



# CPCS-323 | Summer Training

## Final Report

Wed 24 Aug 2022

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Summer 2022

## Acknowledgment

I would like to thank Eng. Mohammad Alashmawi - CTO of Classera - and our supervisor Eng. Huthaifa Yousef, for giving me this opportunity to do my summer training in a motivating environment. I am thankful for the experience and new knowledge I gained. Thanks to all my great team and to both Eng. Yarub and Eng. Saba for their help and support throughout the training. Thanks to our supervisor from the Faculty of Computing and Information Technology, Dr. Samar Babrook for supporting and encouraging us. I will not forget to thank my academic supervisor Dr. Areej Alhothali, for her kind cooperation and encouragement, which helped me in the completion of my training.

## Abstract

My summer training was done in Classera, which has built an innovative and integrated educational system and platforms to provide its partners with the best educational services. Classera was chosen because we wanted to learn new skills that would help us decide on the line of work we wanted to pursue and because we also wanted to experience a real work environment that was different from attending classes or working in the same place studying. My team consisted of 4 members and all of them from the CS department, we were working on a blog website with 5 types of users on the website. the website allows users to add, edit, and delete posts. and add, edit, and delete groups. also, users from the same group can add a comment and like posts. The tools that were used to program the website are PHP and MySQL.

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## Part One

### Introduction

Since 2012, Classera has built an innovative and integrated educational system and platforms to provide its partners with the best educational services. As a result, it has emerged as one of the world's leading innovators in e-learning. In the Classera system, there is a technical support ticket system in which any user can send support requests, inquiries, or request updates through it to the technical support team in Classera to follow up faster. Our supervisor's plan was to join the technical support ticket system, but due to lack of time, the training ended with the creation of a blog website with its additional features. almost every Sunday there is a meeting to follow up on our progress with Eng. Huthaifa Yousef and the R&D department, and there is a meeting when there is a problem and it's just between the supervisor and the team members.

### Training Plan

Week	Work Description	Department	Start Date	Duration (hours)	Training Supervisor
1	Introduction to PHP	Research & Development	20 Jun	30 hours	Huthaifa Yousef
2	Introduction to PHP	Research & Development	26 Jun	30 hours	Huthaifa Yousef
3	Introduction to PHP OOP	Research & Development	3 Jul	30 hours	Huthaifa Yousef
4	Introduction to PHP OOP	Research & Development	17 Jul	30 hours	Huthaifa Yousef
5	Introduction to PHP MYSQL	Research & Development	24 Jul	30 hours	Huthaifa Yousef
6	Practical Tasks on Cakephp	Research & Development	31 Jul	30 hours	Huthaifa Yousef
7	Practical Tasks on Cakephp	Research & Development	7 Aug	30 hours	Huthaifa Yousef
8	Practical Tasks on Cakephp	Research & Development	14 Aug	30 hours	Huthaifa Yousef
Total of hours				240	

## Part Two

### List Of Project/Projects Or Tasks

Our tasks were divided into two parts, theoretical part, and practical part.

#### Theoretical Part

- PHP
- PHP OOP
- JavaScript (not in the training plan -additional-)

#### Practical Part ( Blog Website )

- Create Post page
- Create user page
- Create group page
- Add delete action to all pages
- Add image and video
- Modifications on Posts
- Add likes and comments to post

### Detail Of Main Tasks

#### Theoretical Part: (PHP, PHP OOP, and JavaScript)

Eng. Huthaifa Yousef gave us PHP language sources that we'll need before starting in practical tasks. On Tue 21 June 2022, we start the introduction PHP courses Eng. Huthaifa gave us, which was about PHP syntax, variables, data types, logical expression, and Arrays. On the second week ( Sunday 26 June 2022) with a meeting with our supervisor to follow up on our progress in the PHP course and discuss if

there were any difficulties. then we continued the course which was about string functions, cookies, and sessions. on Monday 27 June we start the second PHP course which was about Object Oriented programming PHP. On Wednesday & Thursday 29 - 30 June 2022, we finish the OOP PHP course, and we'll discuss it with our supervisor next Sunday. as Eng. Saba always says these courses are very important to understand the language and later when we work on the tasks it will help us understand the code and can write new features easily.

On week 3 with our weekly meeting with our sub-supervisors - Eng. Yarub and Eng. Saba - to check if we had any problems last week. Then they gave us HTML, CSS, and JavaScript courses. On Wednesday, we had a meeting with the R&D team, and at the end of the meeting, Eng. Yarub checked on us to see how we progressed on the courses and if we faced any problems, then he told us that after Eid's vacation, there'll be an individual meeting. We finished the courses throughout the week. After the Eid al-Adha vacation, we started week 4 by reviewing all previous courses. Later on Monday, we had a meeting with Eng. Huthaifa he arranged the individual meetings that'll be divided into two days, and that isn't a test or quiz, just to know if we're ready for the practical part of the internship. On Tuesday and Wednesday, we started the individual meetings. He asked questions like "What is PHP? What is the difference between a class and an object? " The syntax of arrays, functions, and so on. On Thursday, He gave us the tools we needed to download to help us with the practical part such as VM, Ubuntu and SQL.



### Practical Part:

- Create Post page

In CakePHP the Model layer represents the part of your application that implements the business logic. It is responsible for retrieving data and converting it into meaningful concepts for your application. This includes processing, validating, associating or other tasks related to handling data. The View renders a presentation of modeled data. Being separated from the Model objects, it is responsible for using the information it has available to produce any presentational interface your application might need. The Controller layer handles requests from users. It is responsible for rendering a response with the aid of both the Model and the View layer. In the Post controller we added some actions such as, Post index, Add Post, Edit Post, and View Post

