough examination of the project, helping me assess strengths and weaknesses for informed adjustments, ultimately optimizing the solution's effectiveness. The survey comprises 11 questions.

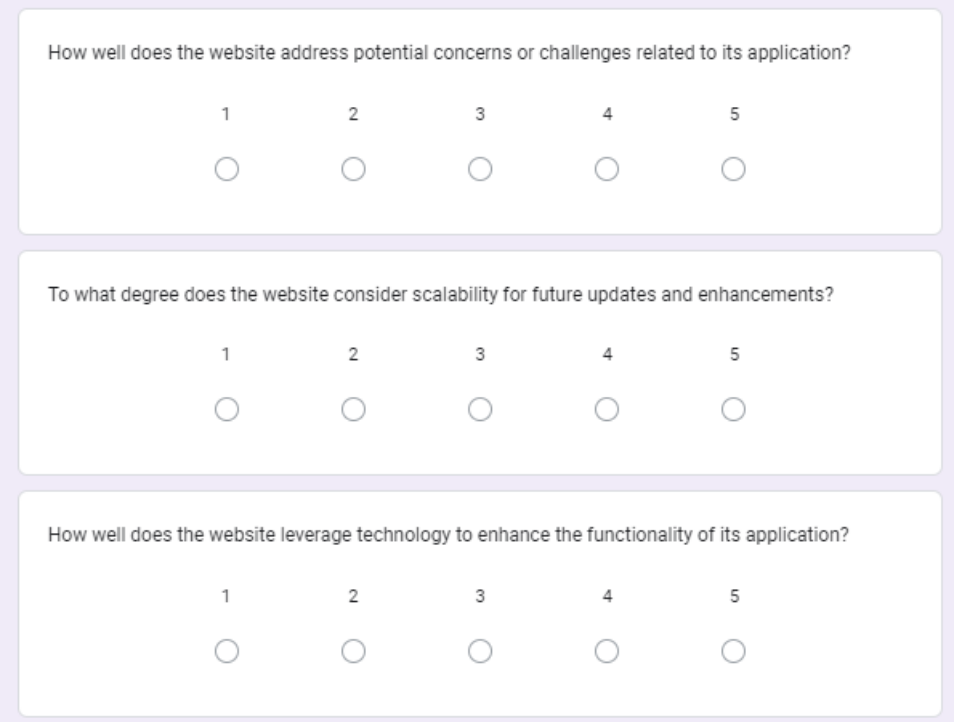

Figure 1: Survey question (1)

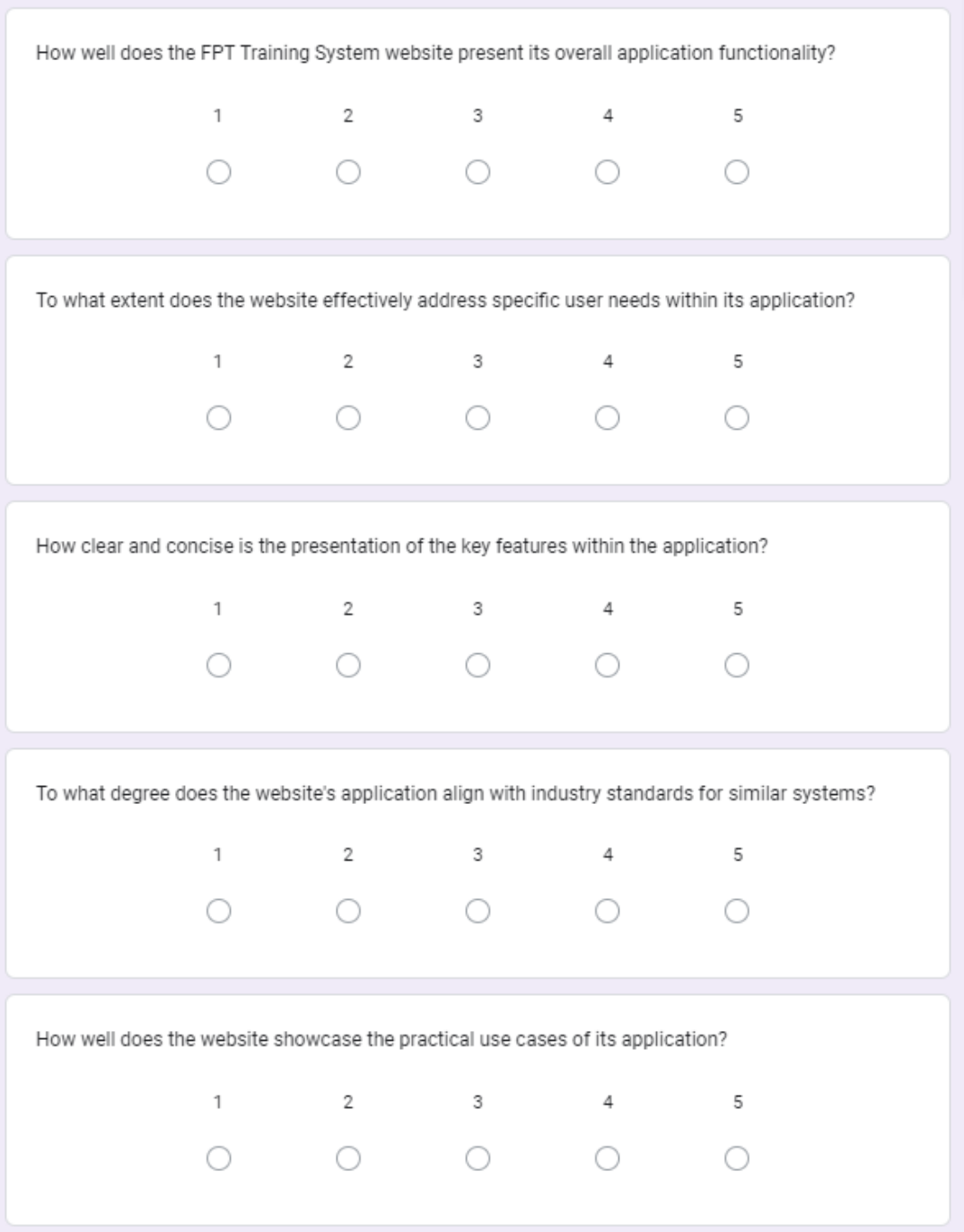

Figure 2: Survey question (2)

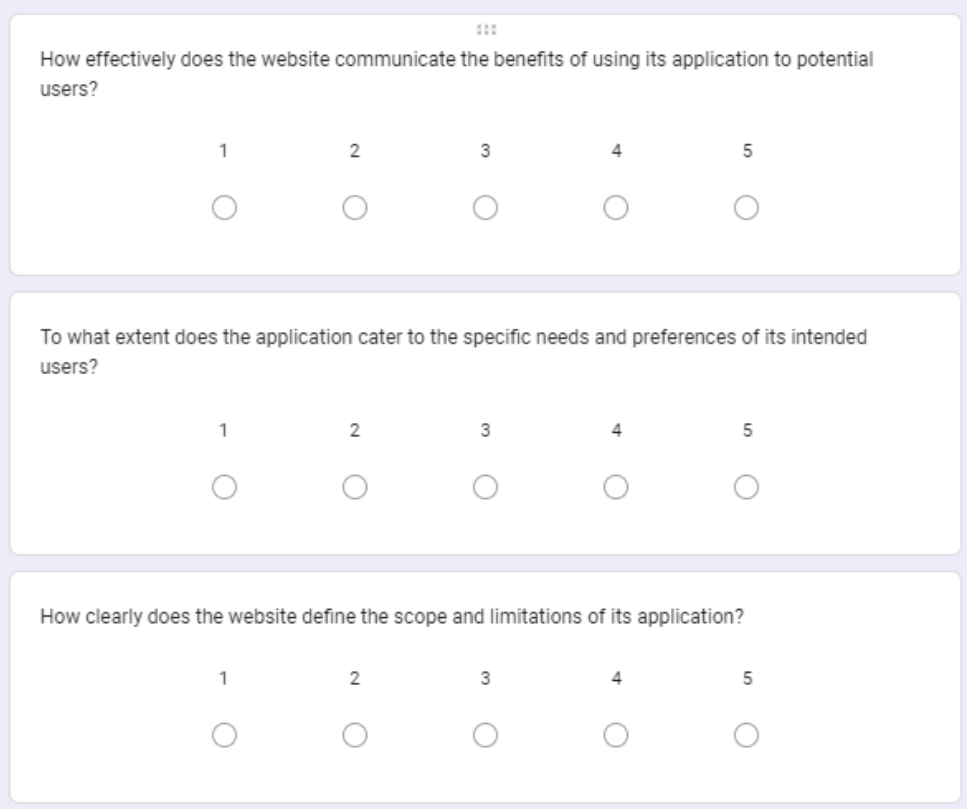

Figure 3: Survey question (3)

And this is answer of the survey:

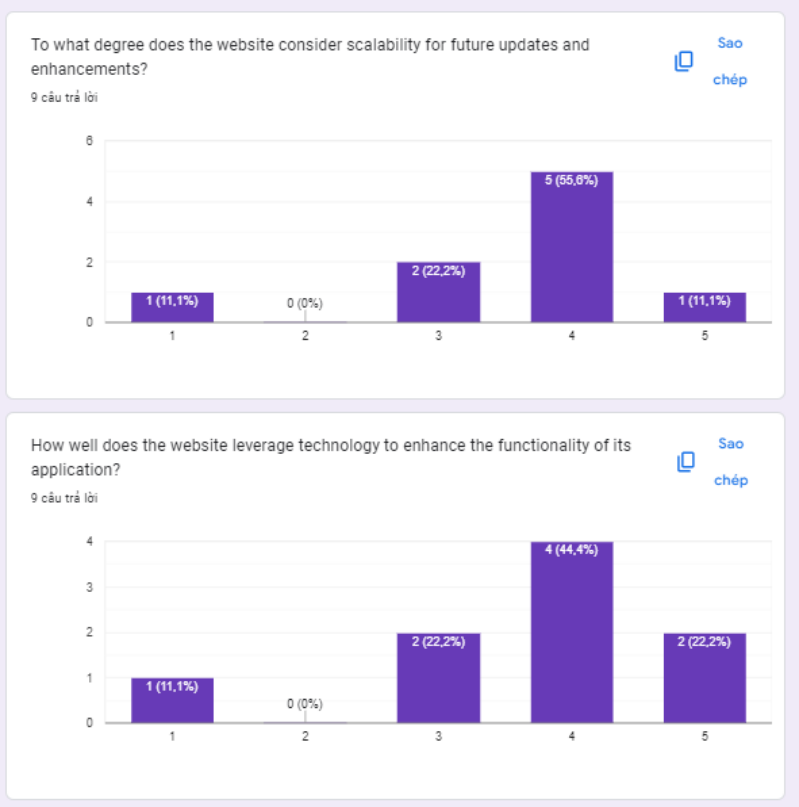

Figure 4: Survey answer (1)

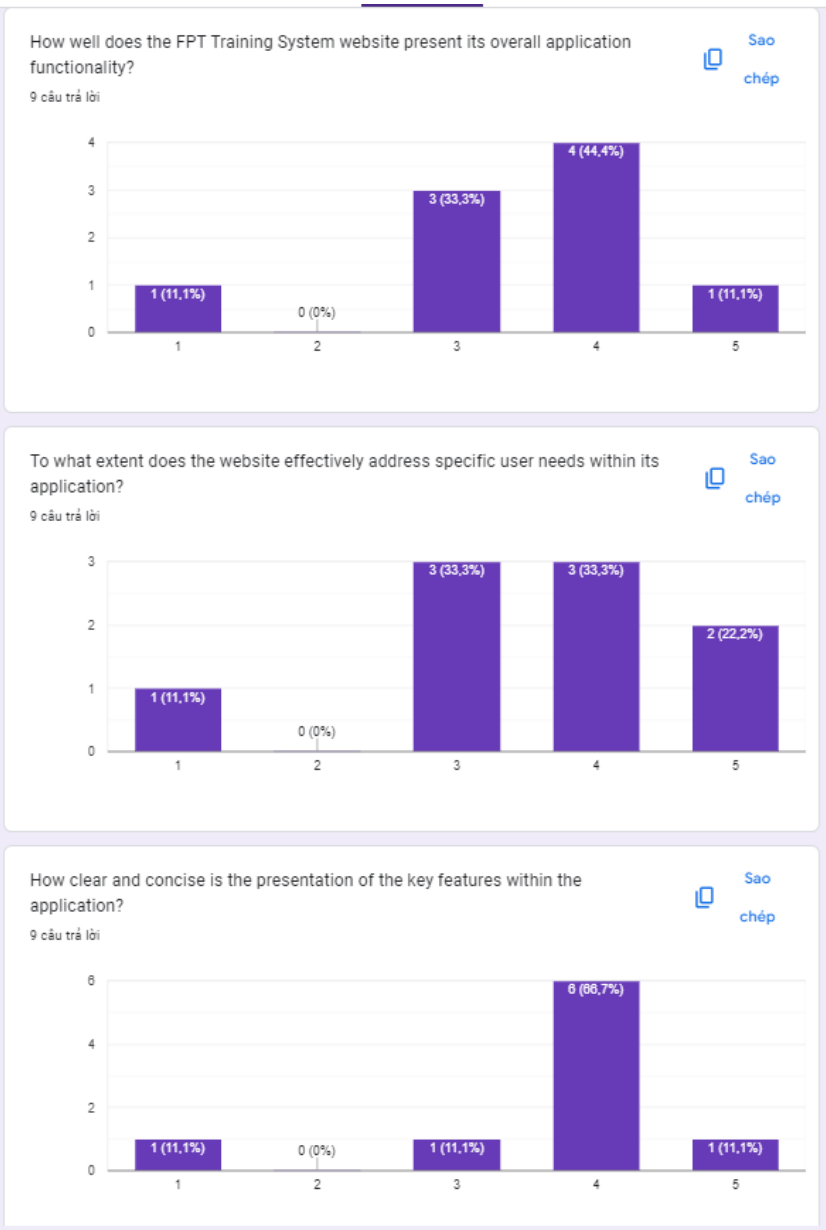

Figure 5: Survey answer (2)

