

## Section 1: Metadata

*to be filled by the student*

### 1.1. Project Information to be filled by the student

Title: VibeTube	
Section: L4	Instructor: Dr.Umer Tariq

### 1.2. Student(s) Information

Name: Bushra Sadaf	ID: bs09267
Section: L4	Batch:2027
Name: Nabiha Hasnain	ID: nh09355
Section: L4	Batch:2027

**Submission guideline:** Save your project proposal as a pdf file and rename as Section<Number>-Group<Number>.pdf



## Section 2: The Project

*to be filled by the student*

### 1. Project Description: *Please provide a brief introduction of the project including its scope.*

Our project titled **VibeTube** is aimed at categorizing YouTube creators and videos into genres such as Study, Travel, Entertainment, Technology, and Fitness, etc. **Creators** can upload new videos, edit or delete existing ones, and track performance through views, likes, and comments. **Viewers** can search videos through genres such as Study, Travel, Entertainment, etc or by title and channel name and can browse trending videos (based on highest views/likes). Each video has a details page that displays that video's details along with options to like, comment, the video while also suggesting trending videos in a sidebar.

#### Scope:

The scope of this project will focus on providing a user-friendly interface and database design to support two main types of users with distinct privileges. The project focuses on database design, backend queries, and a user-friendly GUI, while excluding advanced features such as live streaming, AI based recommendations, or large-scale usage with more users such as admins, moderators, premium users, etc.



## 2. Functional Requirements

*This section describes each function/feature provided by your system.*

### User Types:

**User A:** Creator

**User B:** Viewer

### Function 1: User Registration & Login Bushra

- The system shall allow users to register as either a *Viewer* or a *Creator* by providing their Name, Email, and Password.
- The system shall allow users to log in using valid credentials, with role-based redirection to either the Viewer or Creator dashboard.

### Function 2: Video Management (Creators Only) Bushra

- The system shall allow creators to upload videos with details such as Title, Description, Genre, and Upload Date and edit or delete their uploaded videos when needed. This system also allows the creators to be able to view their uploaded videos with the corresponding number of likes, views, and comments.

### Function 3: Browsing & Search (Viewers Only) Nabiha

- The system shall allow viewers to browse and search videos by genre, title, or channel name.

### Function 4: Viewer Interactions Nabiha

- The system shall allow viewers to like and comment on videos and also subscribe to creators for easy access to their latest uploads.

### Function 5: Trending System Both

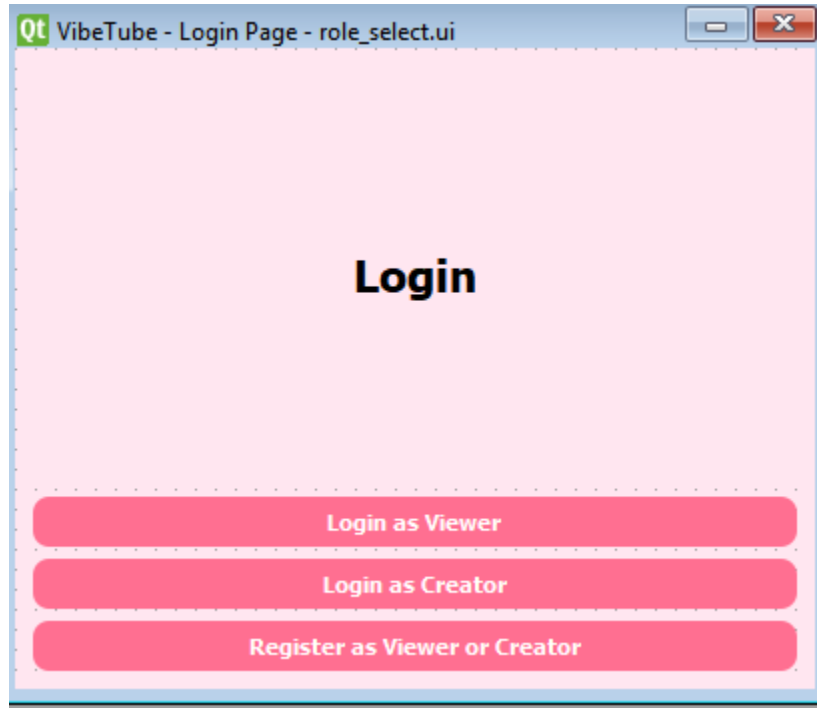
- The system shall allow viewers to see a trending section that highlights videos with the highest views and likes.