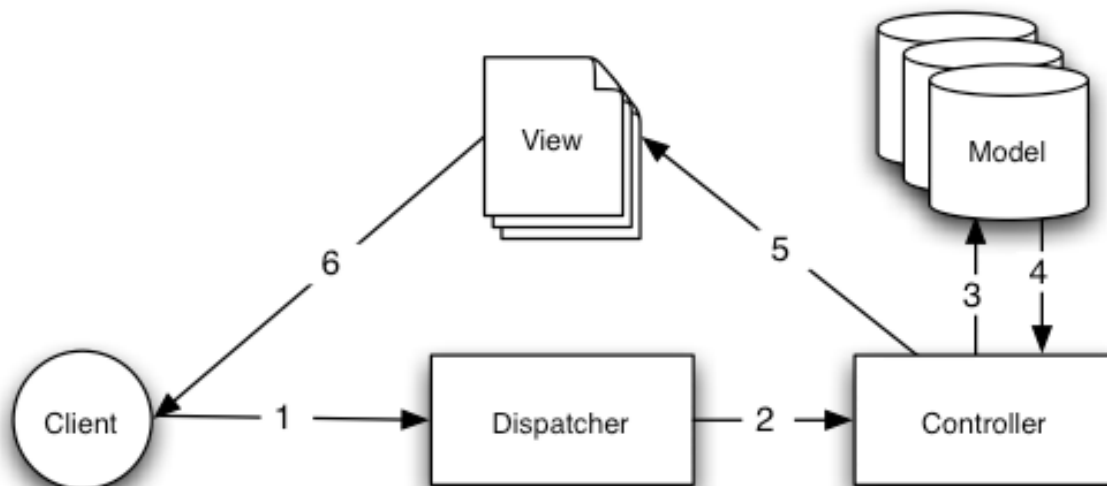
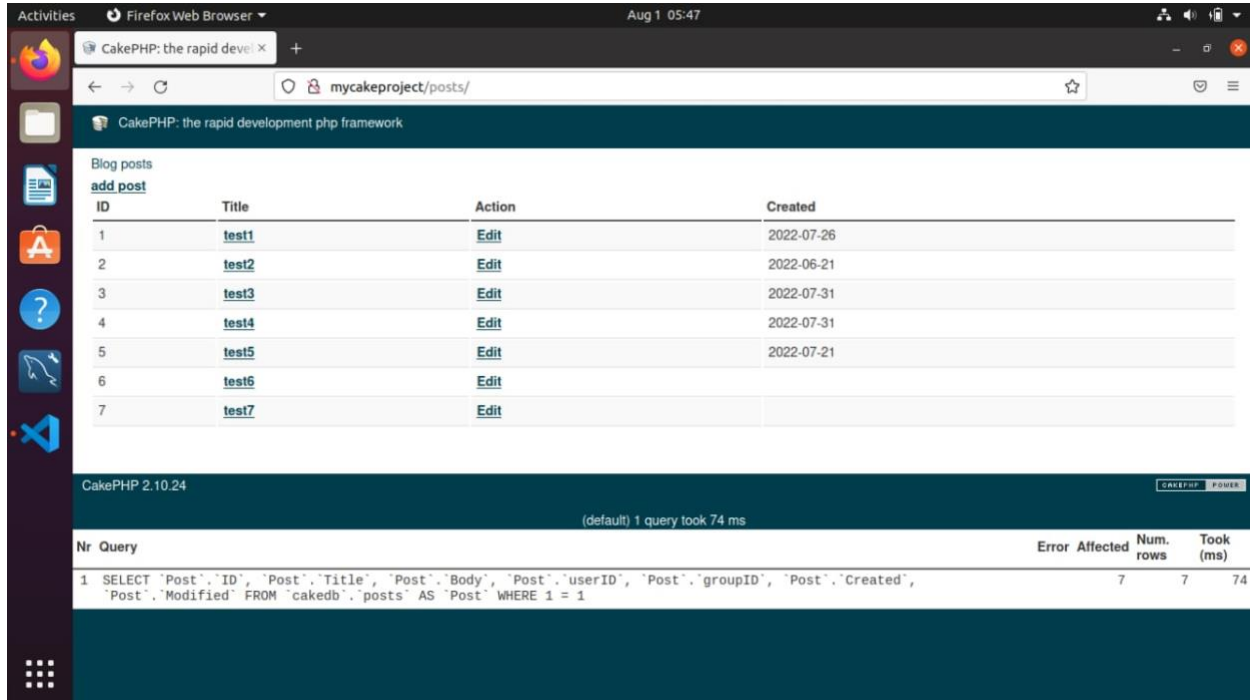


Figure 1 CakePHP request cycle



Blog posts

[add post](#)

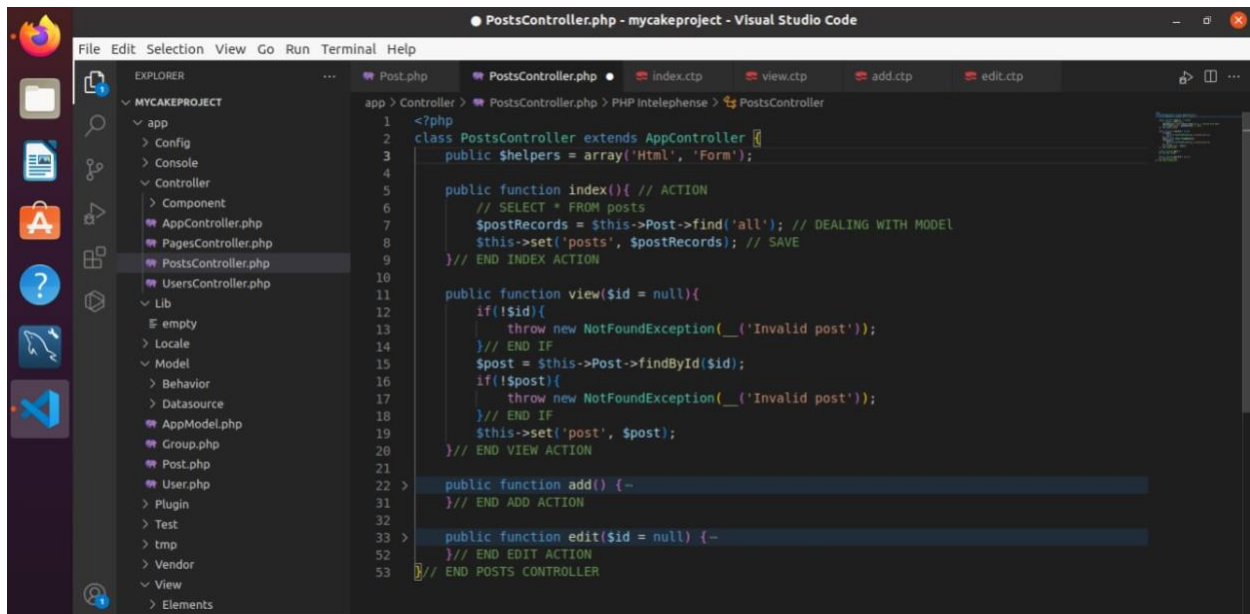
ID	Title	Action	Created
1	<a href="#">test1</a>	<a href="#">Edit</a>	2022-07-26
2	<a href="#">test2</a>	<a href="#">Edit</a>	2022-06-21
3	<a href="#">test3</a>	<a href="#">Edit</a>	2022-07-31
4	<a href="#">test4</a>	<a href="#">Edit</a>	2022-07-31
5	<a href="#">test5</a>	<a href="#">Edit</a>	2022-07-21
6	<a href="#">test6</a>	<a href="#">Edit</a>	
7	<a href="#">test7</a>	<a href="#">Edit</a>	

CakePHP 2.10.24

(default) 1 query took 74 ms

Nr	Query	Error	Affected	Num. rows	Took (ms)
1	SELECT `Post`.`ID`, `Post`.`Title`, `Post`.`Body`, `Post`.`userID`, `Post`.`groupID`, `Post`.`Created`, `Post`.`Modified` FROM `cakedb`.`posts` AS `Post` WHERE 1 = 1		7	7	74