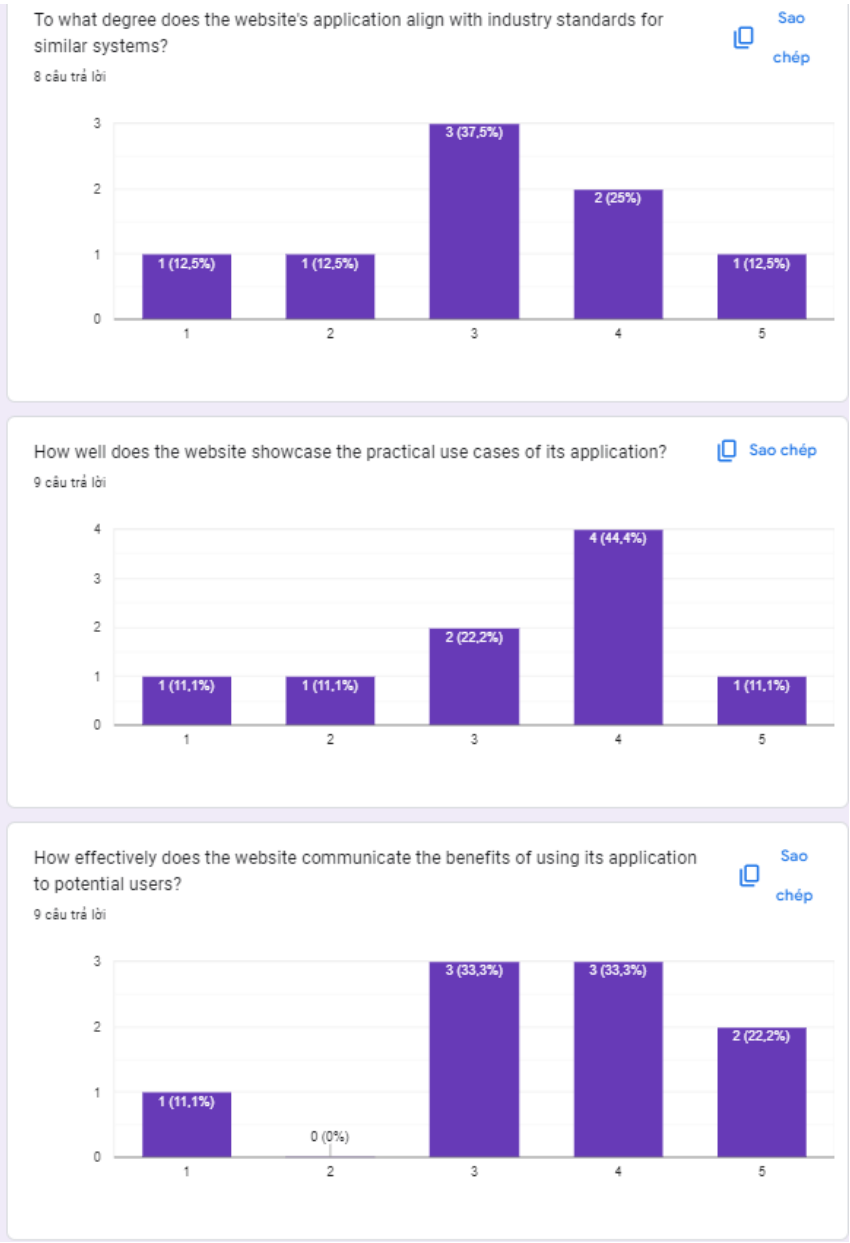

Figure 6: Survey answer (3)

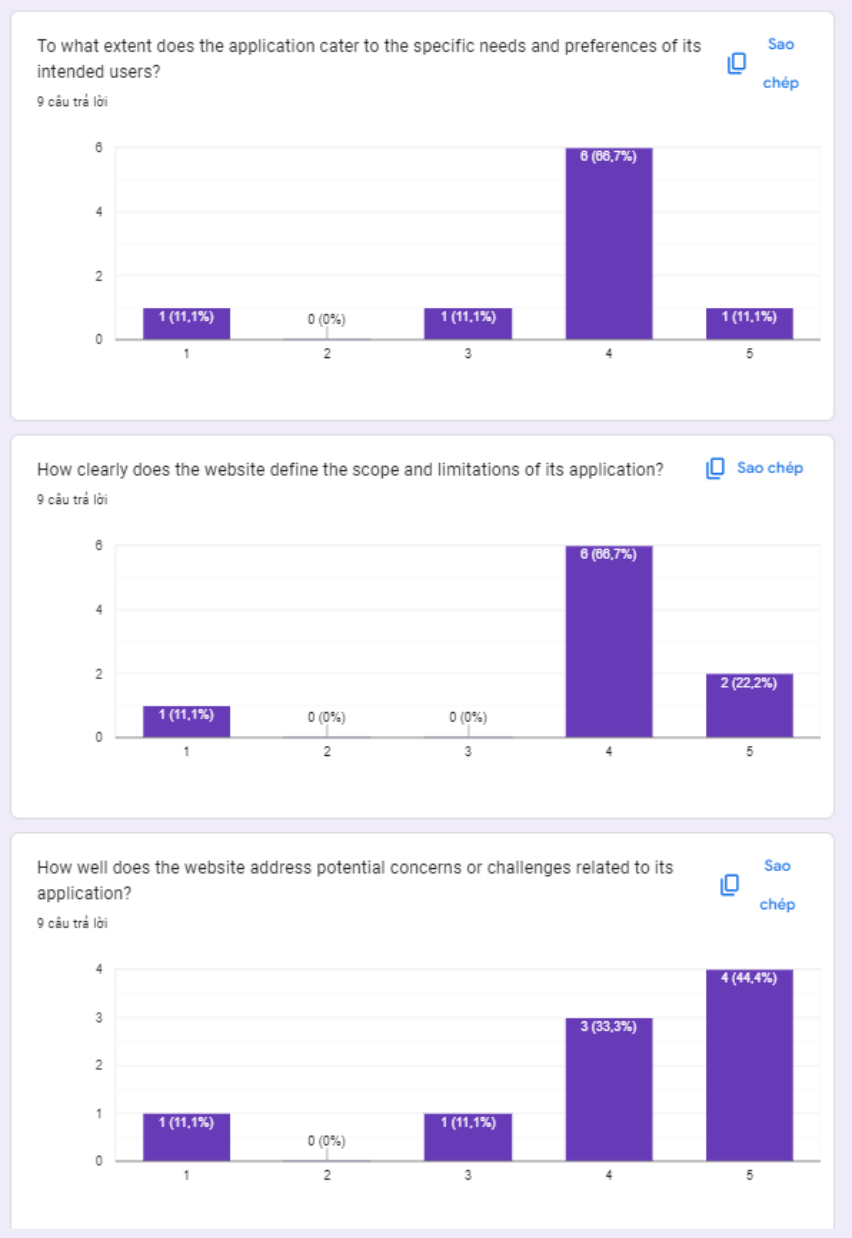

Figure 7: Survey answer (4)

The survey feedback is largely positive, with colleagues acknowledging the website's clarity and effectiveness in addressing challenges. Positive responses highlight adept technology use, a clear scope, and responsiveness to user needs. However, areas for improvement include addressing user needs more effectively and enhancing communication strategies to articulate the application's benefits clearly. This feedback provides valuable insights and a roadmap for refining the application to better cater to user requirements and improve communication with potential users.

2. **Modified after survey**

I am dedicated to implementing the CRUD model (Create, Read, Update, Delete) across all application features to comprehensively address user requests. This strategic approach ensures a seamless and efficient user experience, allowing users to effortlessly create, view, modify, and delete data. To enhance user clarity, technical identifiers like IDs or file names will be replaced with more user-friendly alternatives, prioritizing names for concise representations. The design will also offer flexibility by allowing easy customization of the main color, providing a personalized and visually appealing experience. To effectively communicate the application's benefits, I'm committed to continuous quality improvement, actively listening to user feedback, and employing targeted advertising and marketing strategies for broader visibility. These efforts aim to exceed user expectations, fostering a positive perception among both existing and prospective users.

III. Develop a functional business application based on a specified business problem (P5).

My website includes 3 actors: Admin, Training staff and Trainer. The functions of the 3 actors are as follows. First of all, to access the system, all actors must log in.

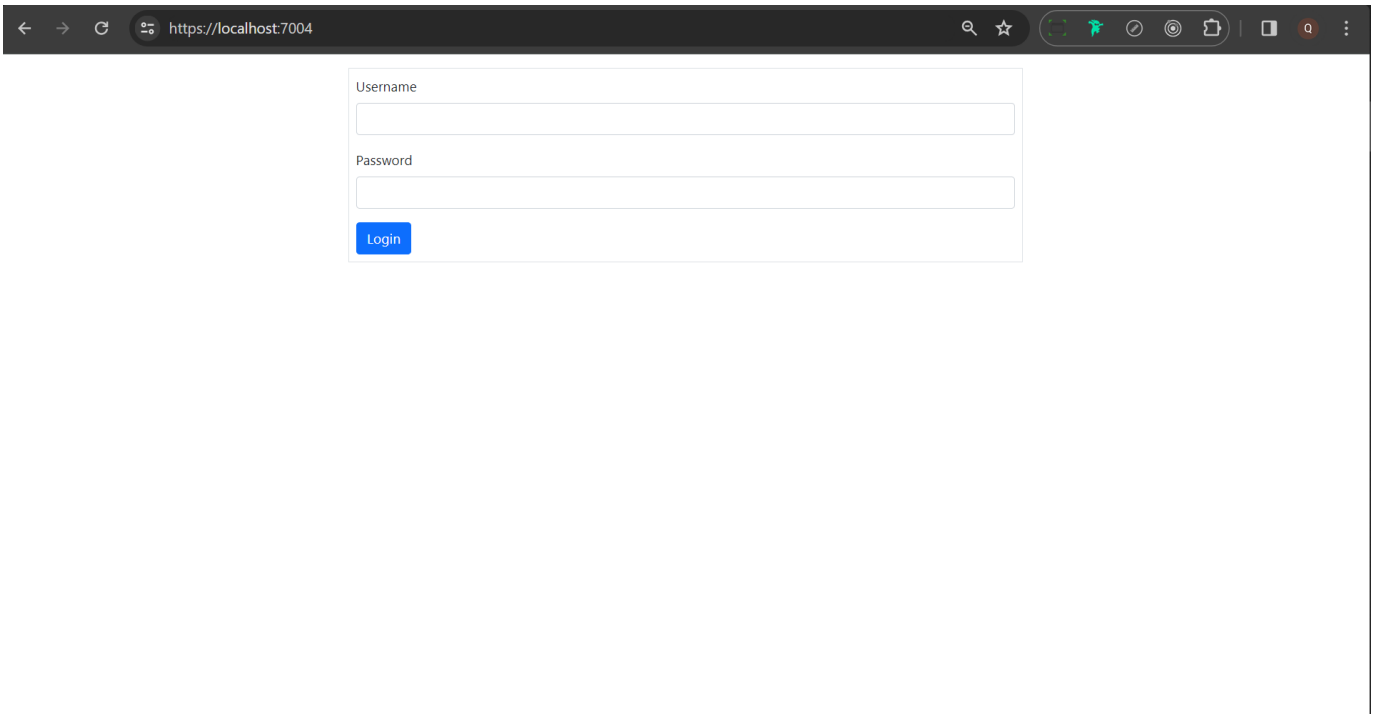

Figure 8: Login

The user logs into the system using the username and password stored in the system. If the user enters the wrong username or password, the user will receive the message: Account invalid. If you can log

into the system, the website will check the user's role. If you are an admin or training staff, the website will redirect to the Account manager function. If the user is a trainer, the website will redirect to the Home manager function.

