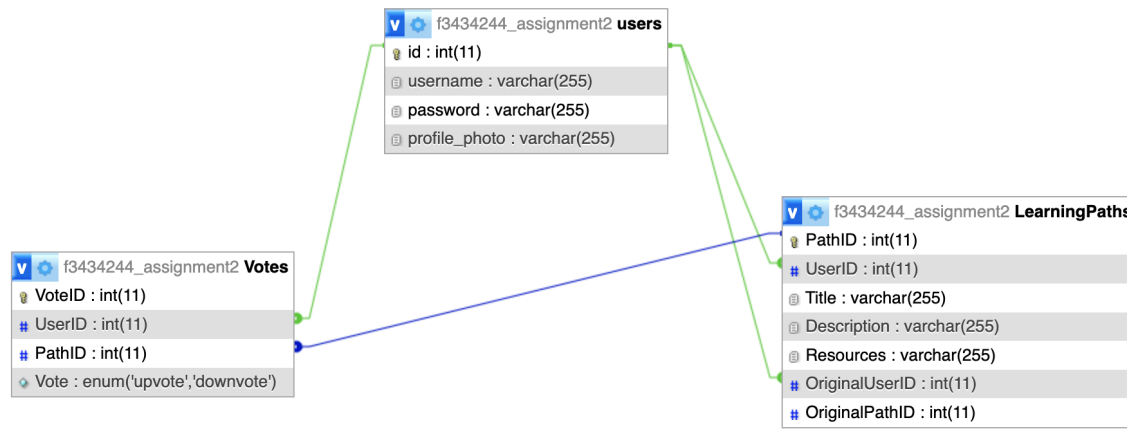# Database Interaction

The application incorporates a designated directory named 'db,' exclusively handling database interactions. These interactions are triggered only when necessary, with user information stored efficiently using cookies. Within our database, three primary tables exist: 'users,' 'LearningPaths,' and 'Votes.'

The 'users' table holds essential user details, including userID, username, password, and a reference to the profile photo path stored on the server. This table serves the purpose of login authentication and user verification.

For managing learning paths and facilitating the site's feed section, the 'LearningPaths' table plays a pivotal role. It stores comprehensive data such as PathID, associated UserID, title, description, resources, and two Original IDs—identifiers crucial for tracking imported or cloned paths across different user accounts.

Lastly, the 'Votes' table manages user feedback on posts by recording upvotes or downvotes. Each entry in this table contains a unique VoteID, the UserID of the voter, PathID of the relevant path, and a 'Vote' field, utilizing an enum between 'upvote' and 'downvote.'

The decision to isolate voting data into a dedicated table simplifies validation processes. It ensures clear identification of user votes, allows a single vote per user for each post, and enables users to modify their votes when needed.

Database Queries

db/confirmLogin.php
```
"SELECT * FROM users WHERE username = '$username'"
```

db/register.php
```
"SELECT id FROM users WHERE username = ?"

"INSERT INTO users (username, password) VALUES (?, ?)"
```

db/changeUsername.php
```
"SELECT id FROM users WHERE username = ?"
```

```
"UPDATE users SET username = ? WHERE username = ?"
```

db/changePassword.php

```
"SELECT id, password FROM users WHERE username = ?"
"UPDATE users SET password = ? WHERE id = ?"
```

db/createLearningPath.php

```
"SELECT id FROM users WHERE username = ?"
"INSERT INTO LearningPaths (UserID, OriginalUserID, Title, Description, Resources)
VALUES (?, ?, ?, ?, ?)"
"SELECT PathID FROM LearningPaths WHERE Title = ? AND UserID = ?"
"UPDATE LearningPaths SET OriginalPathID = ? WHERE PathID = ?"
```

db/deleteLearningPath.php

```
"SELECT id FROM users WHERE username = ?"

"SELECT OriginalPathID, OriginalUserID FROM LearningPaths WHERE PathID = ?"

"DELETE FROM Votes WHERE PathID = ?"

"DELETE FROM LearningPaths WHERE OriginalPathID = ?"

"DELETE FROM LearningPaths WHERE PathID = ?"
```

db/importLearningPath.php

```
"SELECT Title, Description, Resources, UserID, OriginalUserID FROM LearningPaths WHERE
PathID = ?"

"SELECT id FROM users WHERE username = ?"

"INSERT INTO LearningPaths (UserID, OriginalUserID, OriginalPathID, Title,
Description, Resources) VALUES (?, ?, ?, ?, ?, ?)"
```

db/updateLearningPath.php

```
"SELECT OriginalPathID FROM LearningPaths WHERE PathID = ?"

"UPDATE LearningPaths SET Title = ?, Description = ?, Resources = ? WHERE PathID = ?"

"UPDATE LearningPaths SET Title = ?, Description = ?, Resources = ? WHERE
OriginalPathID = ?"
```