**3. UI Screens:** *Provide images of all application screens, showcasing clear input and corresponding outputs. Ensure each image includes a concise caption explaining user action and expected/observed output. You can create these screens using Qt Designer.*

**Functional Requirement 1: Register and Login** Bushra

The system shall allow Viewers and Creators to Register and Login.



UI Screen 1.A: Login Screen (First Screen)

Upon pressing Register as Viewer or Creator, they get to the following screen:



A screenshot of a Qt application window titled "VibeTube - Register Page - register\_page.ui". The window has a light pink background. In the center, the word "Register" is displayed in a large, bold, black font. Below the title, there are four input fields: "Username", "Email", "Password", and "Viewer". The "Viewer" field is a dropdown menu with a small arrow pointing down. At the bottom of the form, there is a large, rounded pink button with the text "Register" in white.

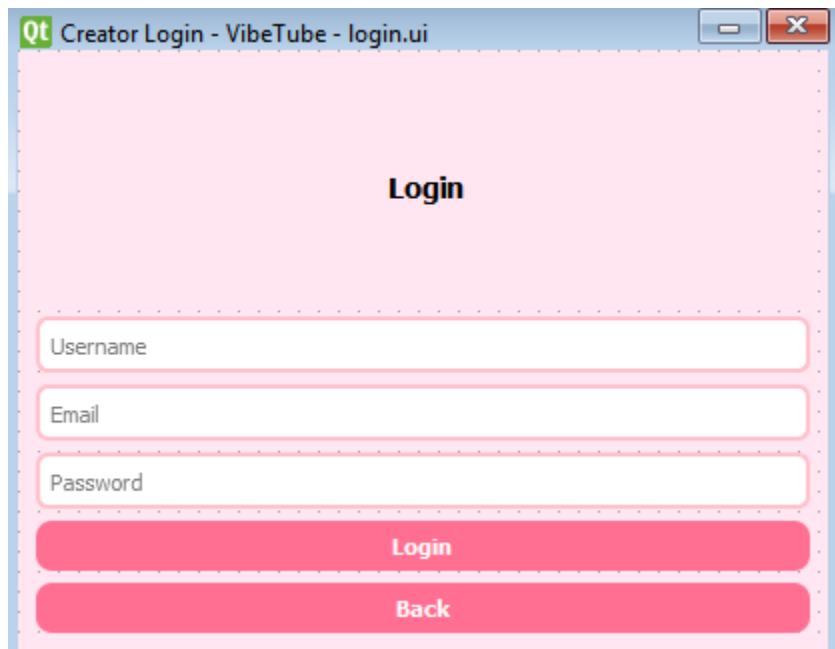
UI Screen 1.B: Register New Account Screen

After pressing register, they get back to Screen 1.A:

A screenshot of a Qt application window titled "VibeTube - Login Page - role\_select.ui". The window has a light pink background. In the center, the word "Login" is displayed in a large, bold, black font. Below the title, there are three rounded pink buttons stacked vertically. The first button is labeled "Login as Viewer", the second is labeled "Login as Creator", and the third is labeled "Register as Viewer or Creator".

UI Screen 1.A: Login Screen (First Screen)

Upon pressing login as viewer or login as creator, they get to the following screen:



