

CPSC 4620

Metube System

Group Seven

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Introduction

This document gives an overview of the Metube System designed by Group 7 of CPSC4620-001 of spring 2017. It contains information regarding the design and function of the pages of this Metube system, as well as the design regarding the database behind the system.

System Design

This version of MeTube consists of two primary components, the database and the website. The database was designed using MySQL through Clemson's buffet website. This allowed for an easily accessible database that all members of the group could use while on campus or logged into campus VPN. The website that was used to host the front end of MeTube was written in HTML/PHP and ran on Clemson's webapp server. This, once again, allowed for an easy to use system to build upon.

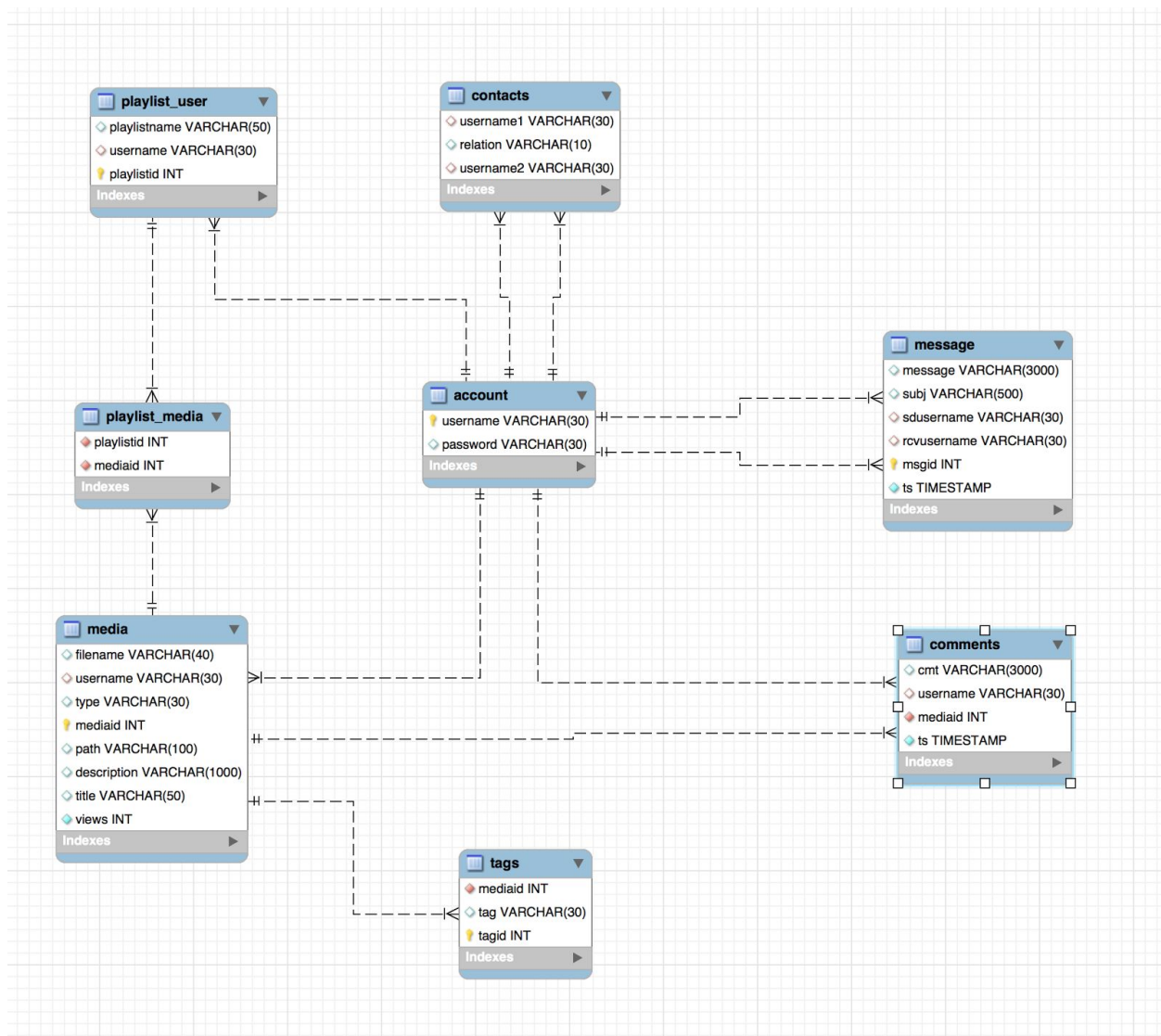
While developing MeTube the group relied heavily upon Github. There was no particular methodology used to approach the design, relying on basic goals each member was given, that member was then free to fulfill those goals however they saw fit. While this lead to occasional errors when merging with Github, in the end it allowed for a free flow of thought to be used in developing this software.