Figure 2 Post page - Index

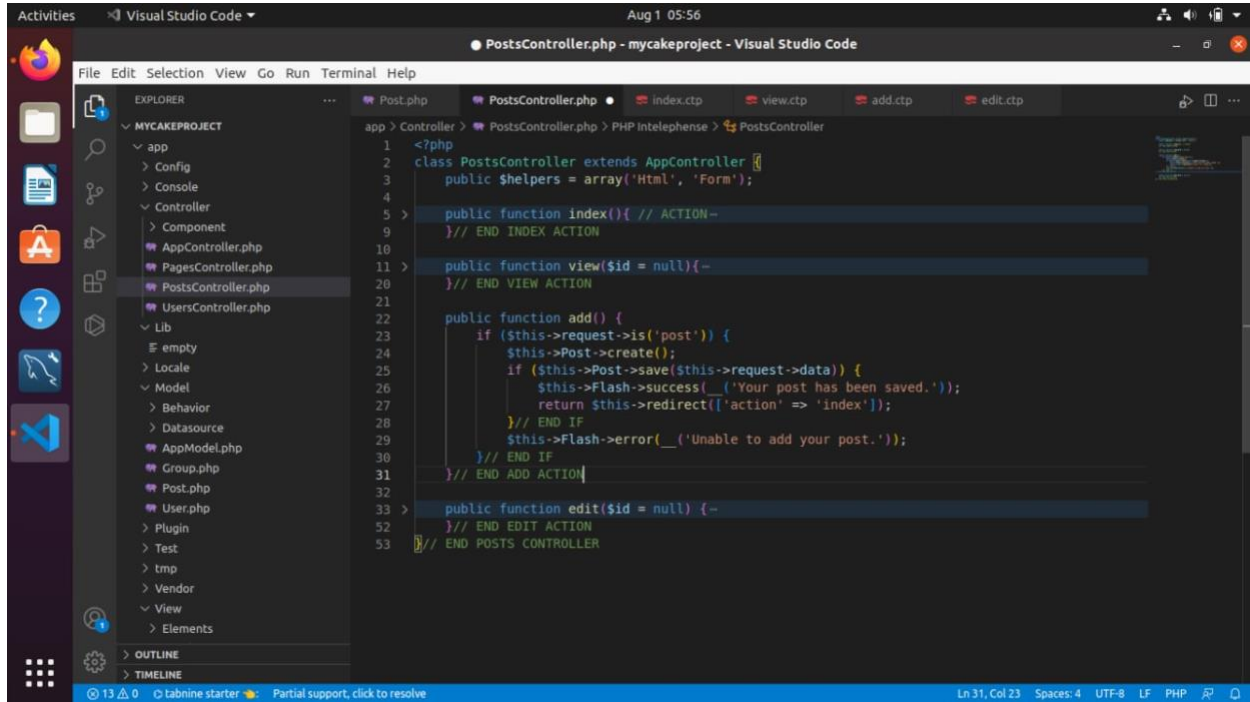


```

1 <?php
2 class PostsController extends AppController {
3     public $helpers = array('Html', 'Form');
4
5     public function index() { // ACTION
6         // SELECT * FROM posts
7         $postRecords = $this->Post->find('all'); // DEALING WITH MODEL
8         $this->set('posts', $postRecords); // SAVE
9     } // END INDEX ACTION
10
11     public function view($id = null) {
12         if(!$id) {
13             throw new NotFoundException(__('Invalid post'));
14         } // END IF
15         $post = $this->Post->findById($id);
16         if(!$post) {
17             throw new NotFoundException(__('Invalid post'));
18         } // END IF
19         $this->set('post', $post);
20     } // END VIEW ACTION
21
22     public function add() { -
23     } // END ADD ACTION
24
25     public function edit($id = null) { -
26     } // END EDIT ACTION
27 } // END POSTS CONTROLLER

```

Figure 3 Post Controller - Index and View action

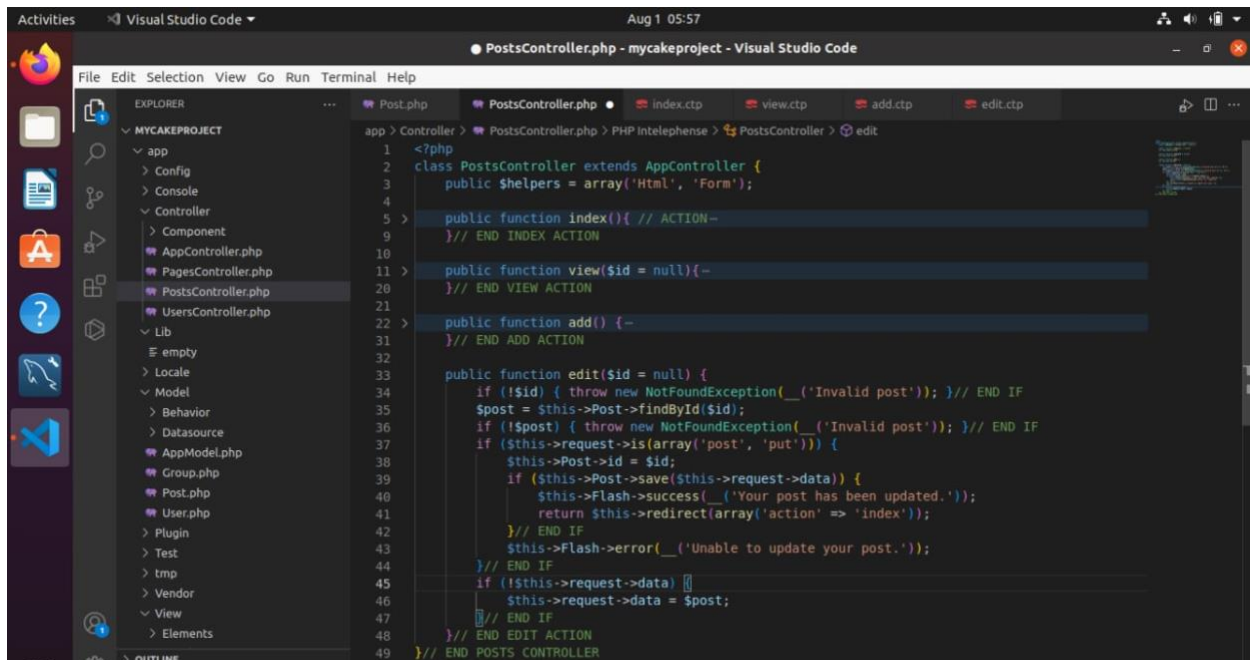


```

1 <?php
2 class PostsController extends ApplicationController {
3     public $helpers = array('Html', 'Form');
4
5     public function index() { // ACTION-
6         // END INDEX ACTION
7     }
8
9     public function view($id = null) {
10        // END VIEW ACTION
11    }
12
13    public function add() {
14        if ($this->request->is('post')) {
15            $this->Post->create();
16            if ($this->Post->save($this->request->data)) {
17                $this->Flash->success(__('Your post has been saved.));
18                return $this->redirect(['action' => 'index']);
19            }
20            // END IF
21            $this->Flash->error(__('Unable to add your post.));
22            // END IF
23        }
24        // END ADD ACTION
25    }
26
27    public function edit($id = null) {
28        // END EDIT ACTION
29    }
30    // END POSTS CONTROLLER
31 }

```

Figure 5 Post Controller - Add action



```

1 <?php
2 class PostsController extends ApplicationController {
3     public $helpers = array('Html', 'Form');
4
5     public function index() { // ACTION-
6         // END INDEX ACTION
7     }
8
9     public function view($id = null) {
10        // END VIEW ACTION
11    }
12
13    public function add() {
14        // END ADD ACTION
15    }
16
17    public function edit($id = null) {
18        if (!$id) { throw new NotFoundException(__('Invalid post')); } // END IF
19        $post = $this->Post->findById($id);
20        if (!$post) { throw new NotFoundException(__('Invalid post')); } // END IF
21        if ($this->request->is(array('post', 'put'))) {
22            $this->Post->id = $id;
23            if ($this->Post->save($this->request->data)) {
24                $this->Flash->success(__('Your post has been updated.));
25                return $this->redirect(array('action' => 'index'));
26            }
27            // END IF
28            $this->Flash->error(__('Unable to update your post.));
29            // END IF
30        }
31        if ($this->request->data) {
32            $this->request->data = $post;
33        }
34        // END EDIT ACTION
35    }
36    // END POSTS CONTROLLER
37 }

```

Figure 4 Post Controller - Edit action

- Create user page

We created User model, controller, and view. In the User Controller we added some actions such as, User index, Edit User, and View User

- Create group page

We created Group model, controller, and view. In the Group Controller we added some actions such as, Group index, and Edit Group.

