



FPT BLOG PROJECT

Software Requirements Specification

– Ho Chi Minh, November 2021 –

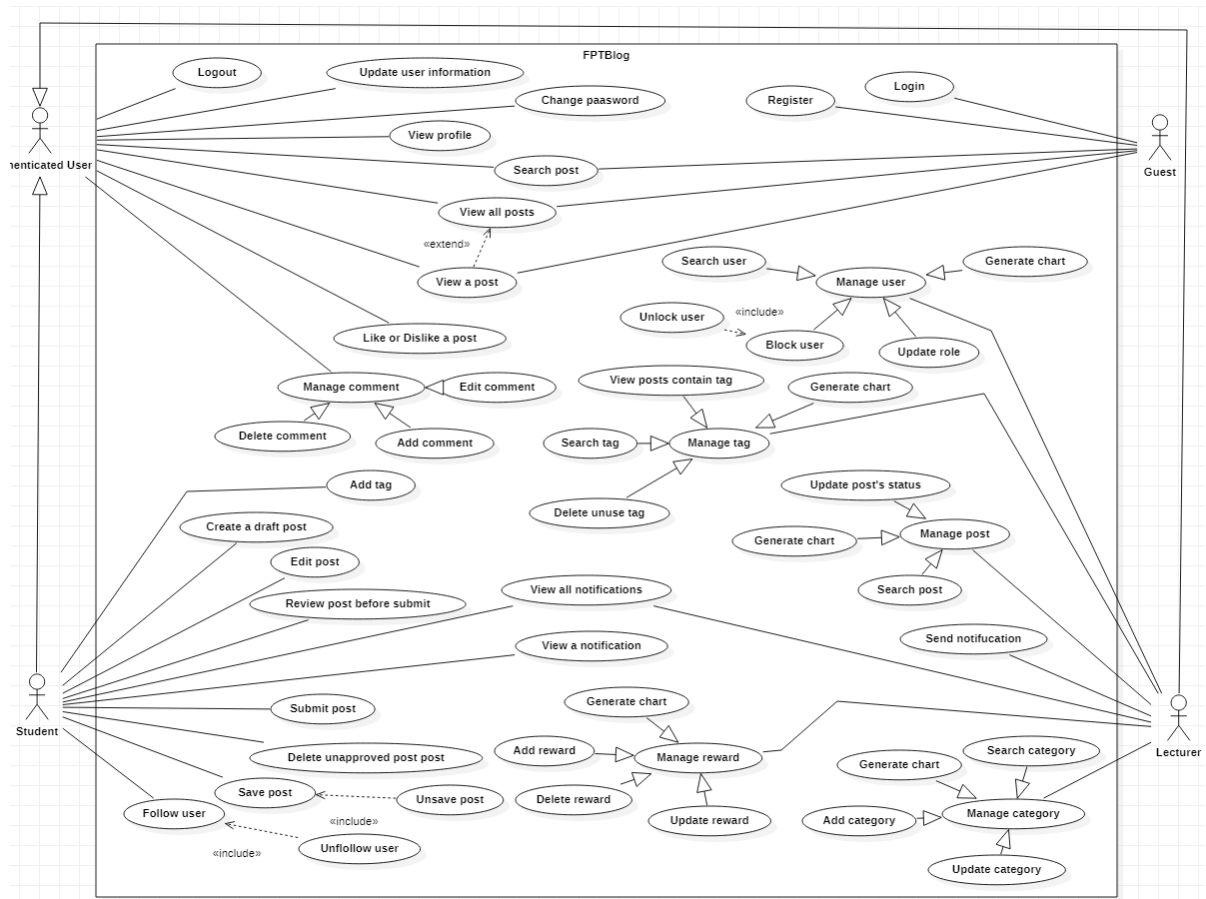
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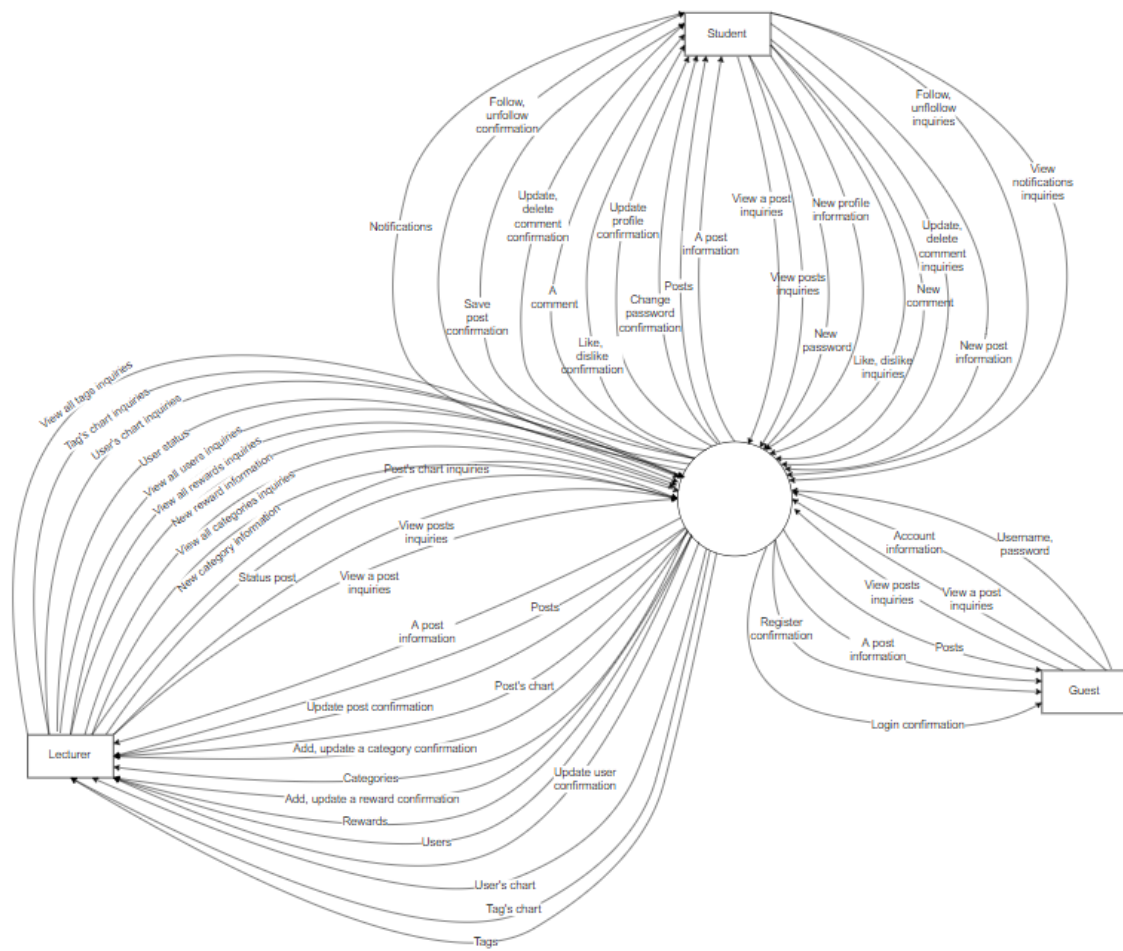
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I. Overview