1. **Admin**

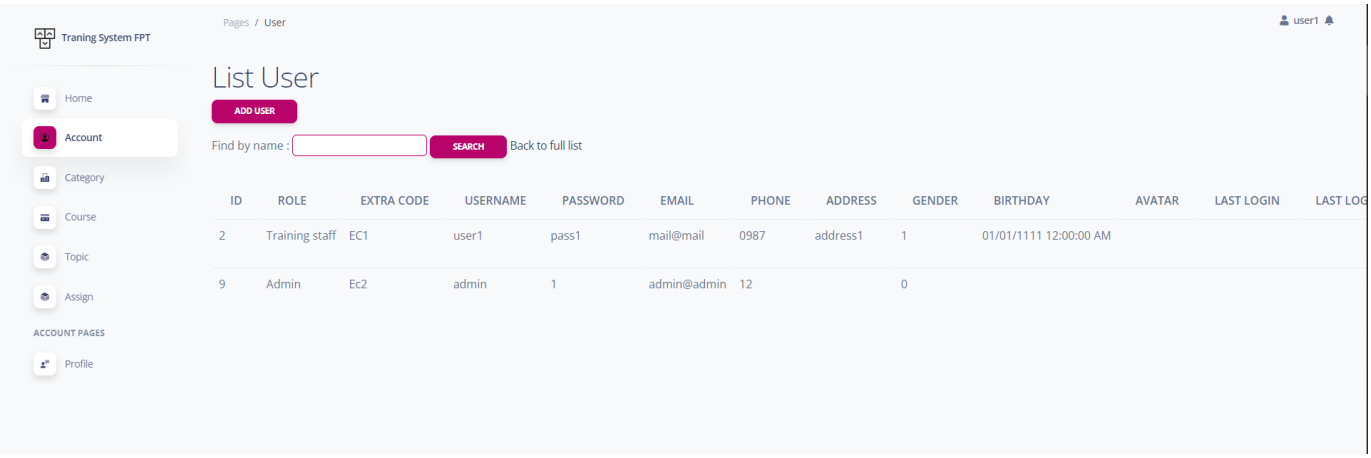

Figure 9: Account manager (1)

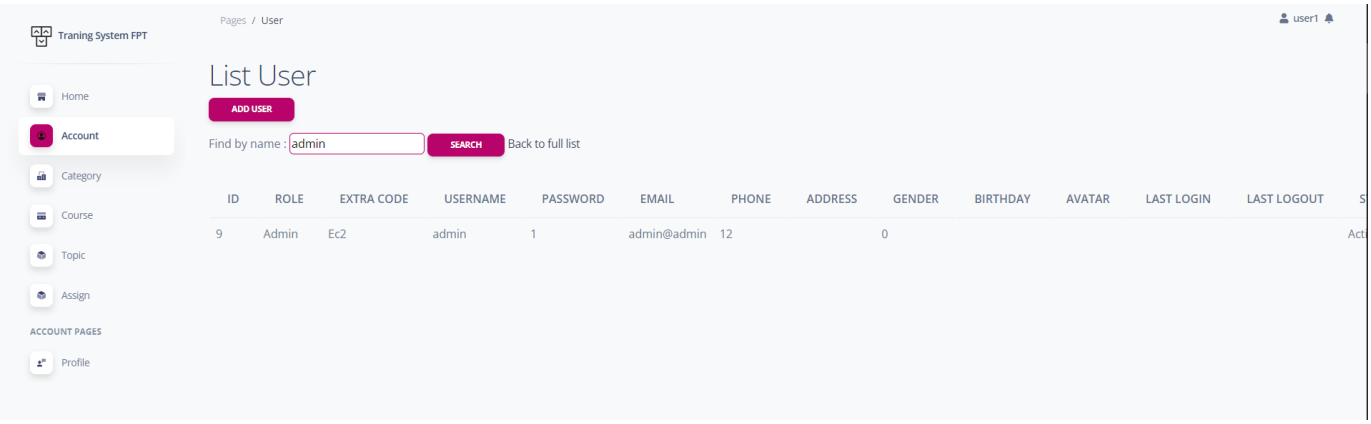

Figure 10: Search account

After logging into the system, the admin will have the right to manage the entire account. Create, read, update, delete all other accounts. create, read, update for accounts with the same Admin role. You can search accounts based on Username or Email.

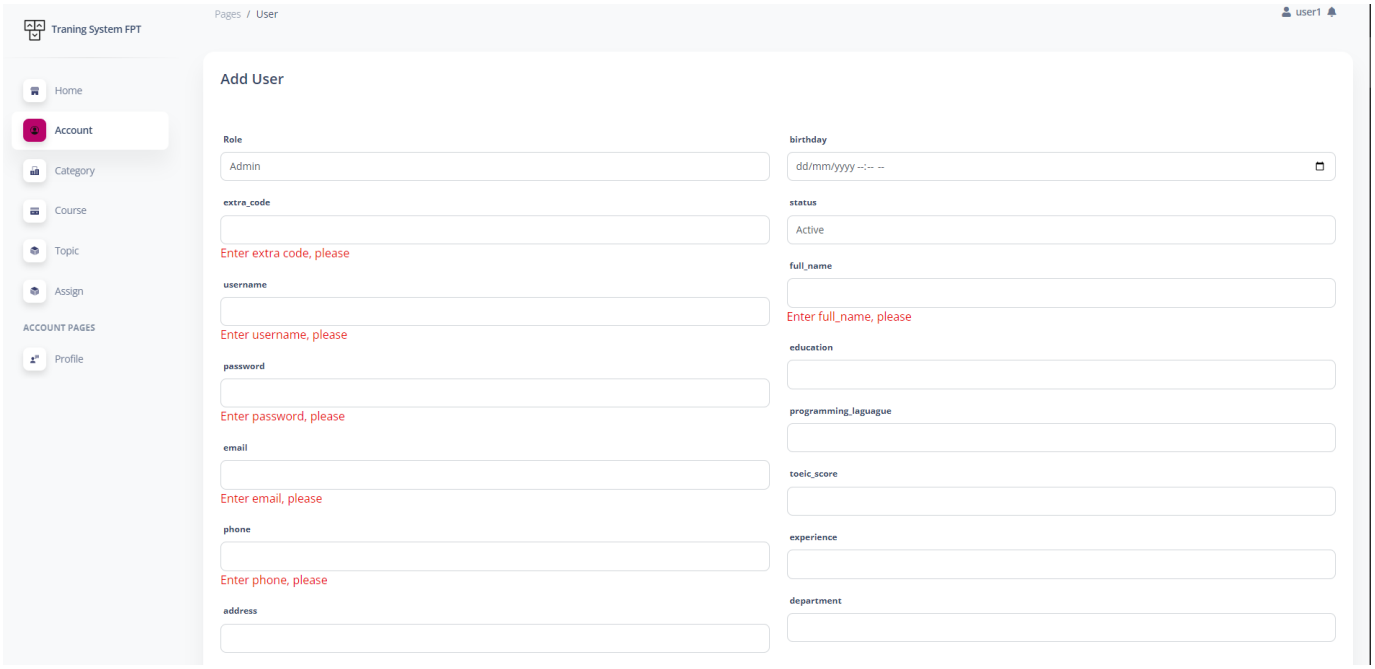

Figure 11: Add account (1)

When creating a new account, the admin will have to fill in all required information fields before adding, including: extra code, username, password, email, phone and fullname.

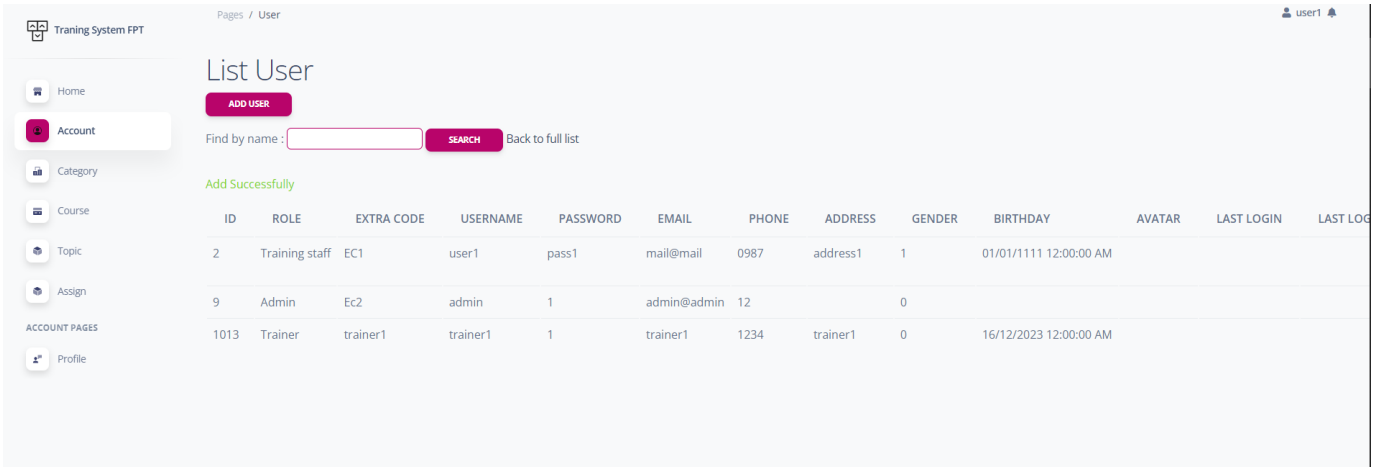

Figure 12: Add account (2)

Once all required fields are filled in, an account will be created. If it is not a Trainee, the account will be allowed to log into the system.

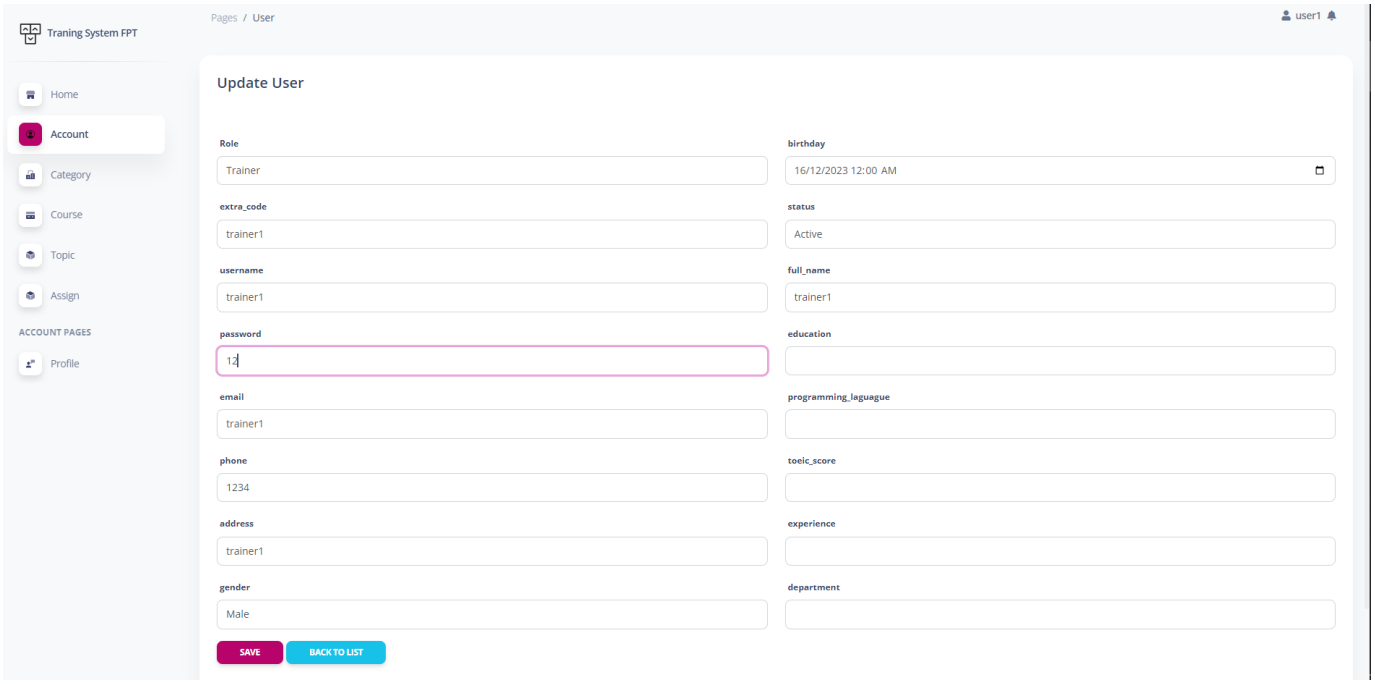

Figure 13: Update account

After filling in all required fields, click save. The account will be updated, the website will redirect to account management.

