CPSC 4620: MeTube Technical Report

Team U9

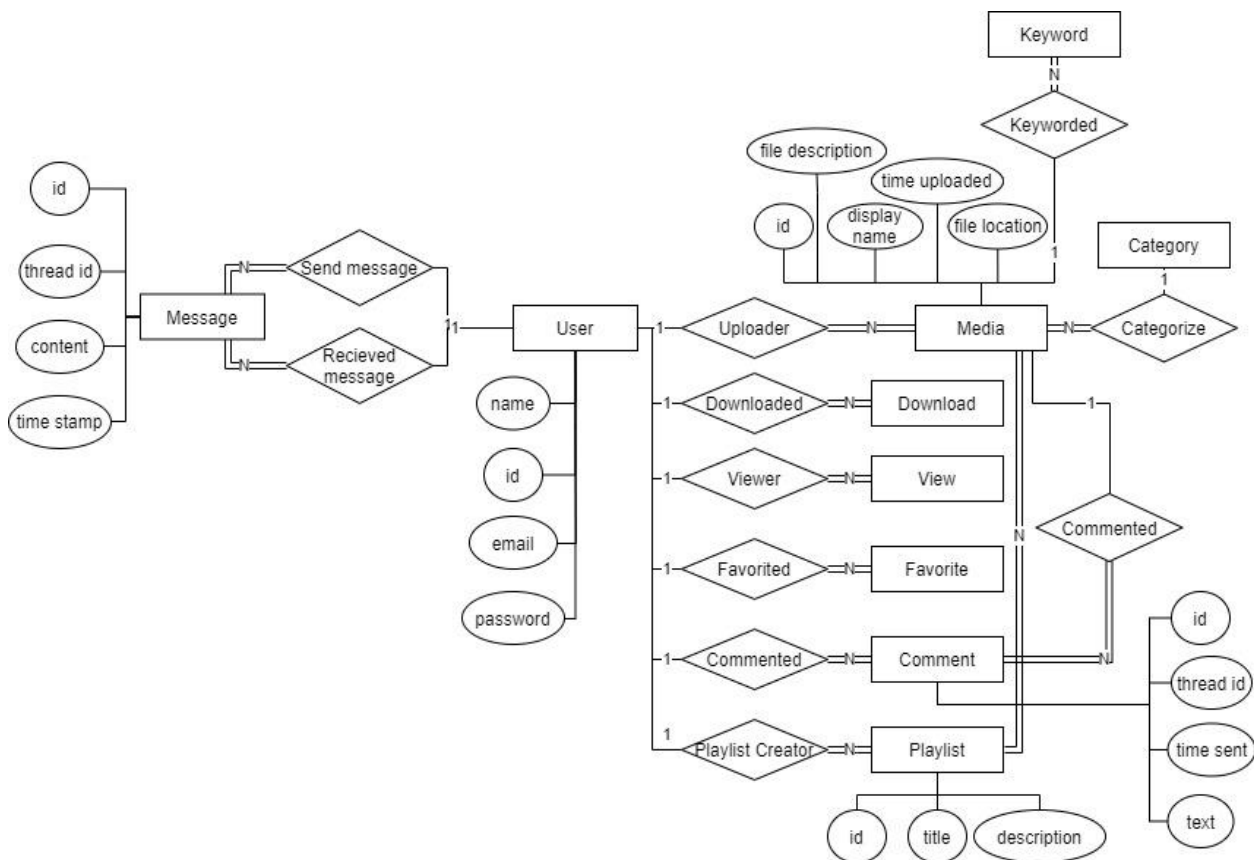**Team Members:** Elise Canouse , Brandy Barfield