One can access the Index page for an implementation of this Metube system at the following url:

http://webapp.cs.clemson.edu/~zhaoxid/Metube_2017/index.php

EER Diagram

The following image is the EER diagram for the organization of the objects and databases in our system.



Function Design

1. Index
 - a. Contains small introduction of Metube System intentions
 - b. Provides links to Register, Login, and Browse via Taskbar
2. Register
 - a. User can register via left side tab of index page.
 - b. All fields are required in order to "submit".
 - c. If "Create Password" and "Repeat password" does not match, output error "Passwords don't match. Try again?".
 - d. If username already exists in database, output error "Username already exists. Please use a different username".
 - e. If all field satisfied the condition, pop up alert box "Register succeeded" and automatically redirects to browse page.
3. Login
 - a. User can login via left side tab of index page.
 - b. When pressing login button:
 - i. If username or password is missing, output error "One or more fields are missing".
 - ii. If entered password and the database password don't match, output error "Incorrect password".
 - iii. If all information are correct, redirect to browse page.
 - c. Reset button are used to reset all entered information.
 - d. If user is already logged in, user will be redirected to Browse
4. Profile
 - a. Under profile page you can access to update profile page.
 - b. Cannot be accessed when user is not logged in.
 - c. You can manage uploaded videos by deleting them.

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- d. Update profile
 - i. You can access to browse page by clicking the "Return"
 - ii. You can change old password.
 - 1. All three fields are required (Old password, New password, Confirm password).
 - 2. If "Old password" doesn't match the database password, output error "Incorrect old password."
 - 3. If "New password" and "Confirm password" doesn't match, output error "New passwords don't match. Try again".
 - 4. If all field satisfied the conditions, pop up alert box "Changed successfully".
 - 5. Message&Inbox
 - a. Cannot be accessed when user is not logged in.
 - b. Show user's inbox of received messages.
 - i. Show the "Sender", "Time sent", "Subject", "Message".
 - ii. Sorted by "Time Sent" descendent.
 - c. Users are able to create new message using the "Create new message" button.
 - i. This button create a new message box in the middle of the screen.
 - ii. Three fields are required to press the send button.
 - 1. Receiver username
 - a. Cannot be yourself or getting error message "Cannot send a message to yourself.
 - b. Cannot be user that doesn't exist in database or getting error message "Error sending message! Username does not exist!".
 - 2. Subject
 - a. Must be entered.
 - 3. Message
 - a. Must be entered.
 - 6. Playlist
 - a. Cannot be accessed when user is not logged in.
 - b. User are allowed to create playlists.
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- i. Playlist name is required.
 - ii. If playlist already exists in database, pop up alert box "Playlist already exist".
 - c. User can view created playlists.
 - i. "Username" "File title" "Download" are provided.
7. Contacts
- a. User are allowed to add contacts
 - i. Contact username is required in order to add
 - ii. If contact username does not exist in database, pop up alert "Contact does not exist" and goes back to contact page.
 - iii. Relation is optional
 - 1. Friend, Family, Favorite, Other are provided as option.
 - 2. If no relation is selected, "none" will be appeared in the "Relation" column.
 - b. User can view contacts.
 - i. Each row provides "Username" "Relation" options of "message" and "delete"
 - ii. Message button open a new window box in the middle of the screen.
 - 1. Receiver will be the username that user selected
 - 2. Subject and message are required in order to send the message.
 - iii. Delete button will delete the contact from the database.
8. Logout
- a. Logout button will set the session username to empty string and redirect to index page.
9. Upload File
- a. Can upload media files with following information:
 - i. Title (required)
 - ii. Description (not required)
 - iii. Tags (not required)
 - b. Will not allow user to submit file unless file is chosen and title is given
 - c. File is placed in webapp directory, path is stored in database
10. Browse
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- a. Media file entries are displayed with following information:
 - i. Author (User who submitted file
 - ii. File title
 - iii. Download link (leads to separate window where file can be downloaded
 - iv. View count
 - v. Playlist dropdown list and add-to-playlist button
 - 1. Only available if viewer is logged in
 - 2. Will add video to playlist selected from dropdown list
 - b. Selection buttons above the different information categories which allow the user to sort files in ascending or descending order