1. Introduction

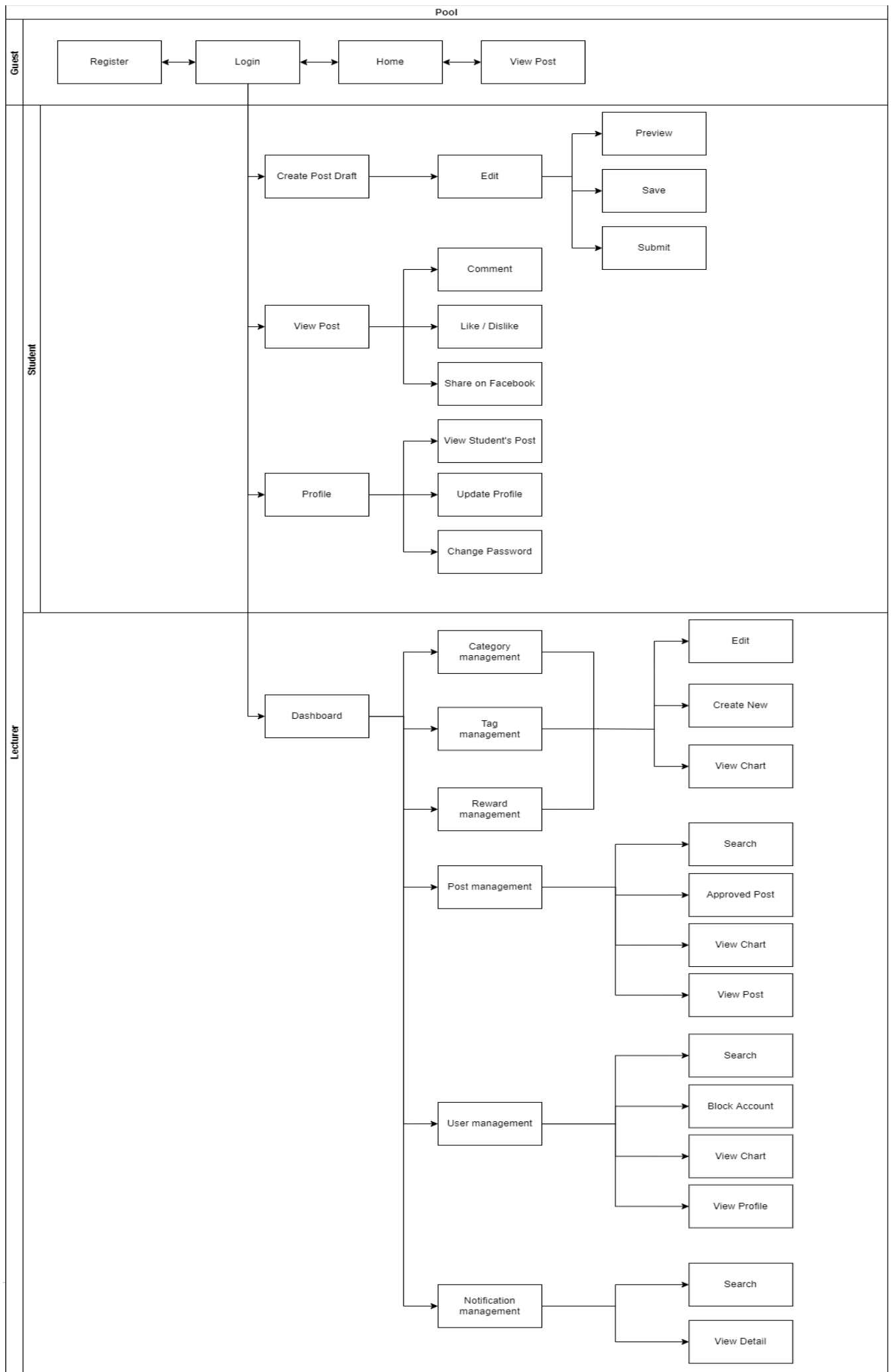
In the digital era, writing an online blog is no longer a new thing for everyone. It's so popular that every single school around the world has their own blog website but this activity does not take place in Vietnamese schools. The FPT Blog is one of the first blog website projects run for students of FPT University. This website can be seen as an upgrade form of Facebook group where FPTU's students can look for information, read articles or posts. They can also write a post which they think its information will help others. This project helps students connect to what lecturers want to express easier by comments, reactions. The design of FPT Blog provides people with the convenience of searching information.