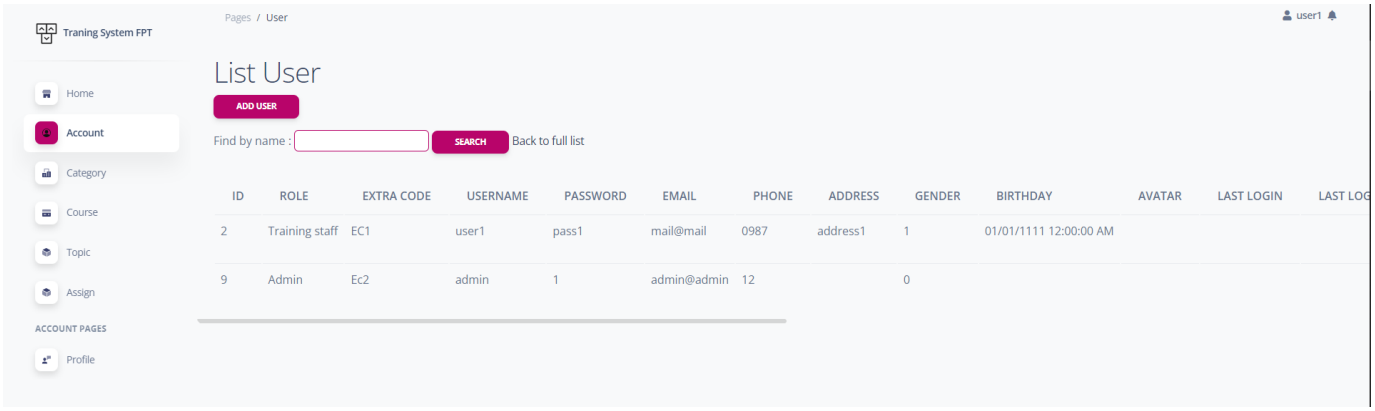

Figure 14: Delete account

After clicking the delete button, the account will be deleted, the website will update the latest data and display it to the user.

2. Training staff

- **Account manager**

For training staff, the account manager will only apply to other training staff accounts, trainer accounts and trainee accounts.

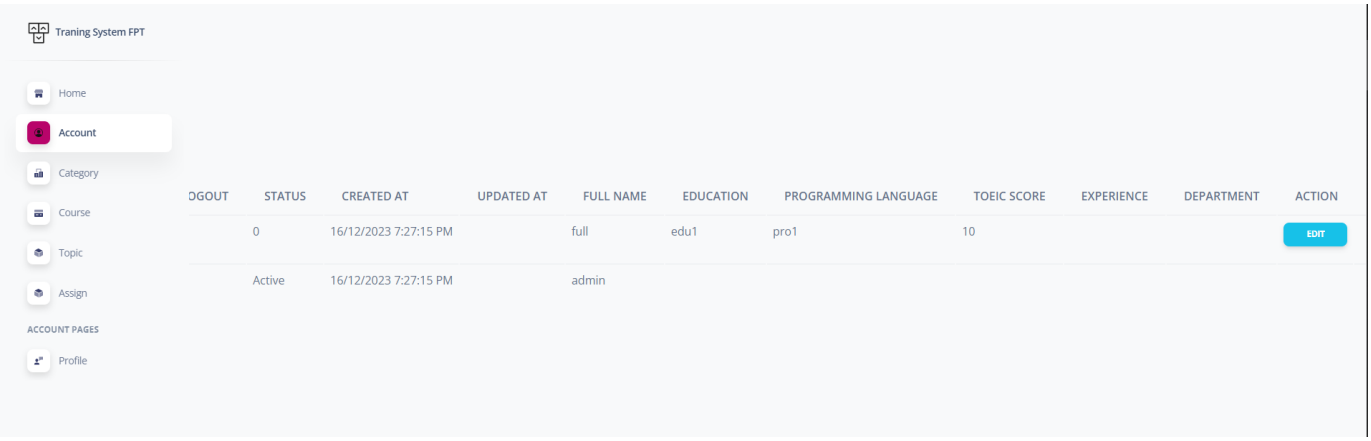

Figure 15: Training staff account manage

- **Category manager**

The account manager feature of training staff is similar to that of admin. includes create, read, update, delete (only for training staff, trainers and trainees).

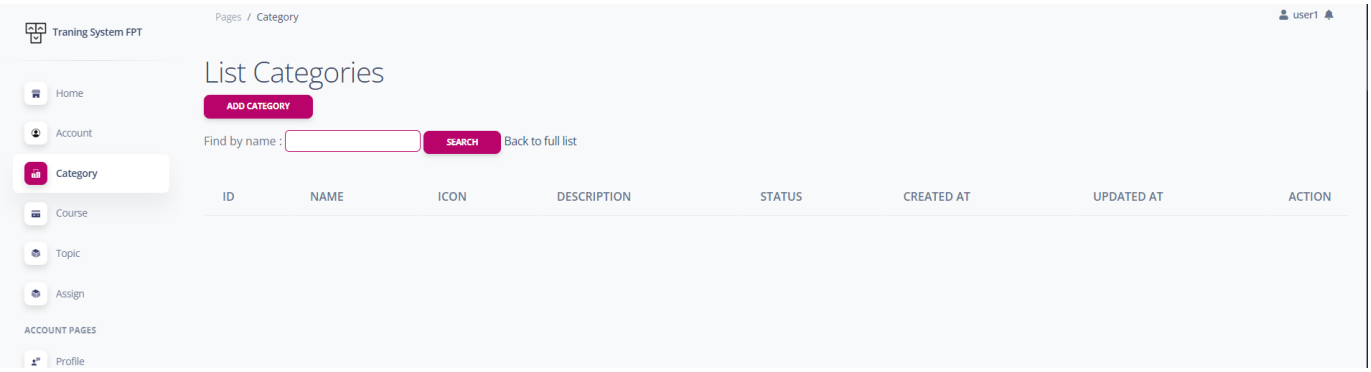

Figure 16: Category manage

Category management includes create, read, update, delete category. Training staff can also search based on the category name.

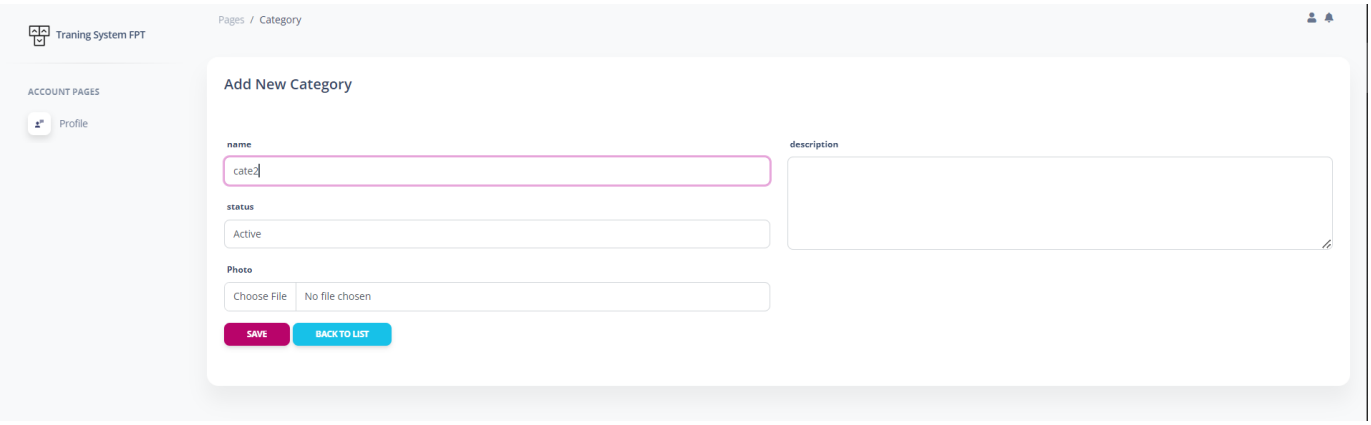

Figure 17: Add Category

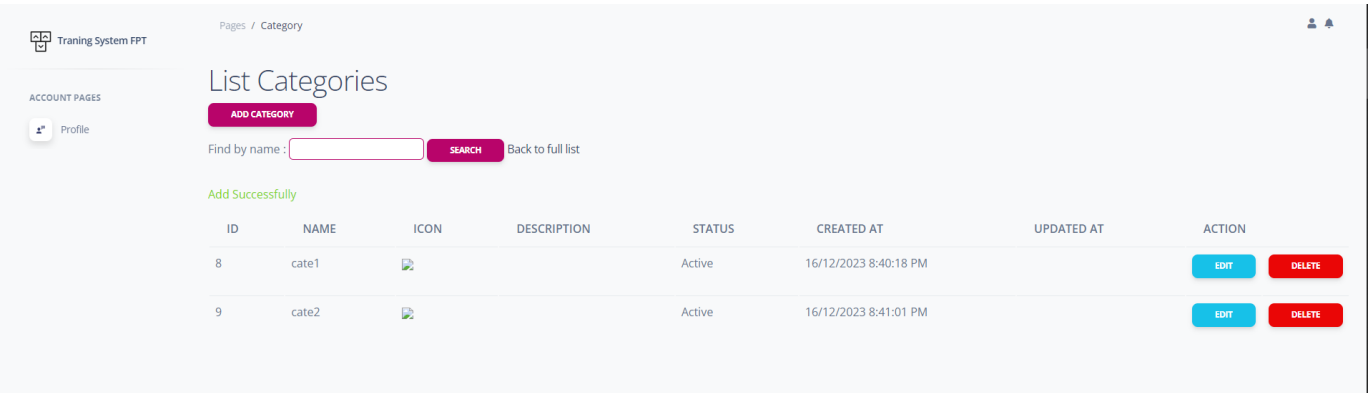

Figure 18: Add category successful

After filling in the necessary information, training staff can add a new category

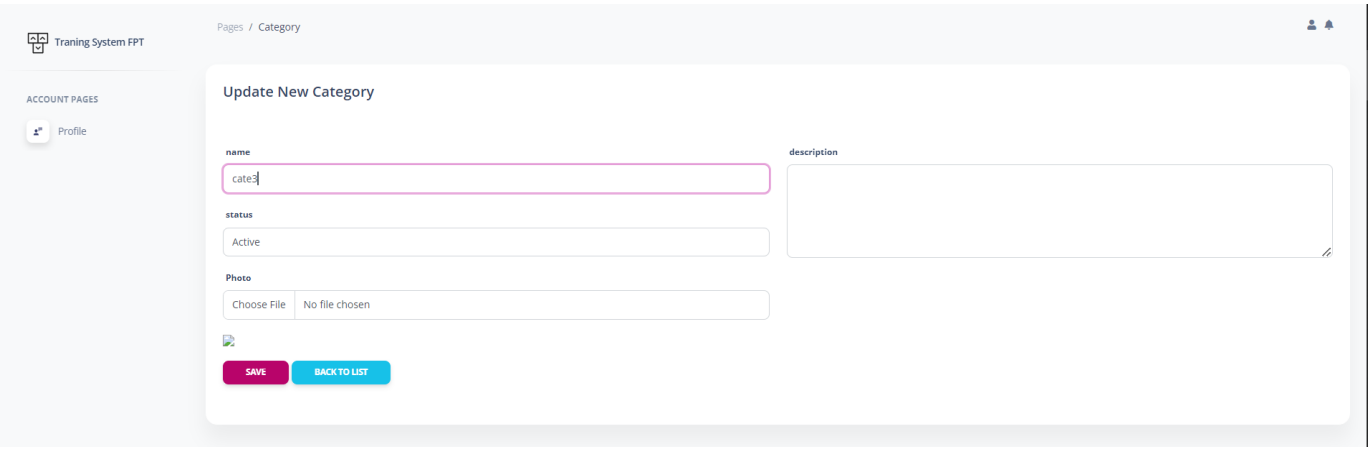

Figure 19: Update category

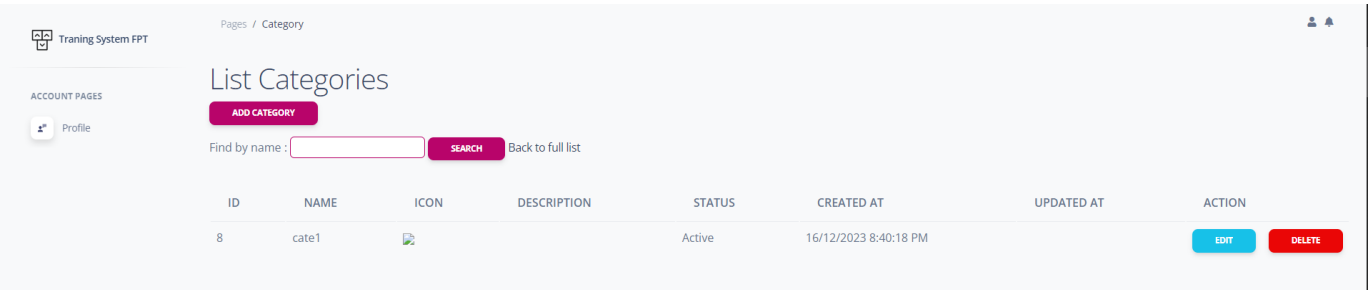

Figure 20: Delete category

After having a new category, training staff can edit or delete the created category.