11. Search

- a. Search bar at the top of the Browse page allows for user to browse files for specific Usernames, Titles, and Tags
- b. Will not allow users to enter a blank query
- c. Will display list of files that fulfill search query
- d. Will display "No result found" if no files fulfill query

12. Media

- a. File selected from Browse, Playlist or Search pages will be displayed with title and description
- b. User can add comments for file selected

13. Navigation Sidebar

- a. Provides links to other existing pages depending on if user is logged in or not

Implementation Details

1. Add_media_to_playlist.php
 - a. Processes adding media files to playlists from browse.php and search.php
2. browse.php
 - a. List all the medias in the database. Provide username, title, download link, view count and playlist option.
 - b. Can sort by username, file title, view count.
3. config.php :
 - a. This file stores the configuration (includes host, database name, username, database password) to connect MySQL database.
4. Contacts.php
 - a. Allows user to view and create relationships with different relationships and send messages to said users
5. create_message.php
 - a. Allows user to send messages from message.php
6. Create_playlist.php
 - a. Processes a request to create a new playlist in playlist.php
7. Create_table.sql
 - a. Is used to first create and initialize the table to be used with the website
8. Delete_contact.php
 - a. Processes contact delete from contacts.php
9. Function.php
 - a. This file provide functions to support other pages.
10. index.php
 - a. This is the home page of Metube.
 - b. Provide access to browse, register and login pages.
11. login.php
 - a. This is the login page. It will check if the entered username and password match the username and password stored in the database.
12. Logout.php

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- a. Allows logged in users to return to the Index page, logs the user out in doing so
13. media.php
- a. Allows user to view uploaded media files
14. Media_delete_process.php
- a. Processes the deletion of media files under profile.php
15. Media_upload.php
- a. Allows user to upload a media file from the user's local directory
16. media_upload_process.php
- a. Processes the upload request from the user given in media_upload.php
17. Message.php
- a. Displays the message page, which allows users to view their inboxes and pull up send_message.php
18. mysqlClass.inc.php:
- a. This file stores the methods to connect and query MySQL database
19. Playlist.php
- a. Allows users to create, delete, and view playlists the user has create and the files in said playlists
20. Profile.php
- a. Displays media user has uploaded, allows user to delete said files
21. register.php
- a. This is the register page. It will check if the entered passwords match and create account in database.
22. search.php
- a. Displays all the media files that related to a given keyword, which can be entered into a search bar on either the browse or search pages
23. Send_message.php
- a. Allows users to send messages to other users from contacts.php
24. submit_comment.php
- a. Processes comment submission from media.php
25. update_profile.php
- a. Allows user to change user's password
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Test Cases and Results