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System Design

MeTube is a media sharing site based on YouTube. It allows registered users to upload files, pictures and videos. Anyone is able to view the media uploaded through the web interface. A search interface is implemented in the MeTube system. Users can search multimedia files based on their keywords. After viewing, users can also make comments on this file.
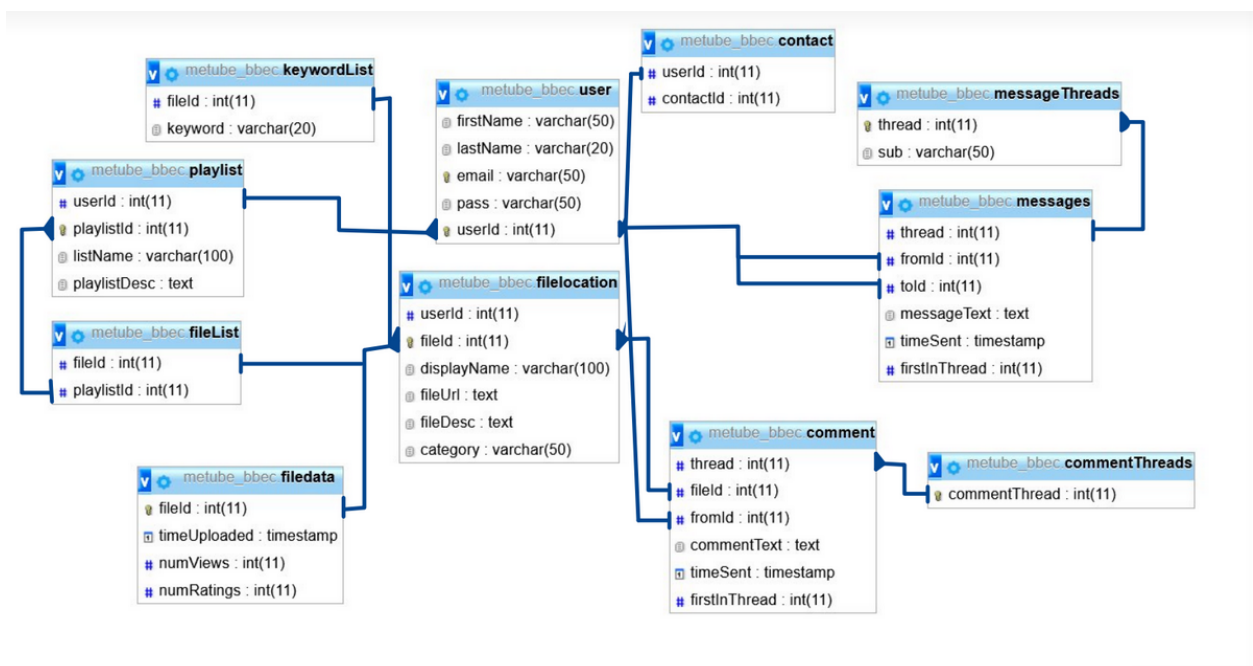
Users can create their own account and update their information. They can also organize media files into playlists. All multimedia files uploaded by one user form this user's channel that other users can subscribe to. A registered user can also maintain a contact list and send messages to users in the contact list. Users can update this list and remove contacts. There's also a messaging system where users can view and send messages to other users in their contact list.

This system is implemented in MySQL, PHP and HTML. It utilizes phpMyAdmin and Buffet to work with its databases. The system can also be deployed on a Linux system with Apache web server tested with IE, Firefox and Chrome.

ER Diagram

id
thread id
content
time stamp

Message

Send message
Recieved message

N
N

11

User

name
id
email
password

1

Uploader
Downloaded
Viewer
Favorited
Commented
Playlist Creator

1
1
1
1
1

N
N
N
N
N
N

Download
View
Favorite
Comment
Playlist

Media

Keyword
Keyworded
N

file description
time uploaded
id
display name
file location
1

Category
Categorize
1
N

Commented
N
N

id
thread id
time sent
text

id
title
description

Database Schema

metube_bbec **keywordList**
fileId : int(11)
◎ keyword : varchar(20)

metube_bbec **user**
◎ firstName : varchar(50)
◎ lastName : varchar(20)
◍ email : varchar(50)
◎ pass : varchar(50)
◍ userId : int(11)