db/updateProfilePhoto.php

```
"UPDATE users SET profile_photo = ? WHERE username = ?"
```

db/vote.php

```
"SELECT id FROM users WHERE username = ?"

"SELECT VoteID FROM Votes WHERE UserID = ? AND PathID = ?"
```

```
"UPDATE Votes SET Vote = ? WHERE VoteID = ?"

"INSERT INTO Votes (UserID, PathID, Vote) VALUES (?, ?, ?)"
```

pages/editLearningPath.php

```
"SELECT Title, Description, Resources FROM LearningPaths WHERE PathID = ?"

"SELECT id FROM users WHERE username = ?"

"SELECT 1 FROM LearningPaths WHERE PathID = ? AND UserID = ?"
```

pages/feed.php

```
"SELECT lp.PathID, lp.Title, lp.Description, lp.Resources, lp.UserID, u.username,
COUNT(v.Vote) AS Upvotes

                              FROM LearningPaths lp

                              INNER JOIN users u ON lp.UserID = u.id

                              LEFT JOIN Votes v ON lp.PathID = v.PathID AND
v.Vote = 'upvote'

                              WHERE lp.PathID = lp.OriginalPathID

                              GROUP BY lp.PathID

                              ORDER BY Upvotes DESC"
```

pages/homepage.php

```
"SELECT id FROM users WHERE username = ?"

"SELECT PathID, Title, Description, Resources FROM LearningPaths WHERE UserID = ?"
```

pages/profile.php

```
"SELECT profile_photo FROM users WHERE username = ?"
```

pages/searchResults.php

```
"SELECT id FROM users WHERE username = ?"

"SELECT PathID, Title, Description FROM LearningPaths WHERE UserID = ? AND (Title LIKE
? OR Description LIKE ?)"
```

pages/viewLearningPath.php

```
"SELECT Title, Description, Resources, OriginalPathID, OriginalUserID FROM
LearningPaths WHERE PathID = ?"

"SELECT username, profile_photo FROM users WHERE id = ?"

"SELECT COUNT(*) FROM Votes WHERE PathID = ? AND Vote = 'upvote'"
```

```
"SELECT COUNT(*) FROM Votes WHERE PathID = ? AND Vote = 'downvote'"
```

Additional Notes

To better understand the application, please refer to this usage guide

Create an account to sign in to the application, but make sure your username is unique, the application will tell you if it's already taken.

Learning Path Creator

Sign Up

Username

Password

Sign Up

Already have an account? Sign In

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For this example we will be using my account

Learning Path Creator   Home Feed Profile   Search   Search   Logout

My Learning Paths

Welcome, tyleroneil!

Create Learning Path

No learning paths found.

Import Learning Path:

Enter path URL   Import

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Once signed in you can customize your profile in the Profile tab on the nav bar

Learning Path Creator   Home   Feed   Profile

Please fill out this field.

Search   Search   Logout

Profile

Profile Photo

| Choose Photo | Browse |

Save Photo

Change Username

New Username

Change Username

Change Password

Current Password

New Password

Change Password

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You can also create Paths from the Create Learning Path on the home page

Learning Path Creator   Home   Feed   Profile

Search   Search   Logout

Create Learning Path

Title

Description

Resources (URLs, separated by commas)

Create Learning Path

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Once you have created a learning path it will be displayed on your homepage