Scenario	Test Step	Expected Result	Actual outcome
Index - User who is not logged in goes to Login Page.	User selects Login from the sidebar.	User should be redirected to Login page.	User is redirected to Login page.
Index - User who is logged in goes to Browse when selecting Login.	User selects Login from the sidebar.	User should be redirected to Browse page.	User receives a message informing he/she is already logged in. User is redirected to Browse page.
Index - User (logged in or not) goes to Browse page.	User selects Browse from the sidebar.	User should be redirected to Browse page.	User is redirected to Browse page.
Register - User registers with password and username that doesn't exist in database.	User enters an unique username and a password into the appropriate boxes. User submits page.	User should be redirected to Browse page with no error message. All available registered user features should be available.	User is redirected to Browse page with no error message. All available registered user features are available.
Register - User attempts to register with already existing username.	User enters the username of an already created user into username text box along with a password. User submits page.	User should be redirected back to Register page with an error message.	User is directed back to Register page. User is given an error message stating that said username already exists.
Register - User attempts to register with two different passwords.	User enters unique username and two different passwords into the username and password text boxes. User submits page.	User should be redirected back to Register page with error message.	User is directed back to Register page. User is given an error message stating that passwords given do not match.

Login - User enters a correct username and password combination.	User enters correct username and password combination into the Login page text boxes. User submits page.	User should be redirected to Browse page.	User is successfully redirected to Browse Page. All available feature are
Login - User enters incorrect username and password combination.	User enters incorrect username and password combination into the Login page text boxes. User submits page.	User should be redirected back to Login page with error message.	User is directed back to Login page. User is given error message stating that the password was incorrect.
Profile - User moves to update profile page.	User selects update profile link on the Profile page.	User should be directed to the update profile page.	User is directed to the update profile page.
Profile - User deletes previously uploaded file.	User selects the delete button next to the file listing in the uploaded files list on the Profile page.	The media file should be gone from the user's uploaded file list. The media file is no longer accessible.	The media file is gone from the user's uploaded file list. The media file is no longer accessible.
Message&Inbox - User sends a message to another user.	User selects "Create New Message" button on Message&Inbox page. User fills out the text boxes in the pop-up window with the receiver's username, a message title, and message contents. The user presses submit.	The receiving user should receive the message from the sending user.	The receiver receives the message from the sending user.

Playlist - User creates a playlist.	User enters a playlist name to the top textbox. User presses submit.	A new playlist should be created.	A new playlist is created. The delete playlist and select playlist textboxes and playlists are now visible.
Playlist - User deletes a playlist.	User selects a playlist to choose from the drop down bar next to the delete button. User presses the delete.	The chosen playlist should no longer appear in the user's list of playlists in the dropdowns.	The chosen playlist no longer appears in the user's list of playlists in the dropdowns.
Playlist - User selects a playlist.	User selects a playlist to choose from the drop down bar next to the selection button. User presses select_playlist.	The files of the chosen playlist should become visible.	The files of the chosen playlist become visible below the dropdown selections.
Contacts - User adds a contact.	User enters a valid username into the contact add contacts textbox. User selects options regarding contact relation. User selects add.	The new contact should be added to the list of contacts on the Contacts page.	The new contact is added to the list of contacts on the Contacts page.
Contacts - User deletes a contacts.	User selects delete option in the list of contacts on the Contacts page.	The contact should be removed from the contact list.	The contact is removed from the contact list.
Contacts - User sends a message to a contact.	User selects message button next in row of contact list of desired receiver. User enters message title and contacts into message pop-up. User selects send.	The message should be sent to the desired receiver.	The message is sent to the desired receiver. Pop-up box shows successful delivery message before closing.