- **Course manager**

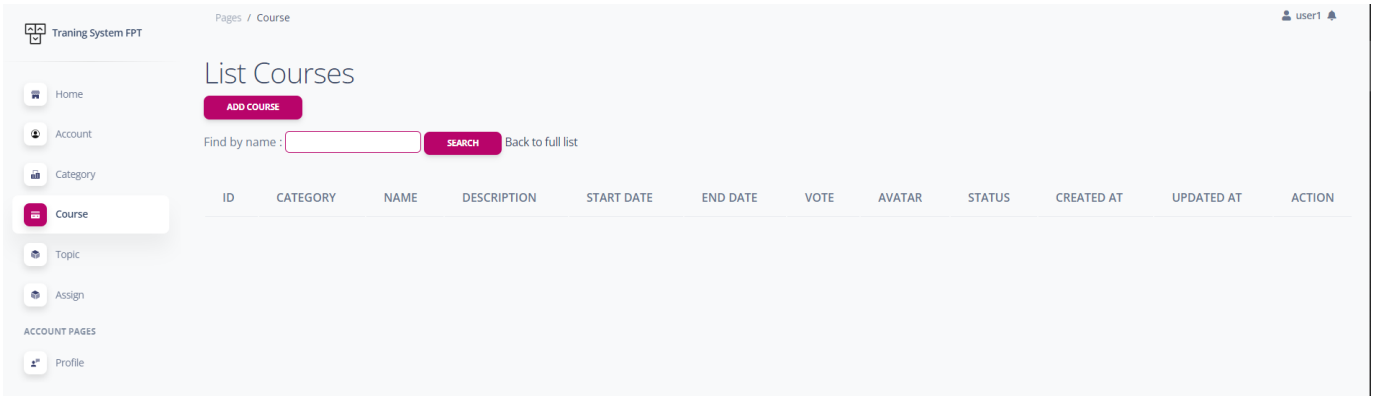

Figure 21: Course manager

Similar to category manager, course manager also has full CRUD. Training staff can search by course name. When creating new course, fill in the required fields and create a new course. Edit and delete when the course is available.

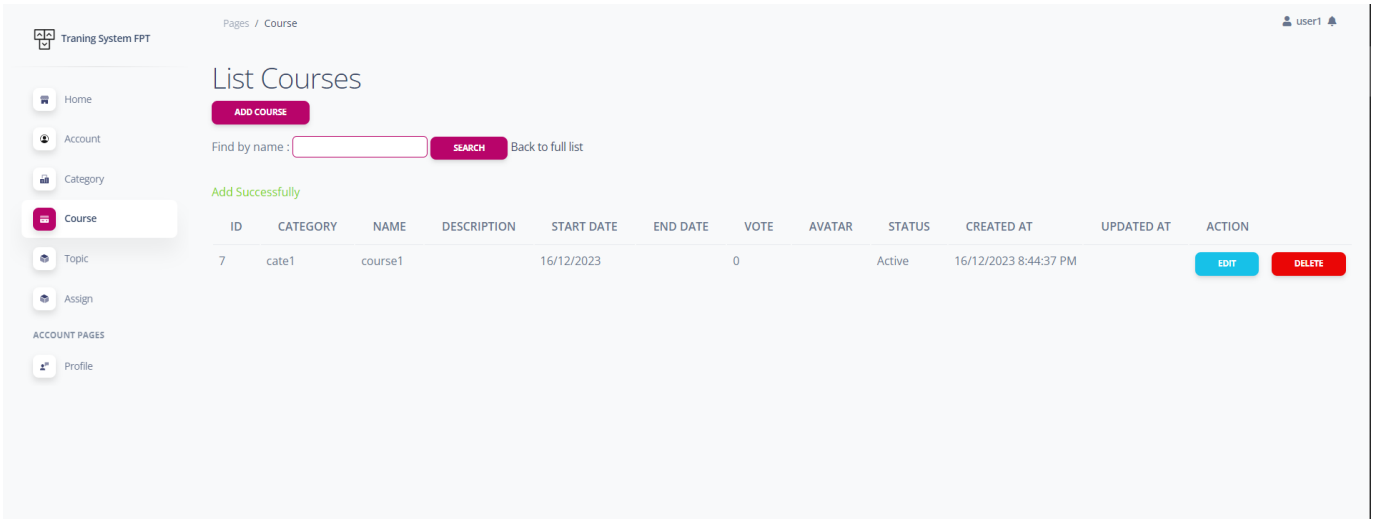

Figure 22: Add course successful

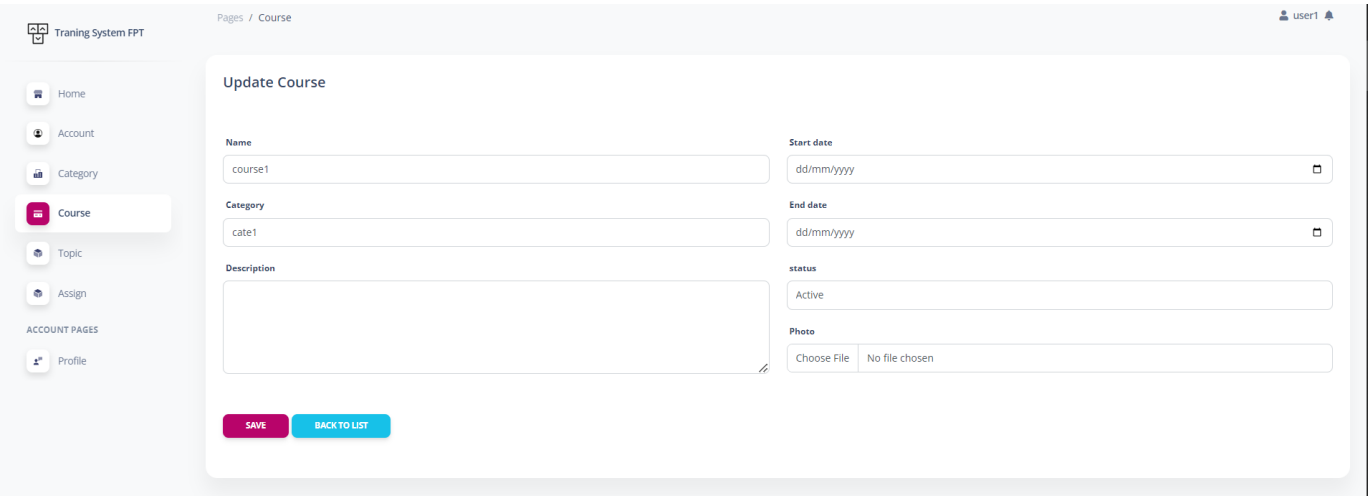

Figure 23: Edit course

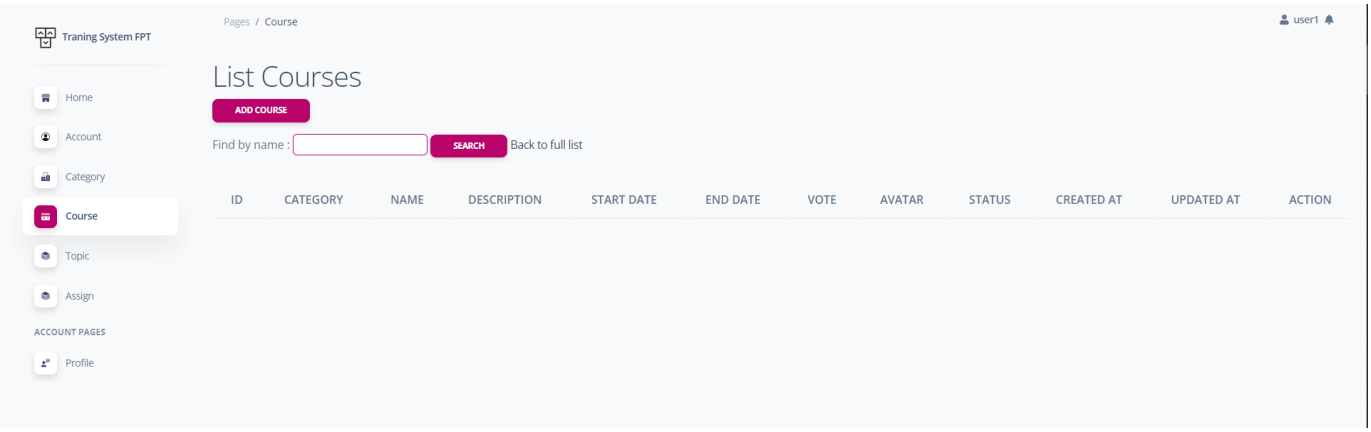

Figure 24: Delete course

- **Topic**

Similar to course manager, topic manager also has full CRUD. Training staff can search by topic name. When creating new topic, fill in the required fields and create a new topic. Edit and delete when the topic is available.