2. System Functions

a. Screen Flow



b. Screen Details

#	Feature	Screen	Description
1	Register	Register	People can register account by Name, Username and Password
2	Login	Login	People can login by Username and Password
3	Home	Home	Everyone can see posts, choose categories, search information
4	Post	View Post	Everyone can see and interact posts such as comment, like/dislike or share on Facebook but guest only can view posts
5	Post	Create Post Draft	People need to create a draft of post before editing
6	Post	Edit	People will edit a post in this screen and they can save or submit this post
7	Post	Preview	People can preview their post before submitting
8	Profile	View Student's Post	Everyone can access to student's profile in order to see their posts
9	Profile	Update Profile	Users can update their information
10	Profile	Change Password	Users can change their password
11	Category Management	Edit	Admins/Lecturers can update a category's information
12	Category Management	Create New	Admins/Lecturers can create a new category
13	Category Management	View Chart	Admins/Lecturers can see a statistic report of categories by chart form
14	Tag Management	Edit	Admins/Lecturers can update a tag's information
15	Tag management	Create New	Admins/Lecturers can create a new tag
16	Tag Management	View Chart	Admins/Lecturers can see a statistic report of trending tags by chart form
17	Reward Management	Edit	Admins/Lecturers can update a reward's information
18	Reward Management	Create New	Admins/Lecturers can create a new reward
19	Reward Management	View Chart	Admins/Lecturers can see a statistic report of given rewards by chart form
20	Post Management	Search	Admins/Lecturers can search a post by Name and Status

21	Post Management	Approved Post	Admins/Lecturers can approve and deny a post
22	Post Management	View Chart	Admins/Lecturers can see a statistic of number of posts, views, interacts and users that filter by date
23	Post Management	View Post	Admins/Lecturers can access directly to a post they choose
24	User Management	Search	Admins/Lecturers can search a user by Name, Status and Role
25	User Management	Block Account	Admins/Lecturers can block or unblock an account
26	User Management	View Chart	Admins/Lecturers can see a statistic report of number of users, lecturers by chart form
27	User Management	View Profile	Admins/Lecturers can access directly to user's profile
28	Notification Management	Search	Admins/Lecturers can search a notification by Name, Level and Date
29	Notification Management	View Detail	Admins/Lecturers can see all information of a notification

c. User Authorization

Screen	Guest	Student	Lecturer
Register	X		
Login	X		
Home	X	X	X
Post	X	X	X
View Post	X	X	X
Create Post Draft		X	X
Edit Post		X	X
Preview Post		X	X
Profile		X	X
View Student's Post		X	X
Update Profile		X	X
Change Password		X	X
Category Management			X
Edit			X
Create New			X
View Chart			X
Tag Management			X
Edit			X
Create New			X

View Chart			X
Reward Management			X
Edit			X
Create New			X
View Chart			X
Post Management			X
Search			X
Approved Post			X
View Chart			X
View Post			X
User Management			X
Search			X
Block Account			X
View Chart			X
View Profile			X
Notification Management			X
Search			X
View Detail			X

In which:

- Student: People login with FPT student email account will have this role
- Guest: People who didn't login with FPT email account will have this role
- Lecture: People login with FPT lecturer email account will have this role

d. Non-Screen Functions

#	Feature	System Function	Description
1	GiveRewardJob	Cron Job	This function runs every midnight to give rewards to every student who matches the system conditions.
2	AuthApiController	API	This class provides all services for user to register or authenticate their account via regular account or email.
3	CommentApiController	API	This class provides all services for user to create, update, get all comments, and get like or dislike of a post.