metube_bbec **contact**
userId : int(11)
contactId : int(11)

metube_bbec **messageThreads**
◍ thread : int(11)
◍ sub : varchar(50)

metube_bbec **playlist**
userId : int(11)
◍ playlistId : int(11)
◍ listName : varchar(100)
◍ playlistDesc : text

metube_bbec **messages**
thread : int(11)
fromId : int(11)
toId : int(11)
◍ messageText : text
◻ timeSent : timestamp
firstInThread : int(11)

metube_bbec **filelocation**
userId : int(11)
◍ fileId : int(11)
◍ displayName : varchar(100)
◍ fileUrl : text
◍ fileDesc : text
◍ category : varchar(50)

metube_bbec **fileList**
fileId : int(11)
playlistId : int(11)

metube_bbec **comment**
thread : int(11)
fileId : int(11)
fromId : int(11)
◍ commentText : text
◻ timeSent : timestamp
firstInThread : int(11)

metube_bbec **commentThreads**
◍ commentThread : int(11)

metube_bbec **filedata**
◍ fileId : int(11)
◻ timeUploaded : timestamp
numViews : int(11)
numRatings : int(11)

Function Design

For this application, every function had its own file for organization purposes. We used the Model View Controller design pattern to organize all of the functions and tasks. This decision was made to separate concerns and permissions.

The Model category contains the details of each of the components, such as the media files and contacts. It has access to the database and all of the user's input and uploads.

The View category includes the files that create the interface the user interacts with, such as the register and playlist pages.

The Controller category worked to prompt the user for input. There are several files that check and verify user input. They also print error messages for any discrepancies in the data

Implementation Details

The files in the Model category are mapped to the database. The components have access to the data when there's been an update or a new upload. The View category for the application are organized according to the entities they represent and are mapped to the Controller. The Controller category responds to the user input, validates it and passes the input to the model.

Test Cases

Test Case 1:

Users should be able to sign up for an account on MeTube and be warned when passwords don't match, or email is invalid.
Steps:
1. Starting on the register page, type in a first in last name
2. Next type in the invalid email of userclemson.edu
3. Type in a password of password123 in the first and second password boxes
4. Click Reset, and information should be cleared
5. Re-fill in same information
6. Click Sign Up, and a warning should tell the user the email is invalid since it has no "@"
7. Re-enter email as user@clemsonedu
8. Re-enter both passwords as password123
9. Click Sign Up, and a warning should tell the user the email is invalid since it has no "."

10. Re-enter email as user@clemson.edu
11. Enter the first password as password123 and the second as password1234
12. Click the "Sign Up" button, and a warning should appear that the passwords don't match
13. Click the "Go back to Register" button
14. Repeat steps 11-13 but with the passwords password123 and PASSWORD123
15. This should also result in the same warning that the passwords don't match
16. Click the "Go back to Register" button and enter a valid email of user@clemson.edu, and matching passwords of password123
17. Click Sign Up. Should bring to welcome page
18. Click "go to my page" button and verify the name is correct on userpage

Status: PASS

Test Case 2:

Users should be able to sign in to their previously made account when using the correct login info, and new users should be blocked from creating an account with the same username.

Steps:

1. Beginning on the registration page, click the "I Already Have an Account" button.
2. Enter the email used to create the previous account and an incorrect password.
3. Click the sign in button and warning should tell the user that the password entered is incorrect.
4. Click "Go back to sign in" button and enter the correct email and a password only differing in case such as "Password123" rather than "password123".
5. Click the "Sign In" button and site should warn that the login info was incorrect since the password is wrong
6. Click "Go back to sign in" button and enter any information in the fields
7. Click Reset to verify that information is cleared
8. Enter an email address that is not associated with an account, and any password
9. Click "Sign In" button, and the site should warn that this account doesn't exist
10. Click "Go back to sign in" button
11. Fill in correct email and password and click "Sign In" button
12. Click "Sign Out" button
13. Enter any name and matching passwords into the fields in the register page
14. Enter a username that already exists like user@clemson.edu

15. Click "Sign Up" button, should bring you to a page warning that the account already exists.

Status: PASS

Test Case 3:

Users should be able to update basic profile information.