You can edit it by clicking view details and delete it from your homepage

By clicking on the Feed tab in the nav bar you can see all the paths created by other users, and it is ranked by upvotes and downvotes
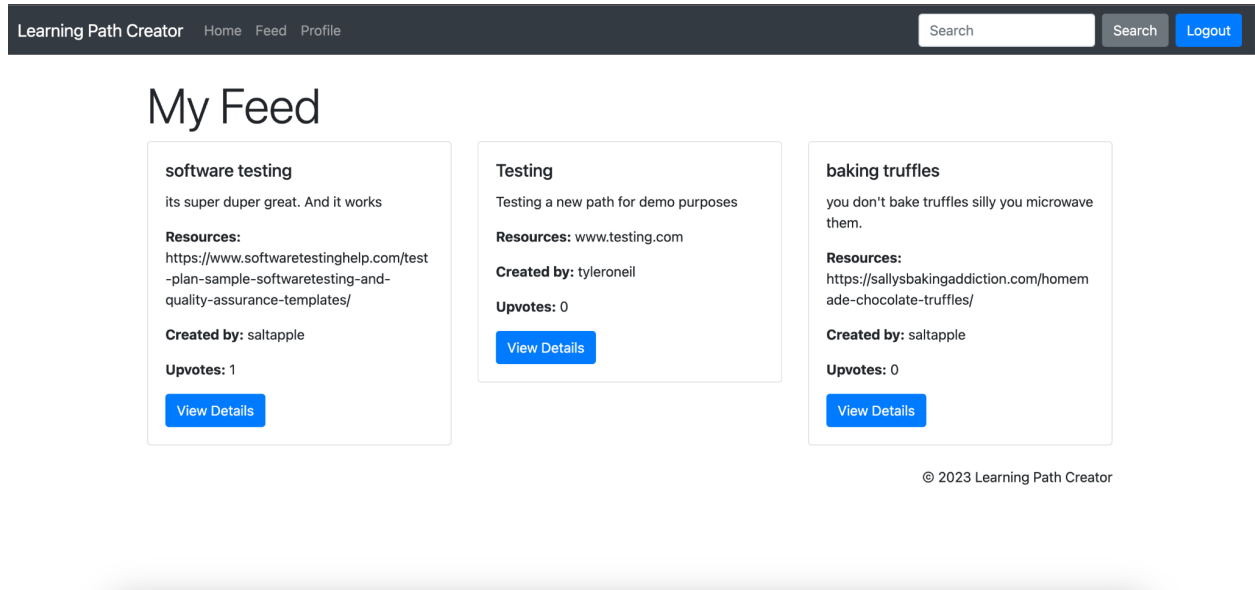
If we click on a users path we can see the details of it

Since it is not our path we can upvote or downvote depending on whether we like it or not.
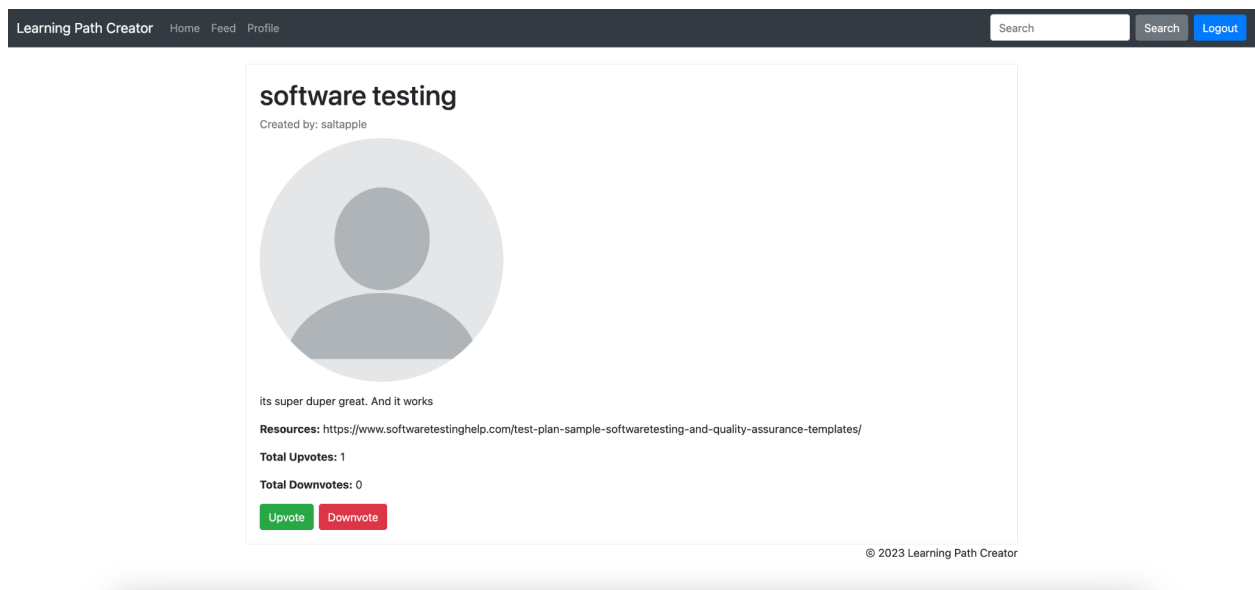
We can clone this and create a copy for our own account by copying the URL above
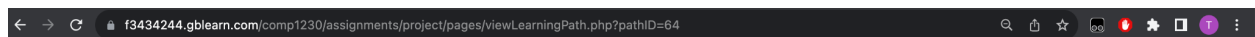
And putting it into the import learning path box on the home page

You will then see that it appears in your learning paths

You can also search from the top search box anything from your learning paths

For this example we searched software and it shows the results

Also…

- If you close the tab by accident you will not be logged out for 24 hours, you must press logout to log out or clear your cookies.
- If you delete an imported/cloned version of a learning path from your homepage it will only delete your instance of the path, but if you delete a path you created, it will then delete all the other learning paths that import it.

Also passwords will be stored encrypted