4	NotificationApiController	API	This class provides all services for lecturer to send a notification to a user
5	CategoryApiController	API	This class provides all services for lecturer to create, update, query, generate report for all categories.
6	PostAdminApiController	API API	This class provides all services for lecturer to create, update, query, get all posts of student.
7	PostApiController	API	This class provides all services for users to create and send a new post to administrators to approve.
8	RewardApiController	API	This class provides all services for lecturers to give rewards to a user, or create a reward condition for users
9	TagApiController	API	This class provides all services for the user to create a new tag and assign tags to their post. Moreover, it also provides a function for lecturers to query, clear all unused tags, and generate reports.
10	UserApiController	API	This class provides all services for the user to get their information, update their account information or password
11	UserAdminApiController	API	This class provides all services for the lecturer to get all information of users, generate reports.
12	Docker Swarm	Bash	Creating multiple instances of the server to provide multiple services for users at the same time
13	NGINX Load Balancer	Bash	Manage all incoming connections to assign their request to a particular server instance to reduce waiting time.
14	NGINX caching	Bash	Remember some files of the last request to reduce bandwidth.

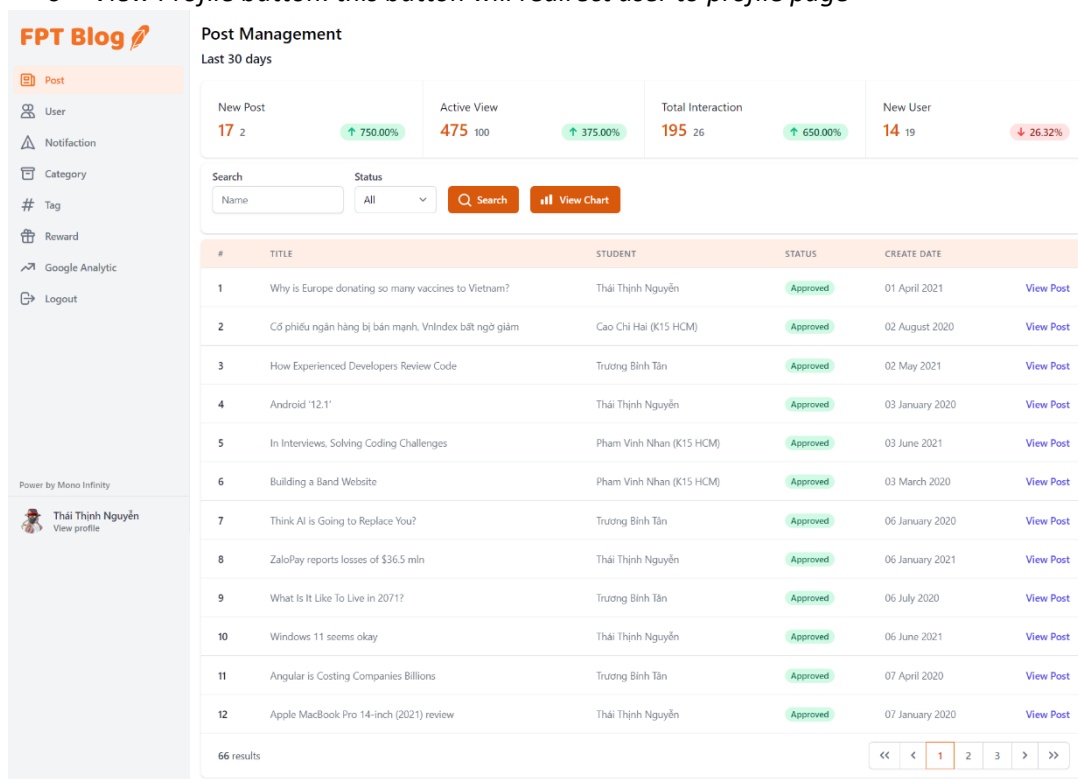
3. Common Requirements

II. Functional Requirements

1. Admin manage resources

a. Manage post

- **Function Trigger:** `/admin/post`
- **Function description:** This page provides services for the lecturer to manage all posts such as previewing post, searching post by name and status, approving post, denying post and generating chart
 - **Search button:** this button will filter posts by name and post status
 - **View Chart button:** this button will call an API request to generate a report about new post, active view, total interaction, new user in a period time
 - **View Post button:** This button will redirect to the post to review
 - **Pagination button:** This button will redirect user to the next page
 - **Waiting button on status column:** This button will active a form for lecture to approve the post
 - **Post button:** This button will redirect user to post management page
 - **User button:** This button will redirect user to user management paged
 - **Notification button:** This button will redirect user to notification management page
 - **Category button:** This button will redirect user to category management page
 - **Tag button:** this button will redirect user to tag management page
 - **Reward button:** this button will redirect user to reward management page
 - **Google Analytic button:** this button will redirect user to google analytic page
 - **Logout button:** this button will destroy the current session and redirect user to login page
 - **View Profile button:** this button will redirect user to profile page



b. Manage user

- **Function Trigger:** `/admin/user/list`

- Function description: This page provides services for the lecturer to manage users such as view profile, searching user by name, user status and user role, upgrading user role, blocking/unblocking user
- Screen layout
 - Search button: this button will filter users by name, user status and user roles
 - View Chart button: this button will call an API request to generate a report about number of students and number of lecturers
 - View Profile button: This button will redirect to the user's profile
 - Pagination button: This button will redirect user to the next page
 - Button in status column: This button will block or unblock user
 - Button in roles column: This button will upgrade a user
 - *Post button: This button will redirect user to post management page*
 - *User button: This button will redirect user to user management paged*
 - *Notification button: This button will redirect user to notification management page*
 - *Category button: This button will redirect user to category management page*
 - *Tag button: this button will redirect user to tag management page*
 - *Reward button: this button will redirect user to reward management page*
 - *Google Analytic button: this button will redirect user to google analytic page*
 - *Logout button: this button will destroy the current session and redirect user to login page*
 - *View Profile button: this button will redirect user to profile page*