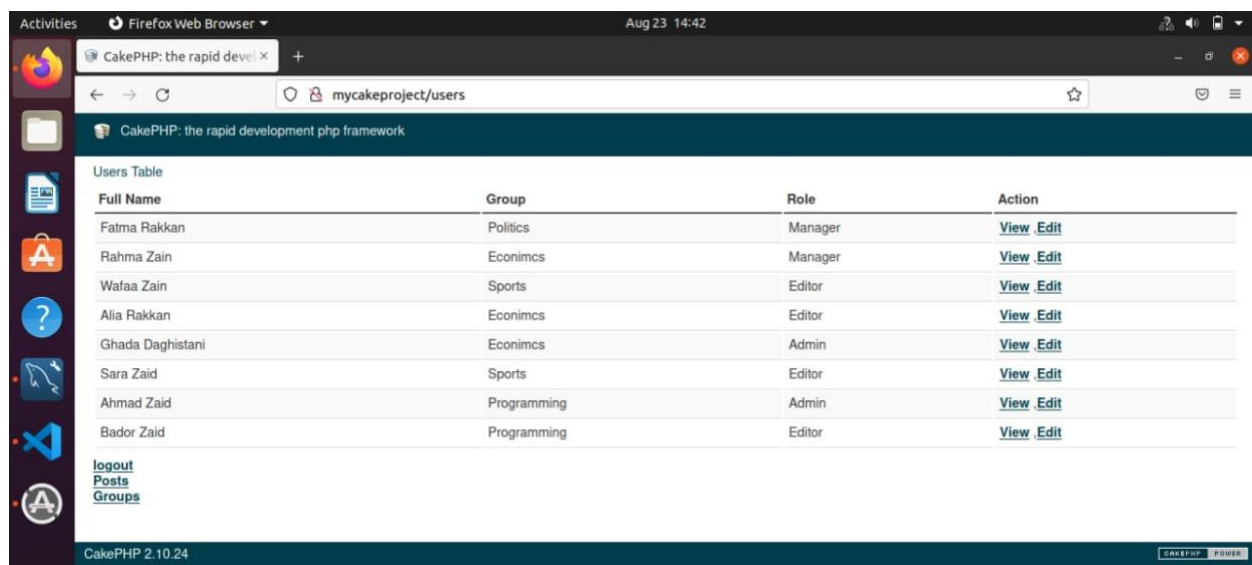


Figure 6 shows a screenshot of the CakePHP Users Table index page. The page displays a table with columns: Full Name, Group, Role, and Action. The table contains 8 rows of user data. The Action column has links for View and Edit for each user. The page also includes a sidebar with links for Logout, Posts, and Groups, and a footer indicating CakePHP 2.10.24.

Full Name	Group	Role	Action
Fatma Rakkan	Politics	Manager	<a href="#">View</a> <a href="#">Edit</a>
Rahma Zain	Econimcs	Manager	<a href="#">View</a> <a href="#">Edit</a>
Wafaa Zain	Sports	Editor	<a href="#">View</a> <a href="#">Edit</a>
Alia Rakkan	Econimcs	Editor	<a href="#">View</a> <a href="#">Edit</a>
Ghada Daghistani	Econimcs	Admin	<a href="#">View</a> <a href="#">Edit</a>
Sara Zaid	Sports	Editor	<a href="#">View</a> <a href="#">Edit</a>
Ahmad Zaid	Programming	Admin	<a href="#">View</a> <a href="#">Edit</a>
Bador Zaid	Programming	Editor	<a href="#">View</a> <a href="#">Edit</a>

Figure 6 User page - Index

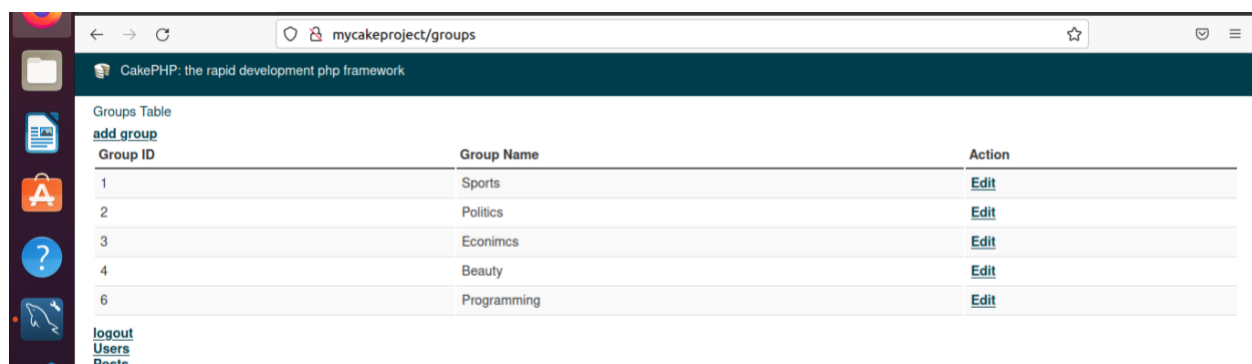


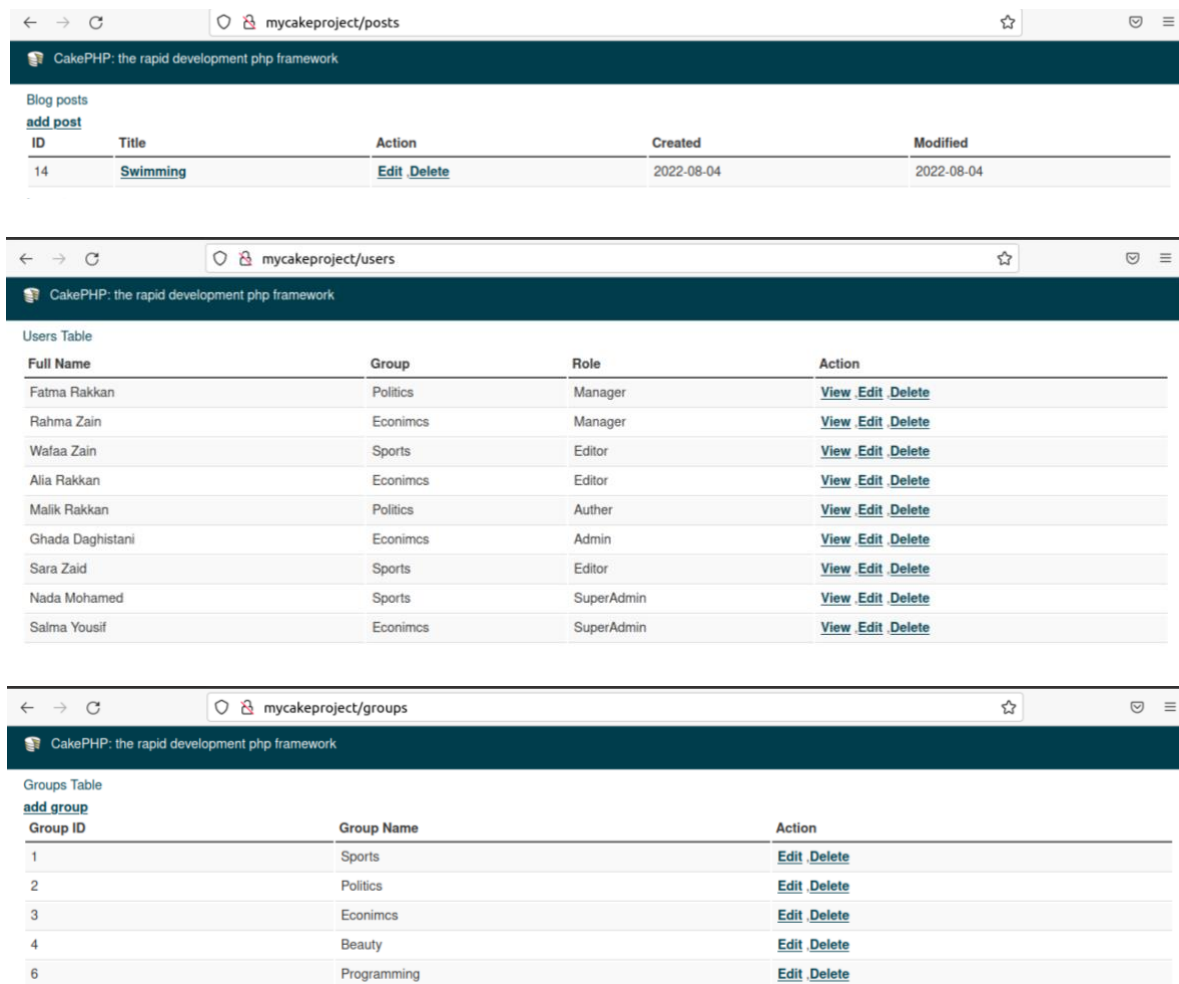
Figure 7 shows a screenshot of the CakePHP Groups Table index page. The page displays a table with columns: Group ID, Group Name, and Action. The table contains 5 rows of group data. The Action column has links for Edit for each group. The page also includes a sidebar with links for Logout, Users, and Posts, and a footer indicating CakePHP 2.10.24.