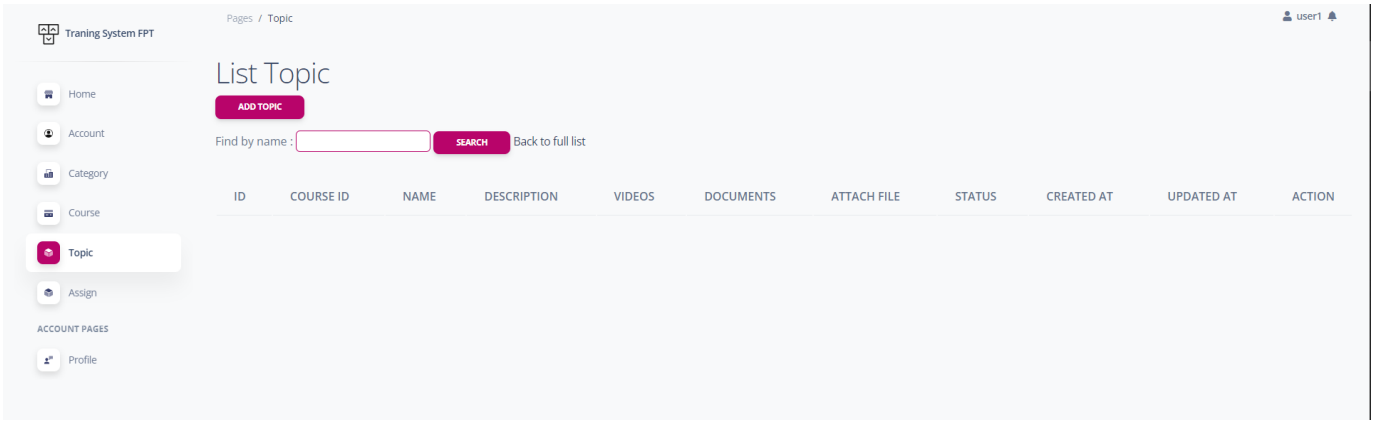

Figure 25: Topic manager

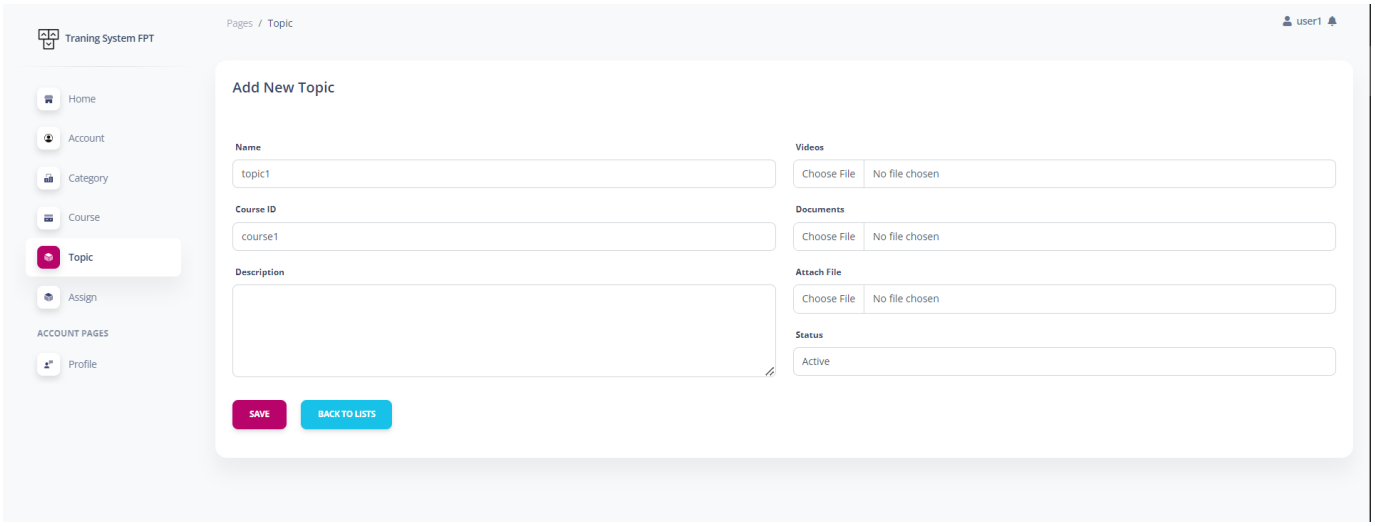

Figure 26: Add topic

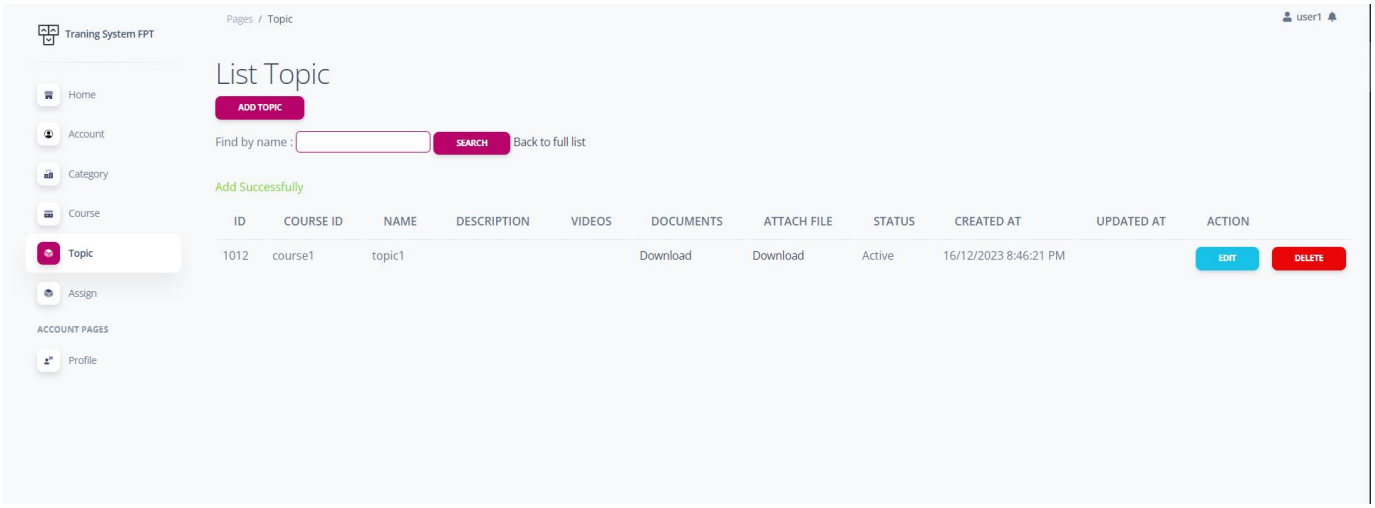

Figure 27: Add topic successful

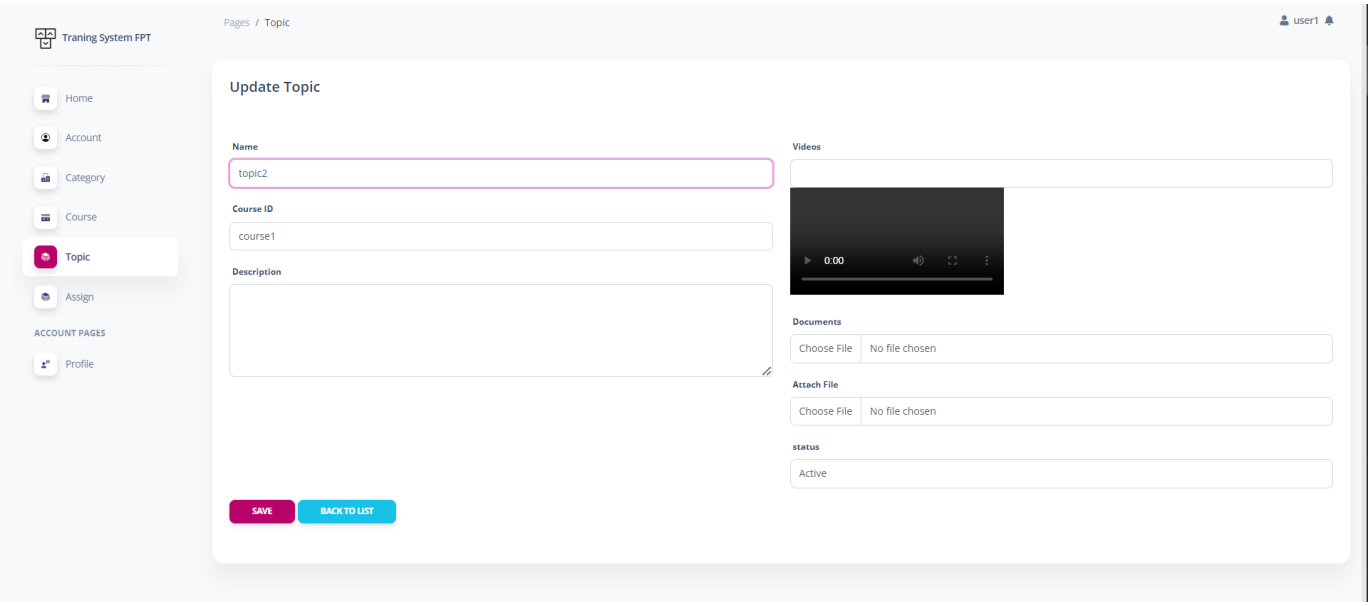

Figure 28: Update topic

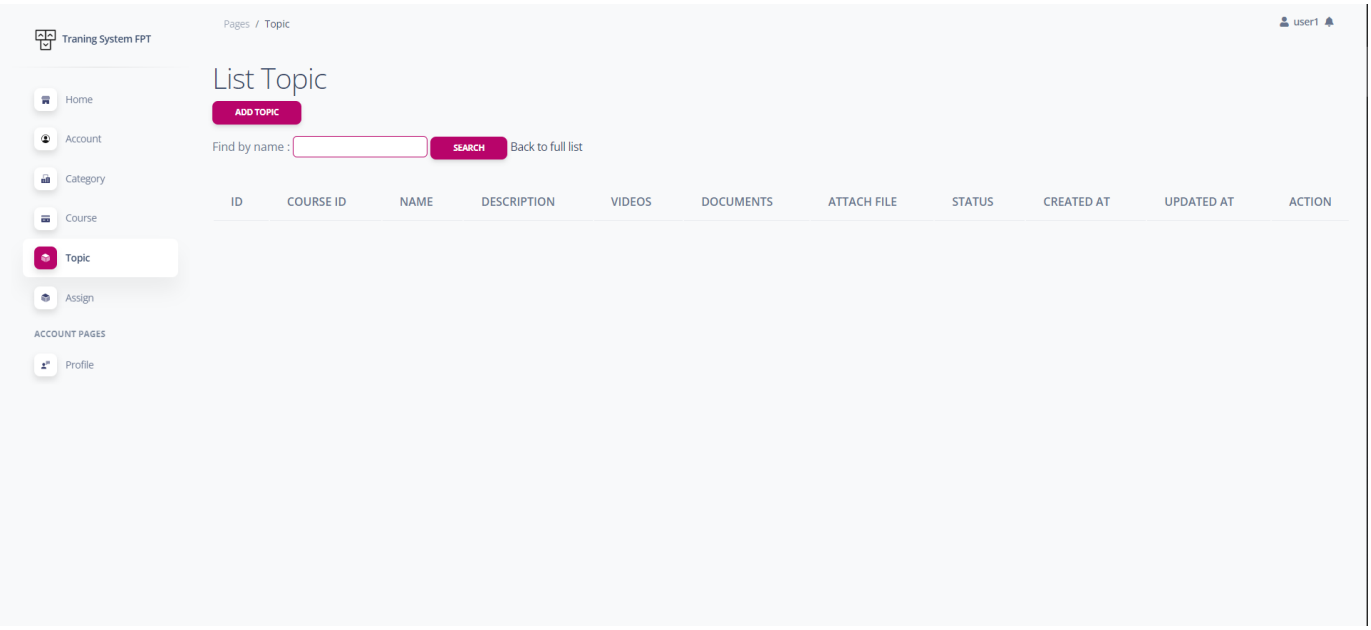

Figure 29: Delete topic

- **Assign trainee to course**

Similar to topic manage, assign trainee to course also has full CRUD. Training staff can create new assignments, select trainees and courses from the list. Edit and delete when a trainee has been assigned to an available course.