FPT Blog

- Post
- User**
- Notification
- Category
- Tag
- Reward
- Google Analytic
- Logout

Power by Mono Infinity

Thái Thịnh Nguyễn
 View profile

User Management

Search

Status

Role

Search

View Chart

Student (30d)

Lecturer (30d)

14

19

26.32%

0

0

0%

#	NAME	USERNAME/EMAIL	ROLE	STATUS	CREATE DATE	
1	MonkNam	MonkNam	Lecturer	Active	01/11/2020	View Profile
2	Phạm Vĩnh Nhân	heuty566@gmail.com	Lecturer	Active	01/21/2020	View Profile
3	Cao Chi Hai (K15 HCM)	haicse150094@fpt.edu.vn	Lecturer	Active	04/04/2021	View Profile
4	Thái Thịnh Nguyễn	thaitinhbzanai79@gmail.com	Lecturer	Active	04/29/2020	View Profile
5	Trương Bình Tân	new9a11516@gmail.com	Lecturer	Active	07/30/2020	View Profile
6	Phan Thanh Thủy	Araceli11	Student	Inactive	01/01/2021	View Profile
7	Mai Anh Phương	Pablo.Renner	Student	Active	01/03/2021	View Profile
8	Đinh Bích Quân	Nichole.Mueller71	Student	Inactive	01/04/2020	View Profile
9	Đinh Thái Lan	Jacyntho.Gorlach98	Student	Active	01/04/2021	View Profile
10	Phan Thanh Hồng	Kara_McLaughlin35	Student	Active	01/04/2021	View Profile
11	Lâm Hoài Vy	Aileen.Weissnat58	Student	Active	01/04/2021	View Profile
12	Trịnh Xuân Nghi	Nicholaus39	Student	Active	01/05/2020	View Profile

434 results

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c. Manage notification

- Function Trigger: /admin/notification
- Function description: This page provides services for the lecturer to manage all the notifications such as view detail of a notification, searching notification by username/email, level, start date and end date.
 - Search button: this button will filter posts by username/email, level, start date and end date.
 - View Detail button: This button will pop up the detail information of a notification
 - Pagination button: This button will redirect user to the next page
 - Post button: This button will redirect user to post management page

- User button: This button will redirect user to user management paged
- Notification button: This button will redirect user to notification management page
- Category button: This button will redirect user to category management page
- Tag button: this button will redirect user to tag management page
- Reward button: this button will redirect user to reward management page
- Google Analytic button: this button will redirect user to google analytic page
- Logout button: this button will destroy the current session and redirect user to login page
- View Profile button: this button will redirect user to profile page

FPT Blog <ul style="list-style-type: none"> Post User Notification Category Tag Reward Google Analytic Logout <p>Power by Mono Infinity</p> <p>Thái Thịnh Nguyễn View profile</p>		Notification Management <div> Search Level Start Date End Date Search </div> <table> <tr> <th>#</th><th>RECEIVER</th><th>USERNAME/EMAIL</th><th>SENDER</th><th>LEVEL</th><th>CREATE DATE</th><th></th></tr> <tr> <td>1</td><td>Phan Thanh Thủy</td><td>Araceli11</td><td>Pham Vinh Nhan</td><td>Banned</td><td>Wednesday, 10 November 2021</td><td>View Detail</td></tr> <tr> <td>2</td><td>Đinh Bích Quân</td><td>Nichole.Mueller71</td><td>Trương Bình Tân</td><td>Banned</td><td>Wednesday, 10 November 2021</td><td>View Detail</td></tr> <tr> <td>3</td><td>Lý Bích Ngân</td><td>Heather56</td><td>Trương Bình Tân</td><td>Warning</td><td>Wednesday, 10 November 2021</td><td>View Detail</td></tr> <tr> <td>4</td><td>Lý Hoài Vy</td><td>BusterProsacco0</td><td>Trương Bình Tân</td><td>Banned</td><td>Wednesday, 10 November 2021</td><td>View Detail</td></tr> <tr> <td>5</td><td>Phan Thanh Thủy</td><td>Araceli11</td><td>Pham Vinh Nhan</td><td>Warning</td><td>Wednesday, 10 November 2021</td><td>View Detail</td></tr> <tr> <td>6</td><td>Phan Thanh Thủy</td><td>Araceli11</td><td>Pham Vinh Nhan</td><td>Information</td><td>Wednesday, 10 November 2021</td><td>View Detail</td></tr> <tr> <td>7</td><td>Phạm Như Bảo</td><td>Elvie13</td><td>Trương Bình Tân</td><td>Banned</td><td>Wednesday, 10 November 2021</td><td>View Detail</td></tr> </table> <div> 7 results << < 1 > >> </div>					#	RECEIVER	USERNAME/EMAIL	SENDER	LEVEL	CREATE DATE		1	Phan Thanh Thủy	Araceli11	Pham Vinh Nhan	Banned	Wednesday, 10 November 2021	View Detail	2	Đinh Bích Quân	Nichole.Mueller71	Trương Bình Tân	Banned	Wednesday, 10 November 2021	View Detail	3	Lý Bích Ngân	Heather56	Trương Bình Tân	Warning	Wednesday, 10 November 2021	View Detail	4	Lý Hoài Vy	BusterProsacco0	Trương Bình Tân	Banned	Wednesday, 10 November 2021	View Detail	5	Phan Thanh Thủy	Araceli11	Pham Vinh Nhan	Warning	Wednesday, 10 November 2021	View Detail	6	Phan Thanh Thủy	Araceli11	Pham Vinh Nhan	Information	Wednesday, 10 November 2021	View Detail	7	Phạm Như Bảo	Elvie13	Trương Bình Tân	Banned	Wednesday, 10 November 2021	View Detail
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d. Manage category