Group ID	Group Name	Action
1	Sports	<a href="#">Edit</a>
2	Politics	<a href="#">Edit</a>
3	Econimcs	<a href="#">Edit</a>
4	Beauty	<a href="#">Edit</a>
6	Programming	<a href="#">Edit</a>

Figure 7 Group page - Index

- Add delete action to all pages

Our supervisor gave us this task to apply it in all pages – Post, User, and Group. at first it was difficult then when we figure out the syntax it was quite easy to apply it on all pages.



The figure consists of three screenshots of a web application interface, each showing a table with a 'Delete' action link for each row.

**Top Screenshot: mycakeproject/posts**

Blog posts  
[add post](#)

ID	Title	Action	Created	Modified
14	Swimming	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-04	2022-08-04

**Middle Screenshot: mycakeproject/users**

Users Table

Full Name	Group	Role	Action
Fatma Rakkan	Politics	Manager	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
Rahma Zain	Econimcs	Manager	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
Wafaa Zain	Sports	Editor	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
Alia Rakkan	Econimcs	Editor	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
Malik Rakkan	Politics	Auther	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
Ghada Daghistani	Econimcs	Admin	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
Sara Zaid	Sports	Editor	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
Nada Mohamed	Sports	SuperAdmin	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>
Salma Yousif	Econimcs	SuperAdmin	<a href="#">View</a> <a href="#">Edit</a> <a href="#">Delete</a>

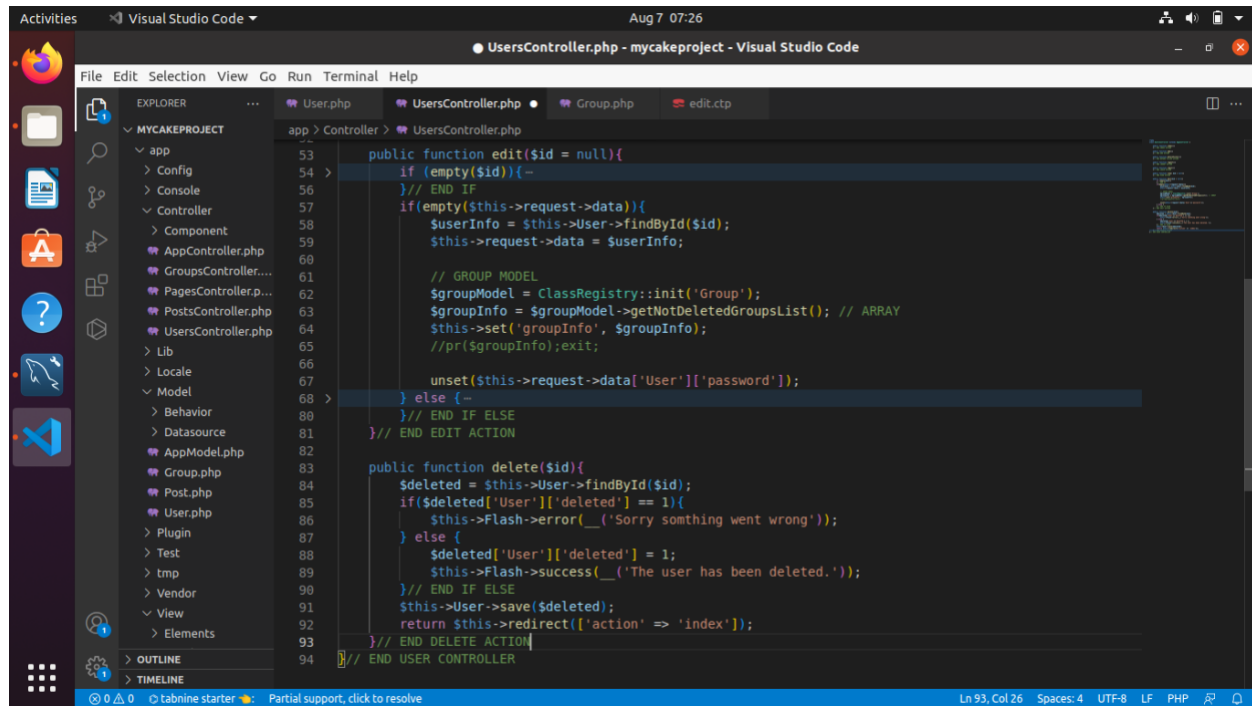
**Bottom Screenshot: mycakeproject/groups**

Groups Table  
[add group](#)

Group ID	Group Name	Action
1	Sports	<a href="#">Edit</a> <a href="#">Delete</a>
2	Politics	<a href="#">Edit</a> <a href="#">Delete</a>
3	Econimcs	<a href="#">Edit</a> <a href="#">Delete</a>
4	Beauty	<a href="#">Edit</a> <a href="#">Delete</a>
6	Programming	<a href="#">Edit</a> <a href="#">Delete</a>