Steps:

1. Starting on the register page, click the "I Already Have an Account" button
2. On the login page enter information of an existing account
3. Once on the userpage, click the "Update my Profile" button
4. Enter a new first and last name, and the correct password
5. Click "Update Info" button and site should tell you that info was changed
6. Click "Go to my page" button and verify that the new name is correct on the userpage
7. Click the "Update my Profile" button again
8. Enter any information in the fields and then click reset to verify information is cleared.
9. Enter the incorrect password in the Current Password field like "PASSWORD123" and anything in the New Password field
10. Click "Update Info" button and site should warn that the current password is incorrect
11. Click "Go to my page" button
12. Click "Update my Profile" button again
13. Enter the correct current password for the account and any new password in the appropriate fields
14. Click "Update Info" button
15. Click "Go to my Page" button, then "Sign out" button
16. Click "I Already Have an Account" button
17. Test that the new password works with the correct email

Status: PASS

Test Case 4:

Users should be able to add and remove contacts

Steps:

1. Starting on the register page, click the "I Already Have an Account" button
2. Login with the previously made login credentials
3. Click the "Add Contact" button
4. Enter anything into contact email textbox
5. Click the "Reset" button and verify that text is cleared
6. Enter an email address not associated with an account

7. Click the "Add Contact" button and the site should warn that this email isn't associated with an account
8. Click the "Add Contact" button again and enter an email that is associated with an account
9. Click the "Add Contact" button again
10. Click the "Add Another Contact" button to verify it returns to the addContact page
11. Click the "Go to My Page" button
12. Under the contact list click the "View" button and verify that the information is correct as added
13. Click the "Go to My Page" button
14. Click the "Remove" button
15. Click the "Remove Another Contact" button
16. Enter an email and click "Remove Contact" button
17. Click the "Remove Another Contact" button
18. Enter anything in the textbox and click the "Reset" button to verify that fields are cleared
19. Click the "Go to My Page" button and verify that the removed contacts no longer show up in the contact list

Status: PASS

Test Case 5:

Users should be able to organize contacts.
Steps:
1. Starting on the register page login to an established account
2. Add at least three contacts
3. Click the "Go to My Page" button and view the contact list
4. Verify that the contacts appear organized in a list/table

Status: PASS

Test Case 6:

Users should be able to upload pictures and videos of png, mp4, pdf, and gif file types.
Steps:
1. Starting on the register page login to an established account
2. Click the "Upload a File" button
3. Enter the display name "userPicture"
4. Click "Browse" and upload a png file
5. Enter anything as a description
6. Select any category
7. Click the "Add File" button

8. Click the "Upload Another File Button"
9. Enter any information in the fields and click the "Reset" button
10. Repeat steps 3-8 with a mp4, pdf, and gif filetypes
11. Click the "Go to My Page" button and verify that uploads appear organized under the files table with appropriate thumbnails and typed information
12. Click the "Upload a File" button
13. Enter a Display Name that already exists like "userPicture"
14. Fill in anything else in the other fields
15. Click "Add File" button then "Go to My Page" button
16. Verify that both files with the same name appear.

Status: PASS

Test Case 7:
Users should not be able to upload content without logging in.
Steps:
1. Starting on the register page verify that there is no button to upload content
2. Click the "I Already Have an Account" button and, again, verify that there is no way to upload content

Status: PASS

Test Case 8:
Users should be able to download content from other users on MeTube
Steps:
1. Starting on the register page click the "I Already Have an Account" button
2. Login to a valid user account
3. Click the "Go to MeTube Home" button
4. Click the "View File" button for any file
5. Verify that the resulting screen displays the information related to the file you clicked on
6. Click the "Download" button and verify that download occurs
7. Click the "Go Back to MeTube Home" button to verify function
8. Click the "View" button a file of each of the 4 file types of png, pdf, mp4, and gif to verify that they are viewable from within the browser

Status: PASS

Test Case 9:
Users should be able to browse media files based on categories.
Steps:
1. Starting on the register page click the "I Already Have an Account" button
2. Login to an existing account

3. Click the "Go to MeTube Home" button
4. Under "Browse by Category" select any category
5. Click the "Browse" button
6. Verify that the displayed files match the selected category
7. Browse by a second category to verify function

Status: PASS

Test Case 10:

Users should be able to create playlists add and remove content from them, and delete or rename them.