- Function Trigger: /admin/category
- Function description: This page provides services for the lecturer to manage all category searching post by name and status, create a new category, edit a category, generating chart.
 - Search button: this button will filter post by name and status
 - Edit button: this button will redirect user to edit a category page.
 -
 - View Chart button: this button will call an API request to generate a report about all the categories
 - Create New Category button: this button will pop up a form to create a new category.
 - Pagination button: This button will redirect user to the next page
 - Post button: This button will redirect user to post management page
 - User button: This button will redirect user to user management paged
 - Notification button: This button will redirect user to notification management page
 - Category button: This button will redirect user to category management page
 - Tag button: this button will redirect user to tag management page
 - Reward button: this button will redirect user to reward management page
 - Google Analytic button: this button will redirect user to google analytic page
 - Logout button: this button will destroy the current session and redirect user to login page
 - View Profile button: this button will redirect user to profile page

FPT Blog

- Post
- User
- Notification
- Category**
- Tag
- Reward
- Google Analytic
- Logout

Power by Mono Infinity

Thái Thịnh Nguyễn
 View profile

Category Management

Search

Status

#	NAME	DESCRIPTION	STATUS	CREATE DATE	
1	Music	Music	Active	10/03/2021	Edit
2	IT	Programmers, web Developers, computer Systems Analyst	Inactive	10/03/2021	Edit
3	Sport	Sport	Active	10/03/2021	Edit
4	Cyber Security	Cyber Security	Active	10/03/2021	Edit
5	Student	Fpt student	Active	10/03/2021	Edit
6	Movie	Movie	Active	10/03/2021	Edit
7	Environment	Environment	Active	10/03/2021	Edit
8	Club	FPT club	Active	10/03/2021	Edit
9	Network	Network	Active	10/6/2021	Edit
10	Programming	C#, HTML, CSS	Active	10/03/2021	Edit
11	Society	Society	Active	10/03/2021	Edit

11 results

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e. Manage tag

- **Function Trigger:** `/admin/tag`
- **Function description:** This page provides services for the lecturer to manage all the tags such as clearing all unused tag, searching tag by name and status, viewing post by tag, generating chart
 - **Search button:** this button will filter posts by name and tag status
 - **View Chart button:** this button will call an API request to generate a report about top 10 tags in the system
 - **View Post button:** This button will redirect to the list post which belong to the tag
 - **Pagination button:** This button will redirect user to the next page
 - **Post button:** This button will redirect user to post management page
 - **User button:** This button will redirect user to user management paged
 - **Notification button:** This button will redirect user to notification management page
 - **Category button:** This button will redirect user to category management page
 - **Tag button:** this button will redirect user to tag management page
 - **Reward button:** this button will redirect user to reward management page
 - **Google Analytic button:** this button will redirect user to google analytic page
 - **Logout button:** this button will destroy the current session and redirect user to login page
 - **View Profile button:** this button will redirect user to profile page

FPT Blog

- Post
- User
- Notification
- Category
- # Tag**
- Reward
- Google Analytic
- Logout

Power by Mono Infinity

Thái Thịnh Nguyễn
 View profile

Tag Management

Search

Status

All

Search

Clear Unused Tag

View Chart

+ Total New Tag (30d)

10 24

↓ 58.33%

Hot Trending

Review

#	NAME	STATUS	TOTAL OF POST	CREATE DATE	
1	Tips	Active	1	11/09/2021	View Post
2	Frontend	Active	1	10/03/2021	View Post
3	Review	Active	5	10/03/2021	View Post
4	real-estate	Active	1	11/10/2021	View Post
5	Costing	Active	1	10/03/2021	View Post
6	Dating	Active	1	10/03/2021	View Post
7	People	Active	2	10/03/2021	View Post
8	Self	Active	1	10/03/2021	View Post
9	Softwa	Active	1	10/03/2021	View Post
10	Web developer	Active	2	10/03/2021	View Post
11	DOTA2	Active	1	10/03/2021	View Post
12	hello	Active	1	10/03/2021	View Post