Figure 8 Delete action in Post, User, and Group pages



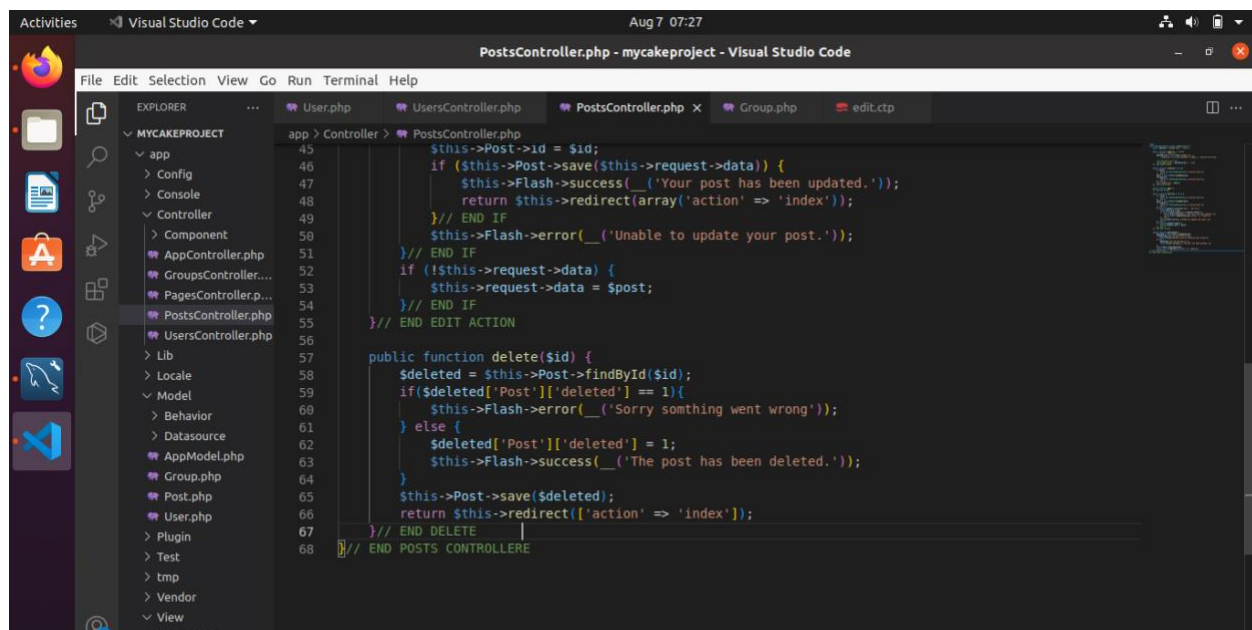


```

53 public function edit($id = null){
54     if (empty($id)){
55         // END IF
56     }
57     if(empty($this->request->data)){
58         $userInfo = $this->User->findById($id);
59         $this->request->data = $userInfo;
60
61         // GROUP MODEL
62         $groupModel = ClassRegistry::init('Group');
63         $groupInfo = $groupModel->getNotDeletedGroupsList(); // ARRAY
64         $this->set('groupInfo', $groupInfo);
65         //pr($groupInfo);exit;
66
67         unset($this->request->data['User']['password']);
68     } else {
69         // END IF ELSE
70     }
71     // END EDIT ACTION
72
73 public function delete($id){
74     $deleted = $this->User->findById($id);
75     if($deleted['User']['deleted'] == 1){
76         $this->Flash->error(__('Sorry something went wrong'));
77     } else {
78         $deleted['User']['deleted'] = 1;
79         $this->Flash->success(__('The user has been deleted.));
80     }
81     // END IF ELSE
82     $this->User->save($deleted);
83     return $this->redirect(['action' => 'index']);
84 }
85 // END DELETE ACTION
86
87 // END USER CONTROLLER

```

Figure 9 User Controller - Delete action



```

45 $this->Post->id = $id;
46 if ($this->Post->save($this->request->data)) {
47     $this->Flash->success(__('Your post has been updated.));
48     return $this->redirect(array('action' => 'index'));
49 }
50 $this->Flash->error(__('Unable to update your post.));
51 // END IF
52 if (!$this->request->data) {
53     $this->request->data = $post;
54 }
55 // END IF
56 // END EDIT ACTION
57
58 public function delete($id) {
59     $deleted = $this->Post->findById($id);
60     if($deleted['Post']['deleted'] == 1){
61         $this->Flash->error(__('Sorry something went wrong'));
62     } else {
63         $deleted['Post']['deleted'] = 1;
64         $this->Flash->success(__('The post has been deleted.));
65     }
66     $this->Post->save($deleted);
67     return $this->redirect(['action' => 'index']);
68 }
69 // END DELETE
70
71 // END POSTS CONTROLLER

```

e

- Add image and video

This task took us so long to do it. First, we had problem saving images users uploaded on the website. Then in displaying the video we figure out that there is a problem on the Ubuntu VM we could not complete the video task.

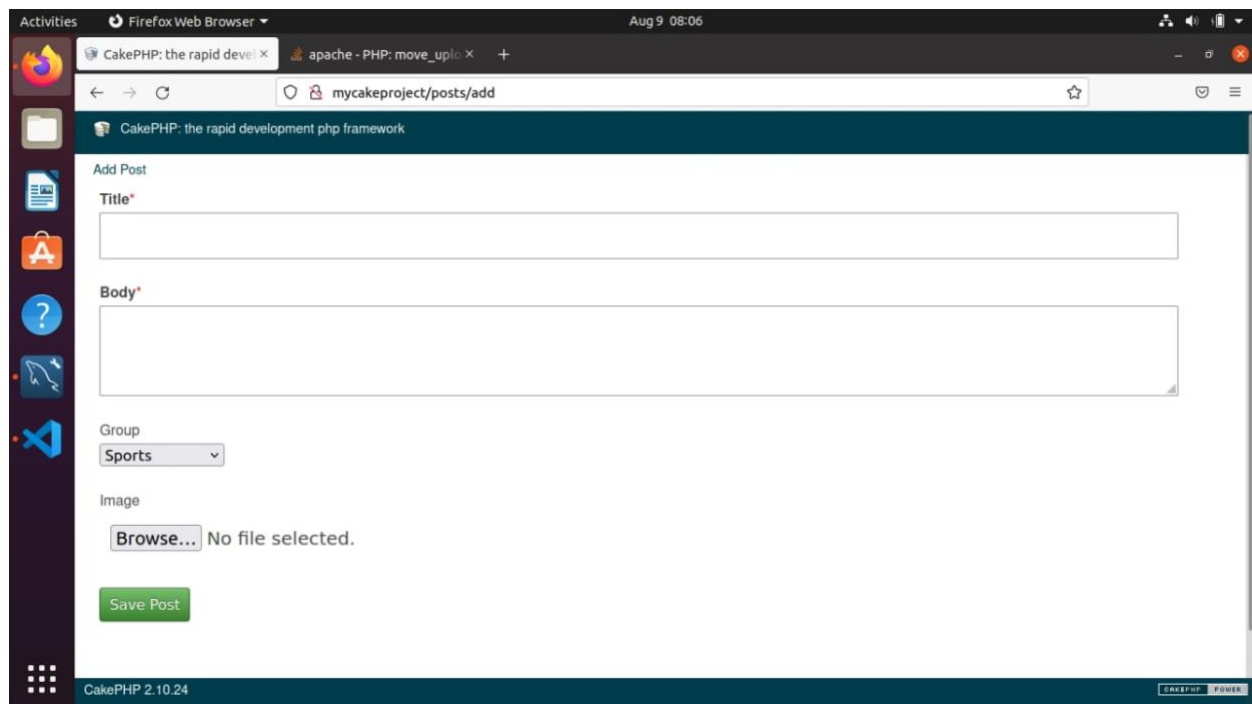


Figure 10 Post - Add post page

I added screenshot from Users/index as an image to finalTest Post.