Steps:

1. Starting on the register page click the "I Already Have an Account" button
2. Login to an existing account
3. Click the "View My Playlists" button
4. Click the "Add a Playlist" button
5. Enter anything in the playlist name and description fields
6. Click the "Reset" button to verify that fields clear
7. Enter a playlist name of userPlaylist and a playlist description of userDescription1
8. Click the "Add Playlist" button
9. Click the "View My New Playlist" button
10. Click the "Go to My Homepage" button
11. Click the "View My Playlists" button and verify that new playlist with proper information appears in list
12. Click the "Go to My Page" button
13. Click the "Go to MeTube Home" button
14. Click the "View File" button for any file
15. Click the "Add to Playlist" button
16. Select the "Add to Playlist button under the userPlaylist playlist
17. Click the "Remove From Playlist" button to verify function
18. Repeat steps 12-16 for another file
19. Click the "Go to My Page" button
20. Click the "View My Playlists" button
21. Click the "View Playlist" button under userPlaylist and verify that the files just added are correct
22. Going back, next click the "Rename Playlist" button for userPlaylist and enter "userPlaylist1" as the new title
23. Click the "Update Information" button and verify the change on the next page
24. Click the "Add a Playlist" button
25. Enter the same title of "userPlaylist1" and a duplicate description as well

26. Click the "Add Playlist" button, and then the "View My New Playlist" button
27. Click the "Go to My Page" button, then the "View My Playlists" button
28. Verify that the two playlists with the same names are disctinct

Status: PASS

Notes: "Add a Playlist" button doesn't appear on MeTube Home

Test Case 11:

Users should be able to put a file that was viewed into a favorites playlist.

Steps:

1. Starting on the register page click the "I Already Have an Account" button
2. Login to an existing account
3. Click the "View My Playlists" button
4. Verify that there is a "Favorites" playlist that functions like the playlists of Test Case 10.

Status: PASS

Test Case 12:

Users should be able to see a list of the top viewed files and most recently uploaded files in the home page of MeTube

Steps:

1. Starting on the register page click the "I Already Have an Account" button
2. Login to an existing account
3. Click the "Go to MeTube Home" button
4. Verify that the most viewed uploads are listed
5. Verify that the most recent uploads are listed

Status: PASS

Test Case 13:

Users should be able to send and receive messages from other users.

Steps:

1. Starting on the register page click the "I Already Have an Account" button
2. Login to an existing account
3. Click the "View My Inbox" button
4. Click the "Compose" button
5. Enter anything in the "To:", "Subject:", and "Message:" textboxes
6. Click the "Reset" button to verify fields are cleared
7. Enter anything in the "Subject:" and "Message:" boxes, leaving "To:" blank.
8. Click the "Send Message" button and the site should tell you the user doesn't exist or is blank.
9. Click the "Go back to Inbox" button

10. Click "Compose" button
11. Retest steps 7 and 8 using an email that is not associated an account and the site should give a warning to address this
12. Repeat steps 9 and 10
13. Enter a valid email, and anything in the subject and message
14. Click the "Send Message" button
15. Verify that the message appears in the Outbox
16. Click the "Go to My Page" button, then "Sign Out" button
17. Login to another account that the message was sent to and then click the "View my Inbox" button
18. Verify that the new message from the first account appears under the inbox with correct text
19. Click the "View Thread" button
20. Click the "Reply" button
21. Enter a message in the textbox and click the "Reset" button to verify fields are cleared
22. Click the "Reply" button
23. Type any message and click the "Reply" button
24. Click the "View" button to view the associated thread and verify that all emails in the thread appear listed under the first.