34 results

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f. Manage reward

- **Function Trigger:** `/admin/reward`
- **Function description:** This page provides services for the lecturer to manage rewards such as add new reward, searching reward by name, searching user have reward, generating chart, giving reward
 - **Search button:** this button will filter rewards belong to a user by name and range date
 - **View Chart button:** this button will call an API request to generate a report about number of users was given a reward, list users and their rewards
 - **List Badge button:** This button will redirect to the page for lecture to create new reward
 - **Give reward button:** This button will allow admin to give user a reward
 - **View Post button:** This button will redirect to the post to review
 - **Pagination button:** This button will redirect user to the next page
 - **Waiting button on status column:** This button will trigger a form for lecture to approve the post
 - **Post button:** This button will redirect user to post management page
 - **User button:** This button will redirect user to user management page
 - **Notification button:** This button will redirect user to notification management page
 - **Category button:** This button will redirect user to category management page
 - **Tag button:** this button will redirect user to tag management page
 - **Reward button:** this button will redirect user to reward management page
 - **Google Analytic button:** this button will redirect user to google analytic page
 - **Logout button:** this button will destroy the current session and redirect user to login page
 - **View Profile button:** this button will redirect user to profile page

FPT Blog

Post

User

Notification

Category

Tag

Reward

Google Analytic

Logout

Power by Mono Infinity

Thái Thịnh Nguyễn

View profile

List Badge

Search

Start Date

End Date

Search

View Chart

#	NAME	NEW POST	INTERACTION	VIEWER	REWARD (ALL)	
1	Phan Anh Thảo	0	0	0	Empty Reward	Give Reward
2	Nguyễn Hải Sinh	0	0	0	Empty Reward	Give Reward
3	Trịnh Minh Uyên	0	0	0	Empty Reward	Give Reward
4	Đinh Thảo Vân	0	0	0	Empty Reward	Give Reward
5	Phạm Vĩnh Nhân (K15 HCM)	12	1378	6181		Give Reward
6	Trương Lê Thu	0	0	0	Empty Reward	Give Reward
7	Hà Hà Liên	0	0	0	Empty Reward	Give Reward
8	Vương Thụy Uyên	0	0	0	Empty Reward	Give Reward
9	Lâm Anh Đào	0	0	0	Empty Reward	Give Reward
10	Đỗ Thanh Huyền	0	0	0	Empty Reward	Give Reward
11	Mai Tâm Nguyễn	0	0	0	Empty Reward	Give Reward
12	Mai Hương Liên	0	0	0	Empty Reward	Give Reward

434 results

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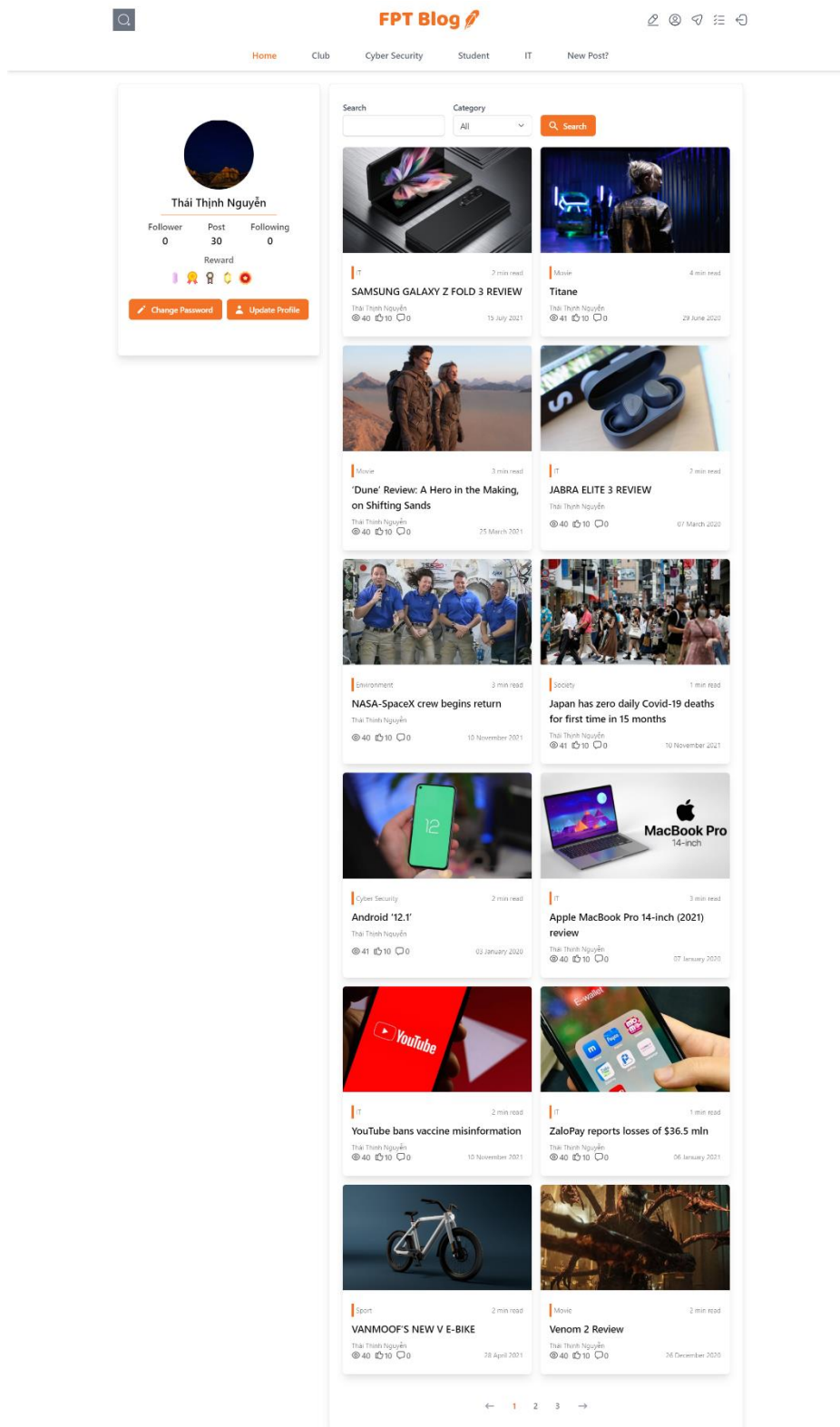
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2. Profile user