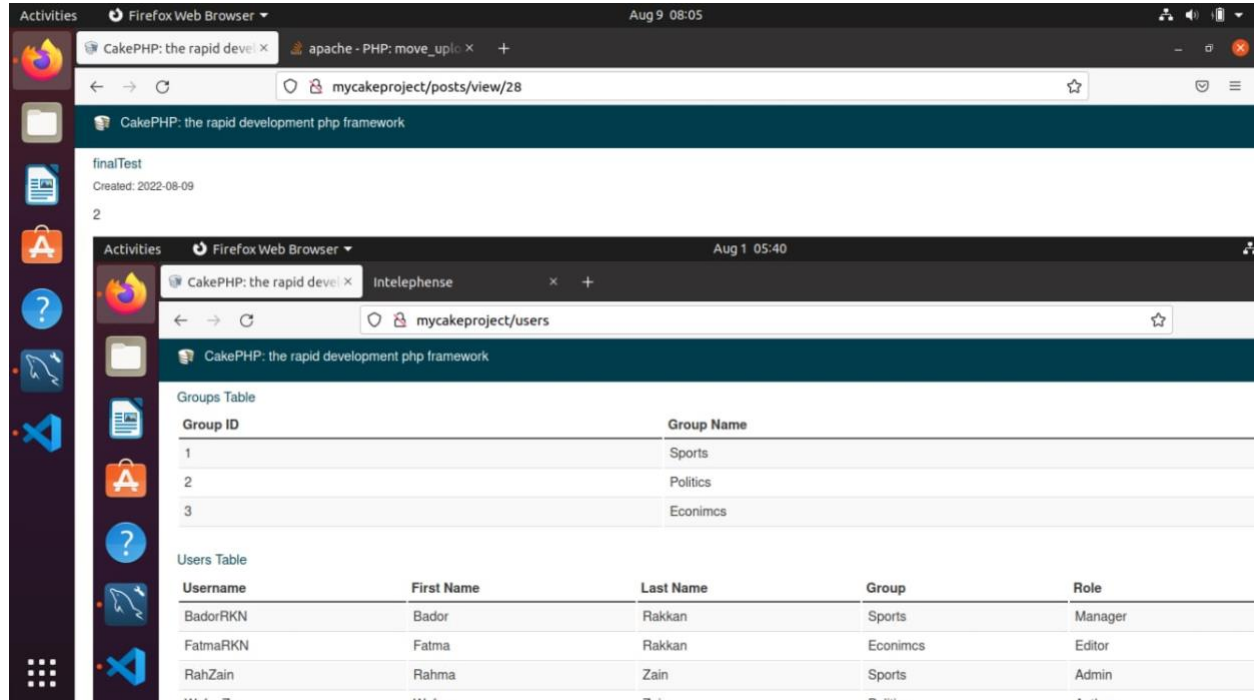


Figure 12 Post view – finalTest post

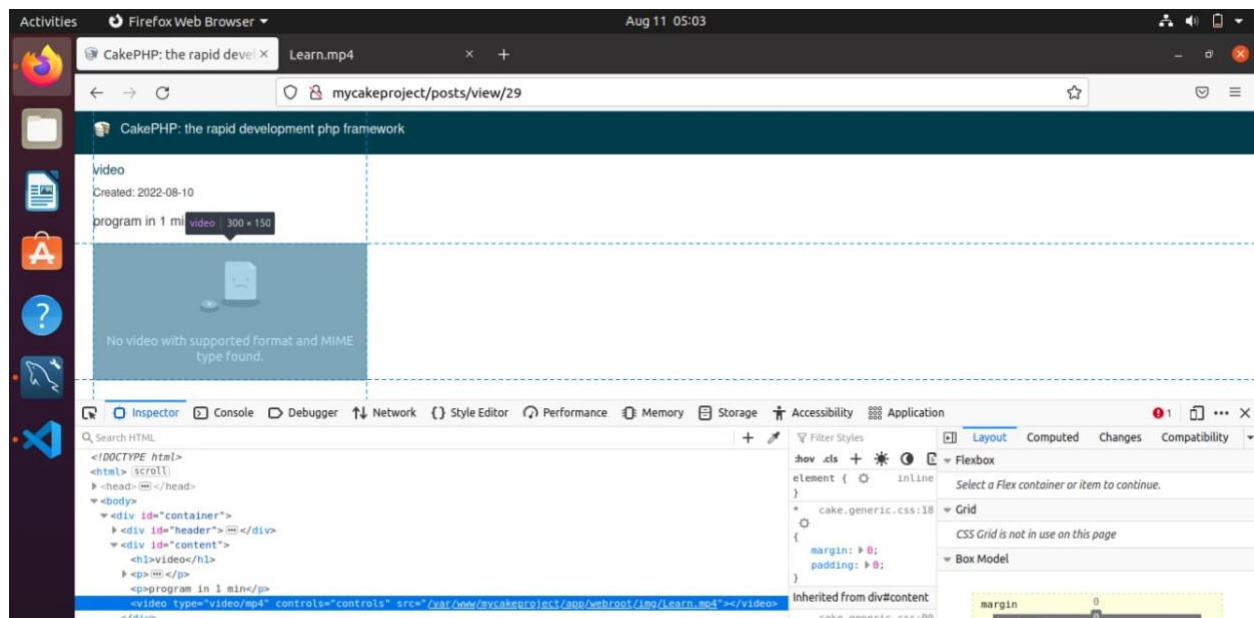


Figure 11 Post view - display video



- Modifications on Posts

Only the users who create the post can edit it and delete it.

Only admin of group could edit and delete any group posts.

Only users in the same group can view group posts.

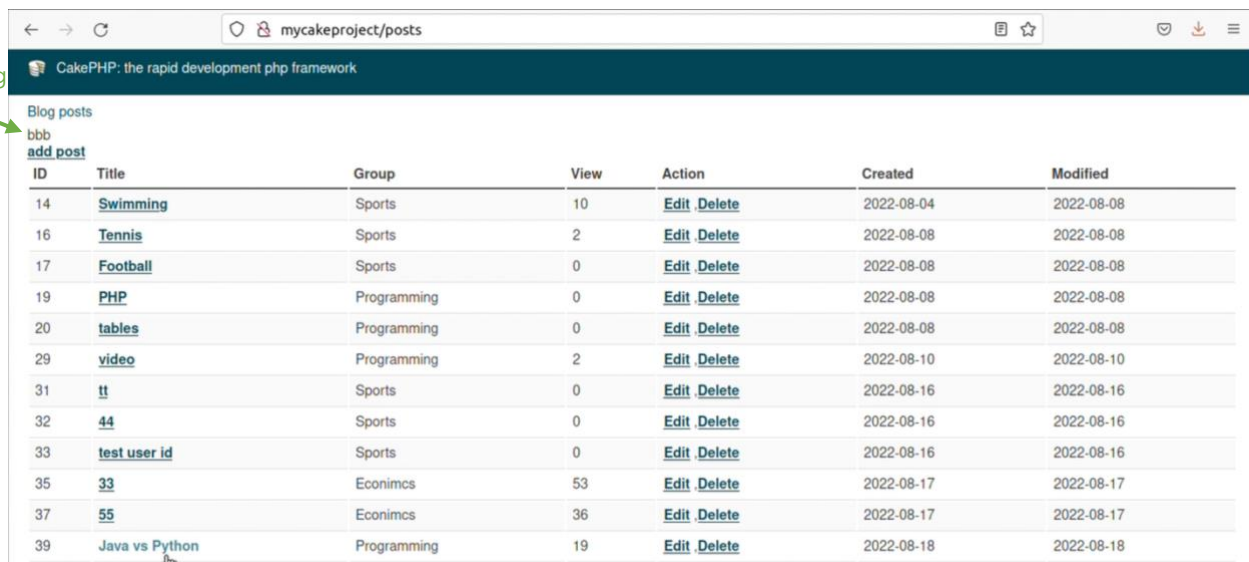
Add view count feature for post

- Add likes and comments to post

Only users in the same group can add comment to the post

Only group admin can edit or delete comments

User bbb  
Group  
programming



Blog posts

bbb

[add post](#)

ID	Title	Group	View	Action	Created	Modified
14	<a href="#">Swimming</a>	Sports	10	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-04	2022-08-08
16	<a href="#">Tennis</a>	Sports	2	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-08	2022-08-08
17	<a href="#">Football</a>	Sports	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-08	2022-08-08
19	<a href="#">PHP</a>	Programming	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-08	2022-08-08
20	<a href="#">tables</a>	Programming	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-08	2022-08-08
29	<a href="#">video</a>	Programming	2	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-10	2022-08-10
31	<a href="#">tt</a>	Sports	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-16	2022-08-16
32	<a href="#">44</a>	Sports	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-16	2022-08-16
33	<a href="#">test user id</a>	Sports	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-16	2022-08-16
35	<a href="#">33</a>	Economics	53	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-17	2022-08-17
37	<a href="#">55</a>	Economics	36	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-17	2022-08-17
39	<a href="#">Java vs Python</a>	Programming	19	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-18	2022-08-18