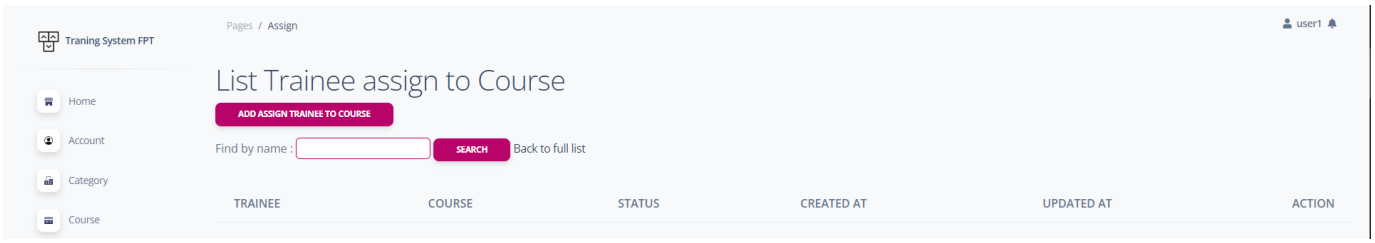

Figure 30: Trainee assign to course manager

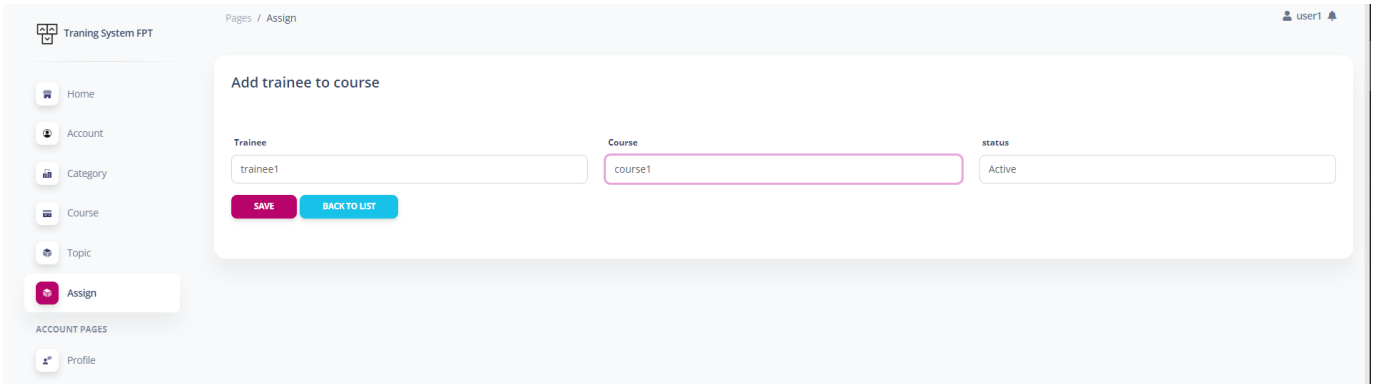

Figure 31: Add new assign trainee

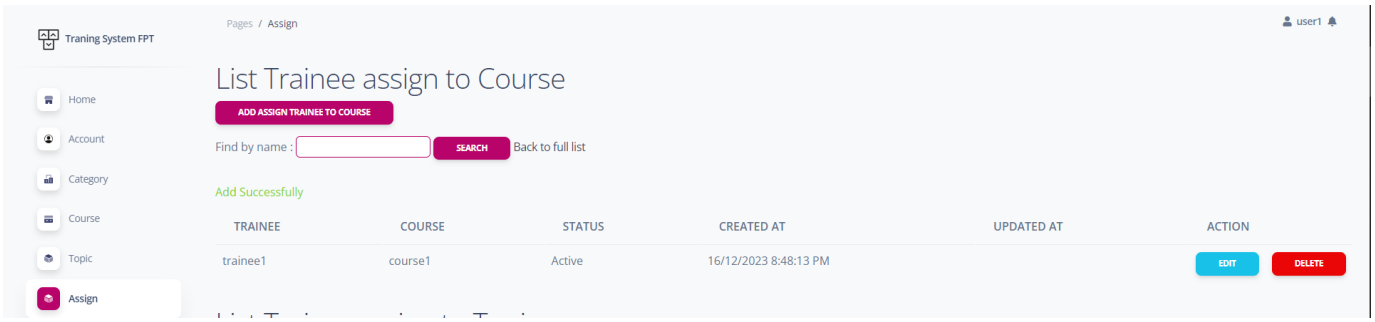

Figure 32: Add new assign successful

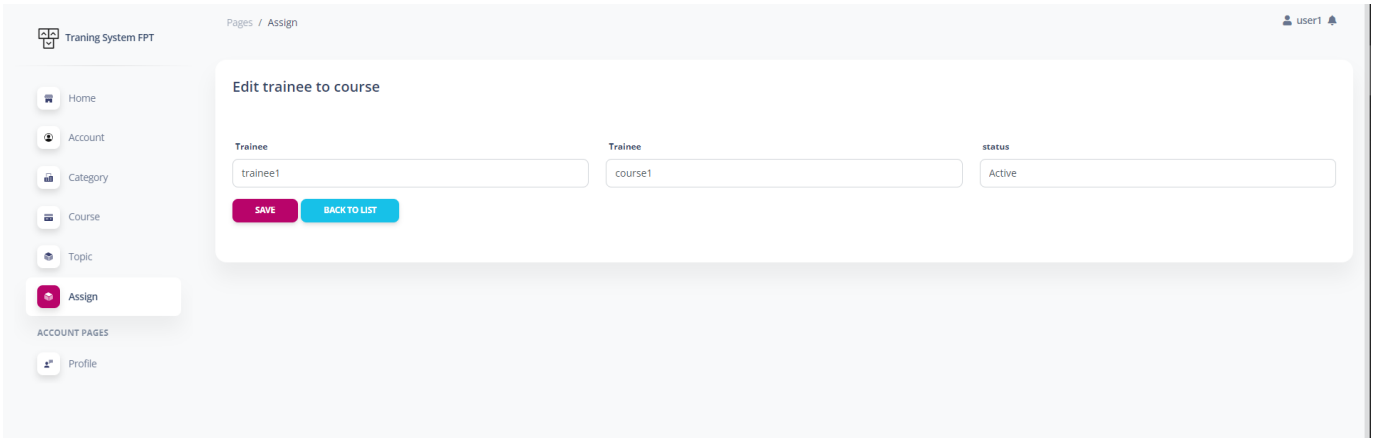

Figure 33: Edit trainee to course

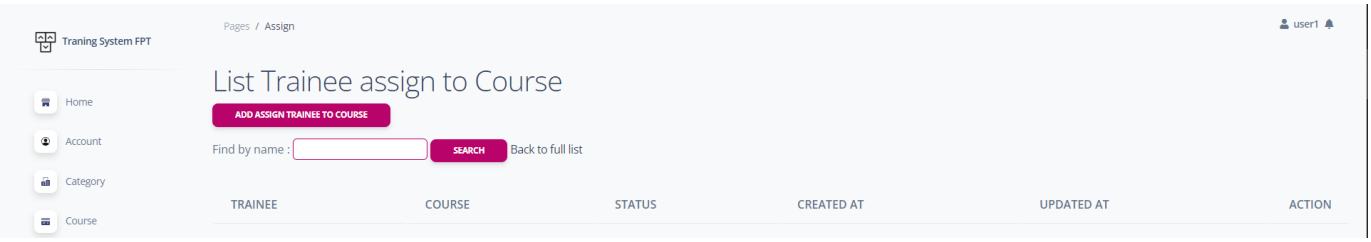

Figure 34: Delete assign trainee to course

- **Assign trainer to topic**

Similar to assign trainee to course manage, assign trainer to topic also has full CRUD. Training staff can create new assign, select trainers and topics from the list. Edit and delete when the trainer has assigned to an existing topic.

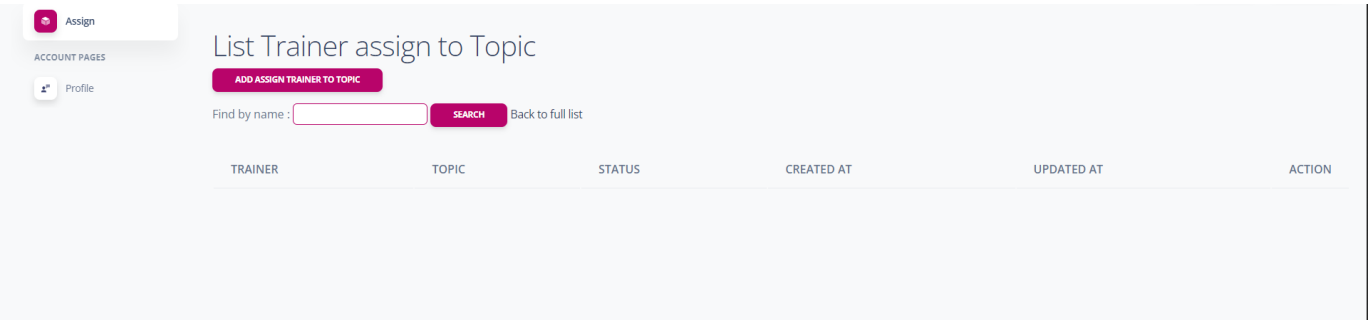

Figure 35: Assign trainer to topic manager

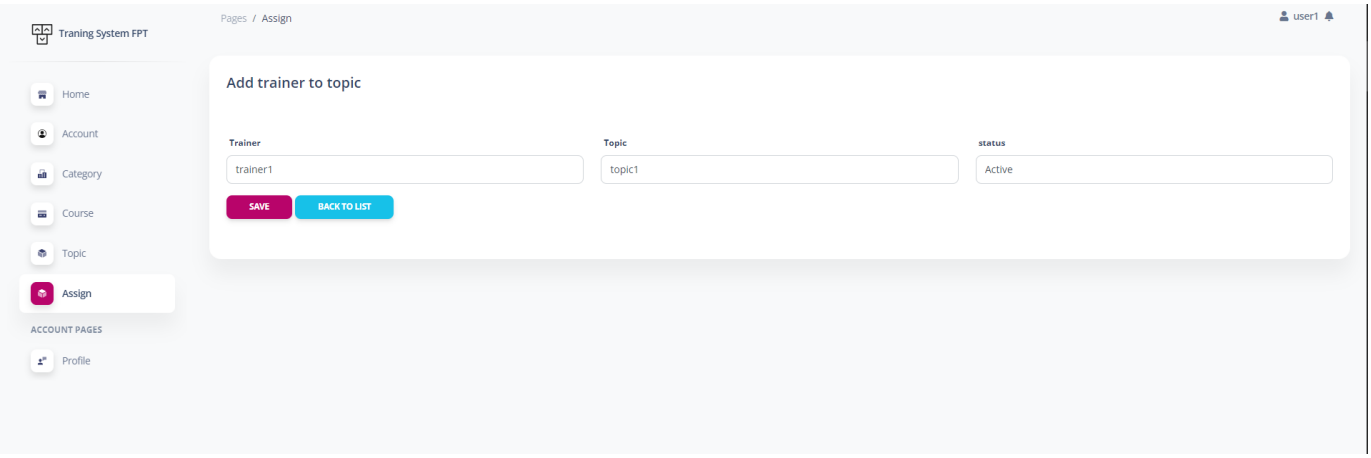

Figure 36: Create new assign trainer to topic

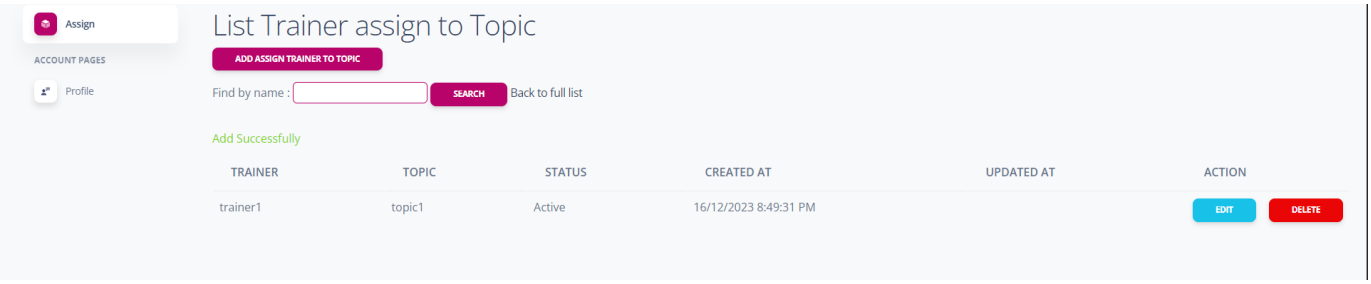

Figure 37: Create new assign trainer to topic successful

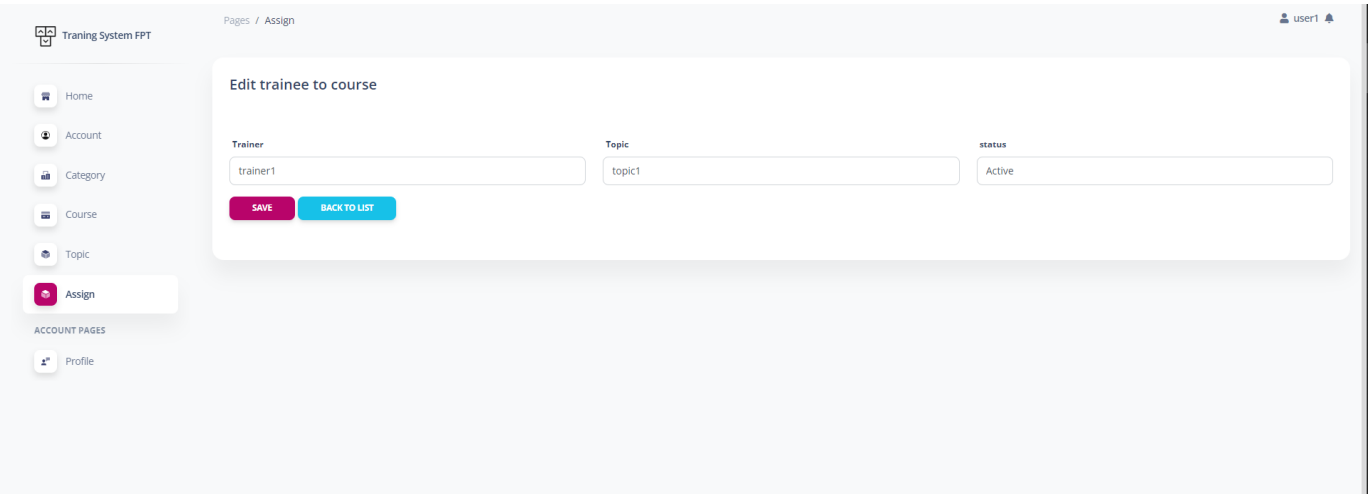

Figure 38: Edit assign trainer to topic

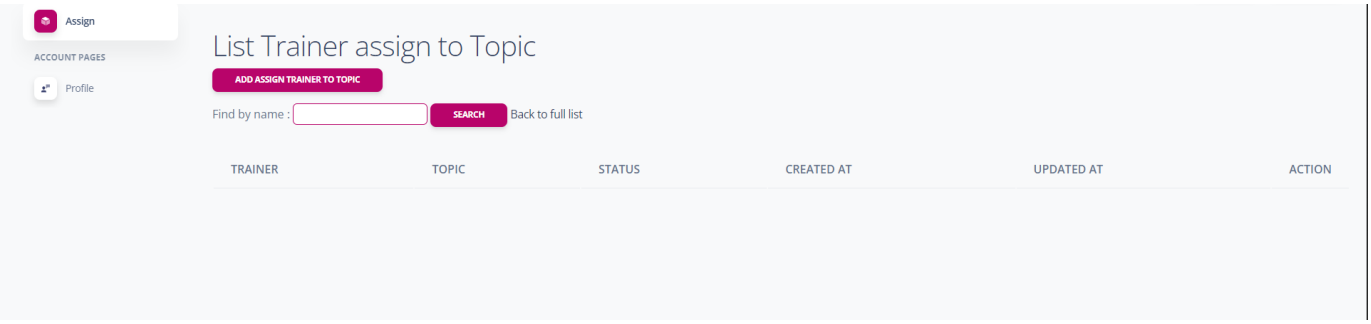

Figure 39: Delete assign trainer to topic

3. Trainer

When the trainer logs into the system. The website will redirect to Home to display all categories. When users click on the details of a category, the website will display a list of courses belonging to that category. When users click on the details of a course, the website will display a list of topics belonging to that course. When users click on the details of a topic, the website will display the content of the topic.