a. View profile

- **Function Trigger:** `/user/me`
- **Function description:** This page provides all current user's information such as full name, avatar, number of followers, following, post and all reward that user get and all posts user has been posting accompanied by search post function with category.
 - **Search button:** this button will filter posts by category and post's title
 - **Change Password:** this button allows user to change their password
 - **Update Profile:** this button allows user to change their information
 - **Post album:** this album shows all their posts that they've posted and view post by simply click on the post



b. Change user's information

- *Function Trigger: /user/update*

- **Function description:** This page provides services for the user to update their information such as full name, email, address, phone.
 - **Update Profile button:** this button will update user information.
 - **Change Password button:** this button allow user to change their password
 - **Update Profile button:** this button allow user to change their information

The screenshot shows the FPT Blog user interface. At the top, there's a navigation bar with 'Home', 'Club', 'Cyber Security', 'Student', 'IT', and 'New Post?'. Below this, the user profile section for 'Thái Thịnh Nguyễn' is displayed, showing 0 followers, 30 posts, and 0 following. There are buttons for 'Change Password' and 'Update Profile'. To the right, the 'Update User' form is shown with input fields for Name, Email, Address, and Phone, and an 'Update Profile' button. The footer includes links for 'About', 'Blog', 'Jobs', 'Press', 'Accessibility', and 'Partners', along with social media icons and a copyright notice for 2021 Mono Infinity - FPT University, Inc.

3. User create post

a. View draft post, waiting post and deny post

- **Function Trigger:** /post/me
- **Function description:** This page shows all the drafts that user has been created with some information: title, category, create date, status.
 - **New Draft button:** this button allows user to create new draft with the quantity up to 50 posts.
 - **Delete button:** this button allows user to delete their draft.
 - **Edit button:** this button allows user to edit their post.

The screenshot shows the 'Draft List' page on FPT Blog. It features a 'New Draft' button at the top. Below, there are two draft cards, each with a placeholder image, the category 'Music', the title 'New Draft', the status 'Draft', and the date '10 November 2021'. Each card has an 'Edit' button. The navigation bar and footer are consistent with the previous screenshot, showing links for 'Home', 'Club', 'Cyber Security', 'Student', 'IT', and 'New Post?', along with social media icons and a copyright notice for 2021 Mono Infinity - FPT University, Inc.

b. Edit post

- **Function Trigger:** `post/editor?postId={postId}`
- **Function description:** This page allows user to edit their post.
 - **Title:** title of the post.
 - **Category:** user can choose a category which they want.
 - **Tag:** user can choose one or more tag they like.
 - **Content:** user can edit their content with text editor support change font style, font size, font colour, upload images, embed youtube videos, alignment, etc.
 - **Save Changes button:** this button will save all the changes in the editor.
 - **Preview button:** this button will display how the post will look like when they are posted.

The screenshot displays the 'Editor Post' interface of the FPT Blog. At the top, there is a navigation bar with a search icon, the 'FPT Blog' logo, and several utility icons. Below this is a horizontal menu with links: Home, Club, Cyber Security, Student, IT, and New Post?. The main content area is titled 'Editor Post' and contains the following elements:

- Title:** A text input field with the placeholder text 'New Draft'.
- Category:** A dropdown menu currently showing 'Music'.
- Tag:** A text input field with the placeholder text 'Enter tag'.
- Content:** A rich text editor with a toolbar containing icons for bold, italic, underline, link, unlink, list, indent, outdent, font color, background color, font size, and font family. The editor area contains the text 'Hello there'.

At the bottom of the editor, there are three orange buttons: 'Save Changes', 'Preview', and 'Submit Post Request'.

Below the editor, there is a footer section with links: About, Blog, Jobs, Press, Accessibility, and Partners. Below these links are social media icons for Facebook, Instagram, Twitter, and YouTube. At the very bottom, a copyright notice reads: '© 2021 Mono Infinity - FPT University, Inc. All rights reserved.'