Figure 13 Only users in the same group can view group posts

← → ↻ mycakeproject/posts/view/39

CakePHP: the rapid development php framework

Java vs Python  
Created: 2022-08-18

Content:  
Java is generally more efficient than Python

Total number of viewers: 19 likes = 5 like post  
[add comment](#)

User	Comment	Action
bbb	Python has simpler, more concise syntax than Java	<a href="#">Edit</a> <a href="#">Delete</a>
aaa	Java is faster, Python is more versatile, easier to read, and has a simpler syntax.	<a href="#">Edit</a> <a href="#">Delete</a>
bbb	not admin	<a href="#">Edit</a> <a href="#">Delete</a>

[Back](#)

← → ↻ mycakeproject/posts/comment/39

CakePHP: the rapid development php framework

Add Comment

Content

hello

[Save comment](#)

Figure 14 Only users in the same group can add comment to the post

User aaa  
admin Group  
programming

← → ↻ mycakeproject/posts

CakePHP: the rapid development php framework

Blog posts  
aaa  
[add post](#)

ID	Title	Group	View	Action	Created	Modified
14	<a href="#">Swimming</a>	Sports	10	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-04	2022-08-08
16	<a href="#">Tennis</a>	Sports	2	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-08	2022-08-08
17	<a href="#">Football</a>	Sports	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-08	2022-08-08
19	<a href="#">PHP</a>	Programming	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-08	2022-08-08
20	<a href="#">tables</a>	Programming	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-08	2022-08-08
29	<a href="#">video</a>	Programming	2	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-10	2022-08-10
31	<a href="#">tt</a>	Sports	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-16	2022-08-16
32	<a href="#">44</a>	Sports	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-16	2022-08-16
33	<a href="#">test user id</a>	Sports	0	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-16	2022-08-16
35	<a href="#">33</a>	Econimcs	53	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-17	2022-08-17
37	<a href="#">55</a>	Econimcs	36	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-17	2022-08-17
39	<a href="#">Java vs Python</a>	Programming	21	<a href="#">Edit</a> <a href="#">Delete</a>	2022-08-18	2022-08-18

← → ↻ mycakeproject/posts/view/39

CakePHP: the rapid development php framework

Java vs Python  
Created: 2022-08-18

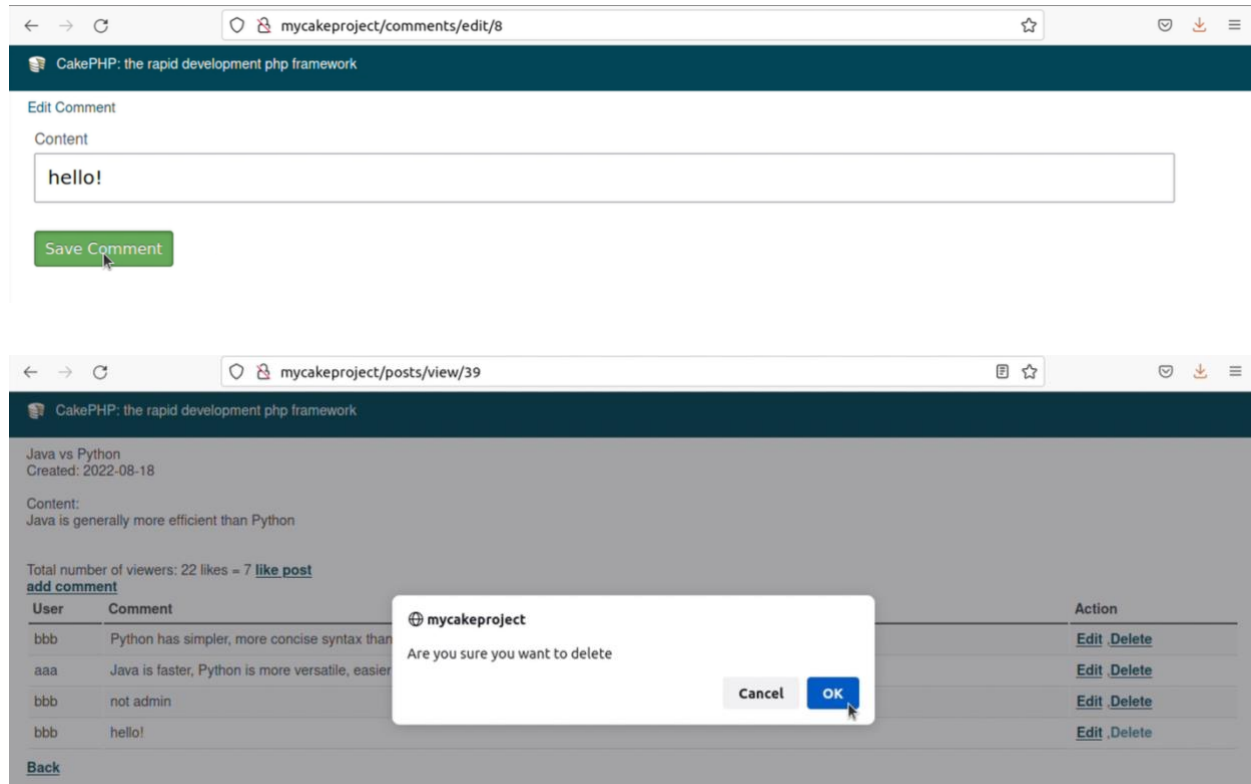
Content:  
Java is generally more efficient than Python

Total number of viewers: 21 likes = 6 [like post](#)  
[add comment](#)

User	Comment	Action
bbb	Python has simpler, more concise syntax than Java	<a href="#">Edit</a> <a href="#">Delete</a>
aaa	Java is faster, Python is more versatile, easier to read, and has a simpler syntax.	<a href="#">Edit</a> <a href="#">Delete</a>
bbb	not admin	<a href="#">Edit</a> <a href="#">Delete</a>
bbb	hello	<a href="#">Edit</a> <a href="#">Delete</a>

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Figure 15 Only admin of group could edit and delete any group posts



The top screenshot shows the 'Edit Comment' form for a comment with content 'hello!'. The bottom screenshot shows a post view for 'Java vs Python' with a comment table and a confirmation dialog for deleting a comment.

mycakeproject/posts/view/39

Java vs Python  
Created: 2022-08-18

Content:  
Java is generally more efficient than Python

Total number of viewers: 22 likes = 7 [like post](#)

[add comment](#)

User	Comment	Action
bbb	Python has simpler, more concise syntax than	<a href="#">Edit</a> <a href="#">Delete</a>
aaa	Java is faster, Python is more versatile, easier	<a href="#">Edit</a> <a href="#">Delete</a>
bbb	not admin	<a href="#">Edit</a> <a href="#">Delete</a>
bbb	hello!	<a href="#">Edit</a> <a href="#">Delete</a>

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mycakeproject

Are you sure you want to delete

Cancel OK

Figure 16 Only group admin can edit or delete comments

## Conclusions

To conclude, the training in Classera was eight weeks long. I gained new skills and experiences working in a new environment that was different from attending classes. Furthermore, I learned and practiced the PHP language and MySQL. Additionally, I wished it was longer than eight weeks to get the most benefit and train in the technical support ticket system as it was planned in Classera's training plan.

## References

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