Logout - User logs out.	User selects logout option on sidebar.	User should be logged out and sent to Index page.	User is logged out and sent to Index page.
Upload File - User uploads a media file.	User selects a file from his/her local files to upload. User fills out the text boxes for the title, description, and tags of the media file. User selects upload.	The media file should be uploaded. User should be able to view file entry in Browse page.	The media file is uploaded. User is able to view file entry in Browse page.
Browse - User selects a media element category once.	User clicks "Username", "File Title", or "View Count" once.	The media list should be organized according to the chosen category descending	The media list is organized according to the chosen category descending.
Browse - User sorts the media files.	User clicks "Username", "File Title", or "View Count" once.	The media list should be organized descending according to the chosen category.	The media list is organized descending according to the chosen category.
Browse - User adds file to a playlist.	User selects desired playlist from playlist dropdown. User selects add to playlist button	Media file should be added to selected playlist.	Media file is added to selected playlist.
Browse and Search - User downloads media file.	User selects media file download link in file entry on page.	User should be able to download media file from the new tab created when link is selected.	User is able to view and download media file from the new tab created when link is selected.

Search - User searches files for a keyword.	User enters a string into the search bar. User selects search.	User should be given a list of entries that match the given keyword in some way (titel, username, or tag).	User is given a list of entries that match the given keyword in some way.
Media - Enter a comment for a file.	User enters a string into the comment text area. User selects send.	A new comment should appear in the comment list under the media file.	The page refreshes, and the new comment appears under the comment list under the media file.

User Manual

1. User can create account via register tab on the left side of index.php page or go to register.php page.
 - a. User cannot create an account using existing username.
 - b. User have to enter username and two password fields.
 - c. Two passwords should match each other.
2. User can login via the login tab or go to login.php page with existing username and password.
 - a. Username and password field are required.
 - b. Incorrect password lead to login error.
3. Under menu on the left side, User can select browse tab to view the uploaded video and search with keyword(File title, upload username, tags).
 - a. User are able to sort by Username, File Title, View Count by pressing the corresponding column name.
 - b. Logged in user can add video to existing playlists. Non-logged in user cannot see the option of playlist.
 - c. By clicking the link of File Title, user can view the Media.
 - d. By clicking the link of Download option of each media, user can download the media file.
4. User can access to media page by clicking the title of the selected media.
 - a. Quicktime Player are the chosen media player.
 - b. Users can view the Title, Media, Description and Comments.
 - c. Logged in user can comment below the Description.
 - d. Comments are sorted by time descendent.
5. Logged in user can view the profile page via the left menu bar "Profile".
 - a. User can change their password via Update Profile link.
 - b. Uploaded Videos by logged in user are listed and user is able to delete the media.
6. Logged in user can upload file via the left menu bar "Upload file".
 - a. Three fields are required (File, Title and Description), tags are optional and separated by comma.

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7. Logged in user can view, create and delete playlist via the left menu bar "Playlist".
 - a. User can create playlist by entering the playlist name then click the create playlist button. Cannot create existing playlist name.
 - b. Delete and select playlist function will not appear when there is no playlist.
 - c. User can view the playlist by select the playlist via the select bar and then click the select playlist button.
 - i. Username, File title and Download option are provided.
 - ii. User can view the media by clicking the file title.
 - d. User can delete the playlist by select the playlist via the select bar and then click the select Delete button.
 8. Logged in user can access to Message and Inbox via left sidebar "Message and Inbox".
 - a. User can create new message by clicking the "Create New Message" grey button.
 - i. Receiver, Subject, Message are required fields.
 - ii. Cannot send message to user him/herself. Cannot send message to non-existing user.
 9. Logged in user can access to contacts page via left sidebar "Contacts".
 - a. User can add contacts by entering the contact username and clicking the add button
 - i. Contact name is required.
 - ii. Four relation "Friend, Family, Favorite, Other" are optional. If nothing is selected, "none" will be appear in the Relation column.
 - b. Contacts are listed
 - i. Username and relation are shown.
 - ii. User can click the message button to send message to the selected contact.
 - iii. User can click the delete button to delete the selected contact.
 10. Logged in user can use logout on the left sidebar to logout.
 - a. This will redirect to the index page.
 - b. Non-logged in user cannot see the logout option.
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Citations

Some codes are from metube template :

http://webapp.cs.clemson.edu/~xuebos/metube_template_2017.tgz

Style template taken and modified from:

https://www.w3schools.com/w3css/tryit.asp?filename=tryw3css_templates_webpage&stacked=h