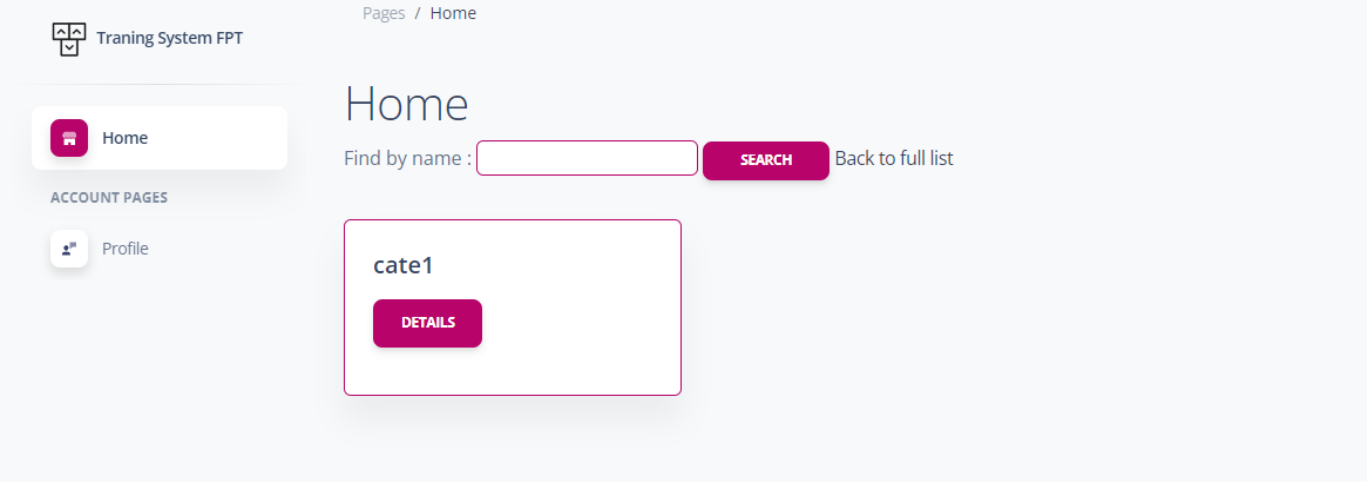

Figure 40: Home

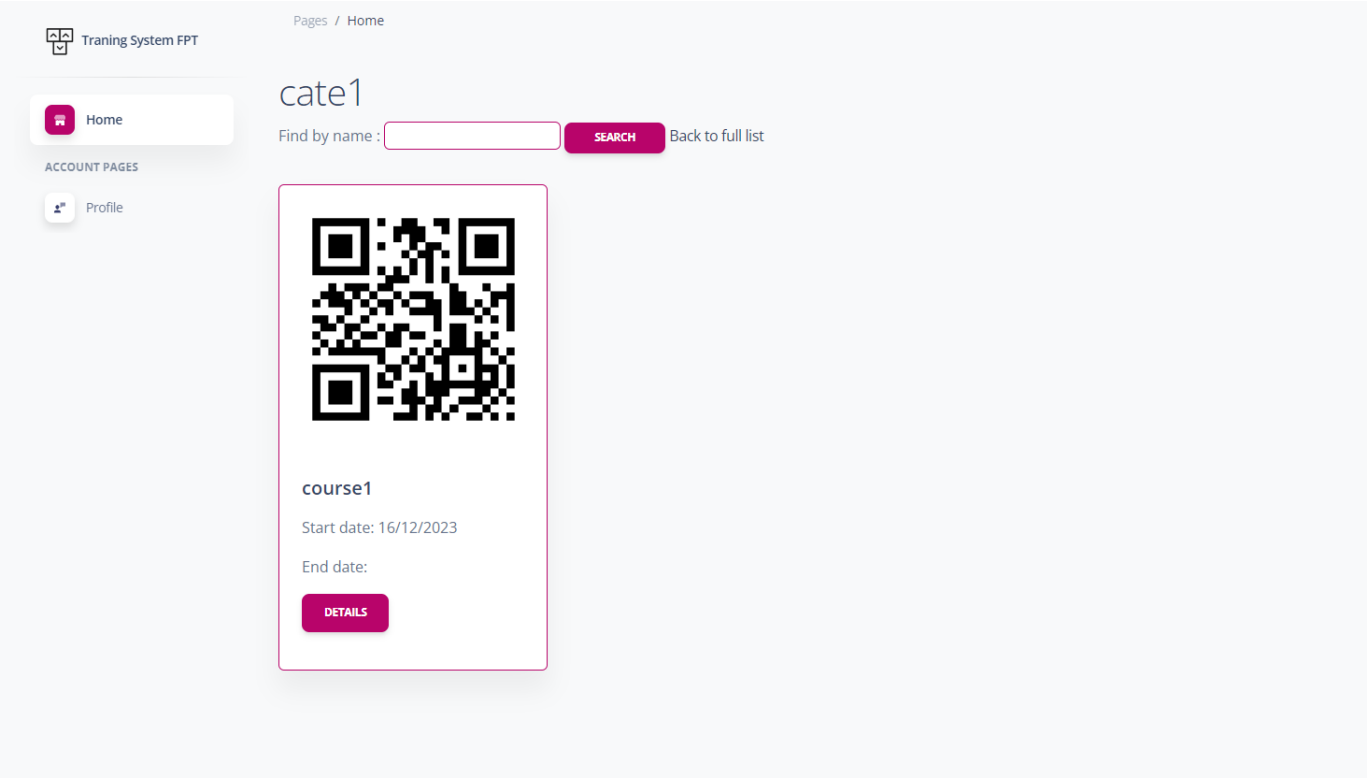

Figure 41: Home course

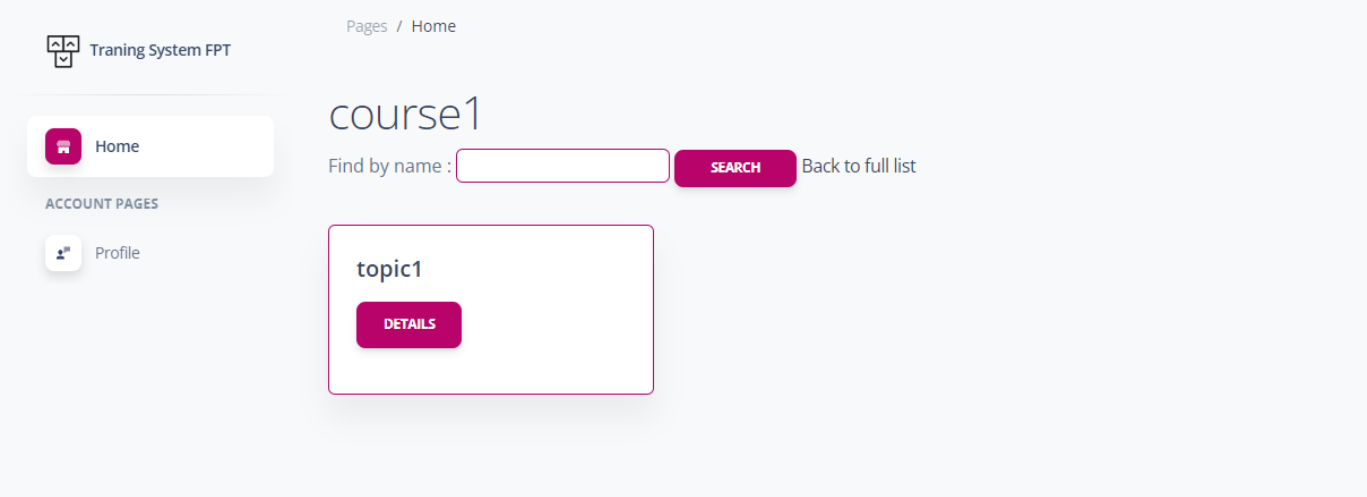

Figure 42: Home topic

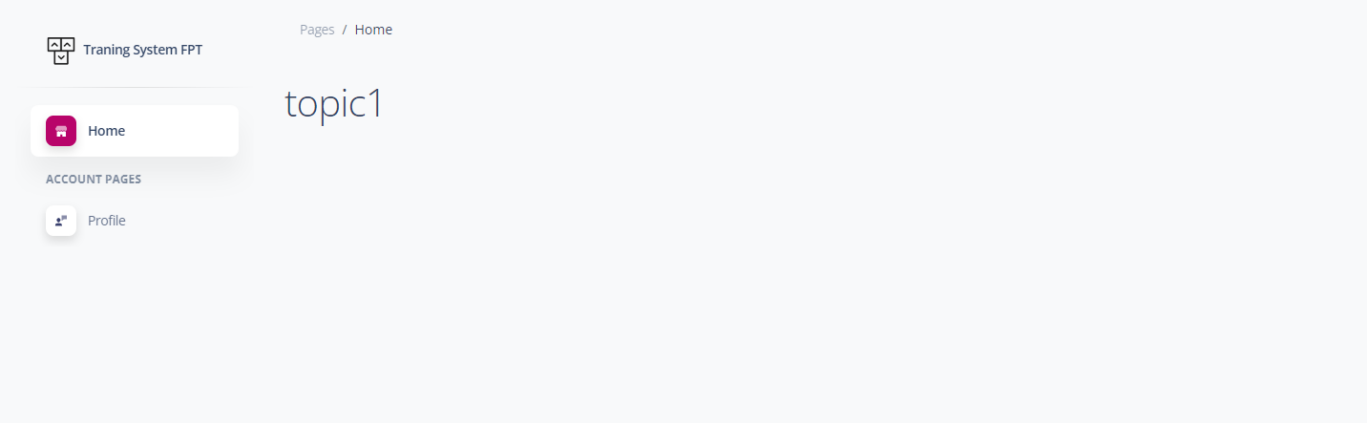

Figure 43: Topic detail

IV. Review the performance of my business application (P6).

1. Testing

ID	Test case name	Description	Test data	Expected	Actual	Remarks
TC1	Login	Login successful	Username: admin, Password: 1	Login successful	Login successful	Pass
TC2	Login	Login failed	Username: admin, Password: 2	Login failed	Login failed	Pass
TC3	Account manager	Display list account		Display all data in database	Display all data in database	Pass

TC4	Account manager	Add account	Role: admin, extra_code: test, username: test, password: 1, email: test@test, Phone: 123, gender: male, Fullname: test	Add successful	Add successful	Pass
TC5	Account manager	Edit account	Role: training staff, extra_code: test2, username: test, password: 1, email: test@test, Phone: 123, gender: male, Fullname: test	Edit successful	Edit successful	Pass
TC6	Account manager	Delete account	Id = 10	Delete successful	Delete successful	Pass
TC7	Account manager	Search account	Admin	Display data of user has name: Admin	Display data of user has name: Admin	Pass
TC8	Category manager	Add category	Name: category1, Status: active	Add successful	Add successful	Pass
TC9	Category manager	Edit category	Name: category2, Status: active	Edit successful	Edit successful	Pass
TC10	Category manager	Delete category	Id = 2	Delete successful	Delete successful	Pass
TC11	Course manager	Add course	Name: course1, Category: cate23,	Add successful	Add successful	Pass

			startDate: 10/10/2023, Status: active			
TC12	Course manager	Edit course	Name: course2, Category: cate3, startDate: 10/10/2023, Status: active	Edit successful	Edit successful	Pass
TC13	Course manager	Delete course	Id = 2	Delete successful	Delete successful	Pass
TC14	Topic manager	Add topic	Name: topic1, Course: course2, Document: document.doc Status: active	Add successful	Add successful	Pass
TC15	Topic manager	Edit topic	Name: topic2, Course: course2, Document: document2.doc Status: active	Edit successful	Edit successful	Pass
TC16	Topic manager	Delete topic	Id = 2	Delete successful	Delete successful	Pass
TC17	Assign trainer manager	Add assign trainer	Trainer: 1, Course: 1, Status: active	Add successful	Add successful	Pass
TC18	Assign trainer manager	Edit assign trainer	Trainer: 2, Course: 1, Status: active	Edit successful	Edit successful	Pass

TC19	Assign trainer manager	Delete assign trainer	Id = 2	Delete successful	Delete successful	Pass
TC20	Assign trainee manager	Add assign trainee	Trainee: 4, Topic: 5, Status: active	Add successful	Add successful	Pass
TC21	Assign trainee manager	Edit assign trainee	Trainee: 6, Topic: 5, Status: active	Edit successful	Edit successful	Pass
TC22	Assign trainee manager	Delete assign trainee	Id = 2	Delete successful	Delete successful	Pass
TC23	Home	List category		Data of list category	Data of list category	Pass
TC24	Home	List course		Data of list course	Data of list course	Pass
TC25	Home	List topic		Data of list topic	Data of list topic	Pass
TC26	Logged in	User has session		Still login until logout	Logged out after few minute	Fail
TC27	Logout	User has log out		Logout successful	Logout successful	Pass
						96.3% (26/27)

Figure 44: Testing

2. Analyse and critical evaluate the application

In evaluating the FPT Training System web application, I've identified positive aspects and areas for improvement. The roles-based system for admin, training staff, and trainers enhances user management

and login decentralization, ensuring secure and role-specific experiences. The categorized homepage facilitates efficient navigation, but a more visually engaging design could enhance user appeal. While the management modules provide comprehensive tools, a more intuitive interface is needed. The ability to assign trainees to courses and trainers to topics streamlines the training process. To ensure sustained success, scalability and a robust feedback mechanism are crucial for accommodating growth and continuous improvement. Despite valuable functionalities, refining visual appeal, interface intuitiveness, and scalability will enhance the overall user experience and adaptability.

V. Conclusion

In summary, the assignment provided valuable insights into my application's user experience through a detailed peer review. Reflecting on the feedback identified areas for improvement, enhancing the application's overall quality. The development process showcased meticulous steps, rigorous testing, and adherence to best practices, resulting in a robust application meeting functional requirements. The critical evaluation highlighted strengths and areas for refinement, serving as a roadmap for future enhancements. This assignment emphasized the importance of a user-centric approach and continuous improvement in software development, offering a comprehensive exploration of the iterative nature of application development.

VI. Reference

- **My github code: https://github.com/tiendat9/ASMAD**
- **GoogleForms: https://docs.google.com/forms/u/0/**
- **Bootstrap: https://getbootstrap.com/**