Status: PASS

Test Case 14:
Users should be able to comment on files in hierarchy
Steps:
1. Starting on the register page click the "I Already Have an Account" button
2. Login to an existing account
3. Click the "Go to MeTube Home" button
4. Click the "View File" button for any file
5. Enter text under "New Comment" and then click the "Comment" button
6. Click the "Reply" button and enter anything in the textbox before hitting the "Reset" button to verify fields clear
7. Re-enter anything in the textbox and hit the "Reply" button
8. Click the "Back to File" button and verify that only original comments and not replies are shown under the file.

Status: PASS

Test Case 15:
Users should be able to search files based on keywords provided by the user uploading the file.

Steps:

1. Starting on the register page click the "I Already Have an Account" button
2. Login to an existing account
3. Click the "View Keywords" button for any previously uploaded file
4. Click the "Add a Keyword" button
5. Enter "Animal" as the keyword and click the "Add a Keyword" button
6. Click the "Remove" button to verify its function
7. Repeat steps 4 and 5 to re-add two keywords and verify that they are displayed in a list
8. Click the "Go to My Page" button
9. Click the "Go to MeTube Home" button
10. Click the "Search by Keyword" button and enter one of the previously entered keywords before clicking "Search"
11. Verify that the video with that keyword pops up

Status: PASS

User Manual

To run the code:
Extract files from the zipped directly. Add the files from the www folder into the www folder on your machine. Go to the browser of your choice and go to the url 'localhost/register.php'. This is the starting point for the system.

Registered users are allowed to
● View media files on the Home Page
● Search for media using keywords
● View comments
● Update their profile

Creating a profile
On the registration page, the user can fill in the first name, last name, email address and password of the account to register

Signing in and out

From the Home Page, the user can find the Go to My Page button on the bottom of the page to access the user's information. Then, the user can scroll down to the bottom to the page to sign out of the account.

Update Profile
1. From the Home Page, the user can find the Go to My Page button on the bottom of the page to access the user's information
1. Underneath the files the user has uploaded, select the button that says Update My Profile which directs the user to another page
2. In the update profile page, the user can change his/her first name, last name, and current password

Add and Remove Contacts
1. From the Home Page, the user can find the Go to My Page button on the bottom of the page to access the user's information
2. Underneath the options to view playlists and inbox, the user can see the contact list
3. To add a contact, the user can select Add Contact which directs the user to a page to add the contact's email address
4. To remove a contact, the user can select remove beside the contact in the contact list

Upload multimedia files
1. From the Home Page, the user can find the Go to My Page button on the bottom of the page to access the user's information
2. Select Upload a File. This directs users to another page where they can input information such as the display name.
3. Users can browse and select files from their local machine
4. Then they can write a description of their file for views and categorize it accordingly before selecting Add File and sharing it

View media files
Select View File of the file the user wants to see from the Home Page
To see the user's own files, the user can go to My Page
To see files from other contacts, users can view their uploads from their contact list.

Commenting on files
To comment on another user's file, select View File from the Home Page, which directs the user to the details of the file. Under the file, users can leave comments and view other comments that have been made by other users.

Creating/Viewing playlists

1. From the Home Page, the user can find the Go to My Page button on the bottom of the page to access the user's information
2. Select the button that says View My Playlists, which directs the user to all of the playlists the user has made
3. To create a new playlist, select Add a Playlist. This will prompt the user to enter the name and description of the playlist.
4. Options to view details on specific playlists, rename or to remove them are also depicted

Keywords-based Search

To search by keywords, select the Search by Keyword button on the top of the home page. On a separate page, users can search for specific files by submitting certain words.

Messaging Users

1. Users can view their inbox from My Page by selecting the View my Inbox button
2. To create a new message, select the Compose option that directs you to another page where you can fill in the email address of the user you want to send your message to, the subject and the content of the message.