

# **COSC 360 Project Report**

*Implementation from a System Developer's Perspective*

Link: <https://github.com/COSC360/project-3AM>

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## 1. Features

- 1.1. Navbar: The left side navigation bar consists of bootstrap icons that when hovered will show a pop up of the page description utilizing CSS. It also uses 'active' to highlight the current page the user is in. The right side of the navbar shows if the user is logged in or not. If the user is logged in it will show the username, the profilePicture, and a dropdown menu to edit profile and logout. This uses `php $_SESSION` to send the user's username, profilePicture, and pictureType to all pages. If a user is not logged in, it will show "Log In!" (link to login page).
- 1.2. Populars: The `user_populars.php` sorts posts based on likes in descending order. The page has an `up_arrow` button that when clicked is connected to a JavaScript function which takes the parameter of the `postId`. This utilizes AJAX to send a POST request to the `update_likes.php`. The data sent includes the `postId` and the current number of likes the post has then `update_likes.php` will update the database by incrementing the number of likes by 1 for the post with the `postId` sent from the POST request. The page will also automatically reload after the process above is finished so the change is reflected immediately.
- 1.3. Notification: `user_notification` page has a list of notifications with `opened = 0` and serves as a link to `update_notification.php` while sending `commentId` and `postId` of the clicked notification to `update_notification.php`. In `update_notification.php` it will set the `opened` column for the `commentId` received from `user_notification.php` to 1 and will not be shown in `user_notification` the next time the user opens the page. Then it will automatically direct to `post.php` containing the post and comments of the clicked notification.
- 1.4. Create Account: `user_createAccount` has validations email is valid using regex in JavaScript function and password matches with re-enter password using a JavaScript function.
- 1.5. Main Page: `index.php` retrieves and prints title, content, and username of each post. It also has a text area which inserts a new row to the Comment table in the database when the form is submitted. There is also a report icon on the top right of each post, if clicked a popup window will appear and when submitted will send the `postId` and reason to `report.php`. Then will insert a new row to the ReportPost table and be directed back to `index.php`.
- 1.6. Forms: All the forms (`user_editProfile`, `user_createPost`, `user_createAccount`) have a validation to ensure all required fields are filled and valid. All forms are styled using bootstrap card and CSS.
- 1.7. Image uploads: If the image uploaded in `editProfile` and `createAccount` exceeds 100KB, it will show a popup window saying the file should be less than 100KB. The field is also restricted to only accept `jpg`, `jpeg`, and `png` using the html "`accept=`"
- 1.8. Images: In the `post.php` page, the users' profilePicture and comments will be shown for all the users who commented into the respective posts. Current logged in user's profile picture will also be shown in the right side of the navigation bar.

- 1.9. Admin main page: admin\_index.php has a statistic of the website's users and posts. It also has a form to add a new task for the to-do list. They both use AJAX for the implementation. The submitted task will be inserted to the adminTask table.
- 1.10. Admin user list: admin\_userList.php has a list of users and the delete button beside each user. When clicked, it sends the username to delete\_user.php, the user will be deleted from the database (User table) and automatically directed back to admin\_userList.php. Furthermore, the posts from the user which was deleted will also be deleted from the Post table.
- 1.11. Admin notification: admin\_notif.php contains a list of reports made by users. The list contains postId, reporter, reason and "reviewed" button. The admin will go to the post by clicking the postId link, then review it. If it is appropriate, no action will be done and the reviewed button will be clicked to remove the report from the list.
- 1.12. Automated test for Create Account(can be found on tests/UserCreateAccountTest.php):

```
kevinmario@Kevins-MacBook-Pro project-3AM % vendor/bin/phpunit tests/UserCreateAccountTest.php
PHPUnit 10.0.19 by Sebastian Bergmann and contributors.

Runtime:      PHP 8.2.4

.                                                     1 / 1 (100%)

Time: 00:00.044, Memory: 6.00 MB

OK (1 test, 3 assertions)
```

## 2. Web site at a high-level

- 2.1. The forms in the website have client-side validations and database validations to ensure no errors when a new row is inserted to the database.
- 2.2. The password is hashed with md5 when inserted to the database for security.
- 2.3. Images larger than the maximum allowed to be inserted to the database are also caught when submitting the form. Therefore, before inserting to the database, the images are already correct and could be accepted by the server.
- 2.4. Deleted users will have their posts removed to ensure no errors in the future.
- 2.5. The navigation bar has all the important pages a user might use, making it easier to navigate between pages, and uses icons to create a more visually appealing user experience. Moreover, when hovered will show the description for each icon for further engagement with the user.
- 2.6. Actions made by the user related to the database are efficient as it does not show users the database modification pages which are unrelated to the user experience. It directs to the

- database editing page containing the SQL statement and automatically returns to the initial page without user intervention. The change is then immediately reflected on the initial page.
- 2.7. Some pages also use col in html to accommodate different screen sizes in different devices ensuring better user experience.
  - 2.8. All buttons (up-arrow and report) that could alter the database are not available for non-logged in users to prevent errors.

### **3. Limitations**

- 3.1. Images that users want to upload have to be less than 100KB and if larger, they have to compress it online.
- 3.2. Cannot create account for admin from website and has to be created directly on the database (for security)