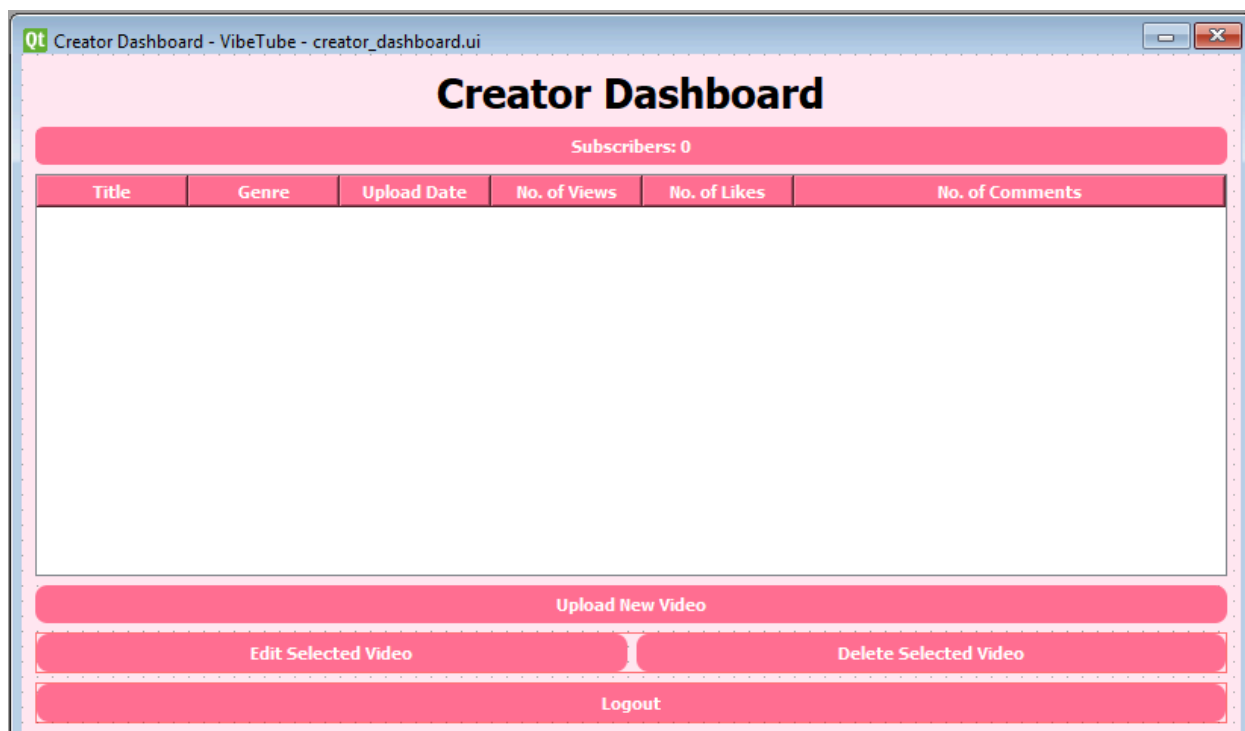
The image shows a Qt Designer window titled "Qt Creator Login - VibeTube - login.ui". The window contains a login form with a pink background. The form has a title "Login" in bold black text. Below the title are three input fields: "Username", "Email", and "Password". At the bottom of the form are two buttons: "Login" and "Back".

UI Screen 1.C: Viewer/Creator Login Screen



## Functional Requirement 2: Video Upload and Management by Creator Bushra

The system shall allow a Creator to upload, view analytics and delete/edit uploaded videos.



UI Screen 2.A: Main Creator dashboard



The screenshot shows a Qt application window titled "VibeTube - Upload Video - upload\_video.ui". The window has a pink background and a blue border. At the top, there is a title bar with the Qt logo and window control buttons. Below the title bar, the text "Upload New Video" is centered in a bold, black font. The main content area contains several input fields: a text box for "Enter video title", a larger text box for "Enter video description", a dropdown menu currently showing "Travel", and a date field showing "01/01/2000". At the bottom of the window, there are two large, pink buttons labeled "Submit" and "Back".

UI Screen 2.B: Uploading a video

A screenshot of a Qt application window titled "VibeTube - Edit Video - edit\_video.ui". The window has a light blue title bar with standard minimize and close buttons. The main content area has a pink background and is titled "Edit Video Details" in bold black text. It contains three input fields: a text box for "Edit video title", a larger text area for "Edit video description", and a dropdown menu currently showing "Travel". At the bottom, there are two prominent pink buttons labeled "Save Changes" and "Cancel".

**Qt VibeTube - Edit Video - edit\_video.ui**

**Edit Video Details**

Edit video title

Edit video description

Travel

**Save Changes**

**Cancel**

UI Screen 2.C: Editing a video



**Functional Requirement 3: Browsing on main page by Viewer**    Nabiha

The system shall allow a Viewer to browse/search for videos uploaded by different Creators channels.

Note: The following screen will also show trending videos (Functional Requirement 5).

**Viewer Home**

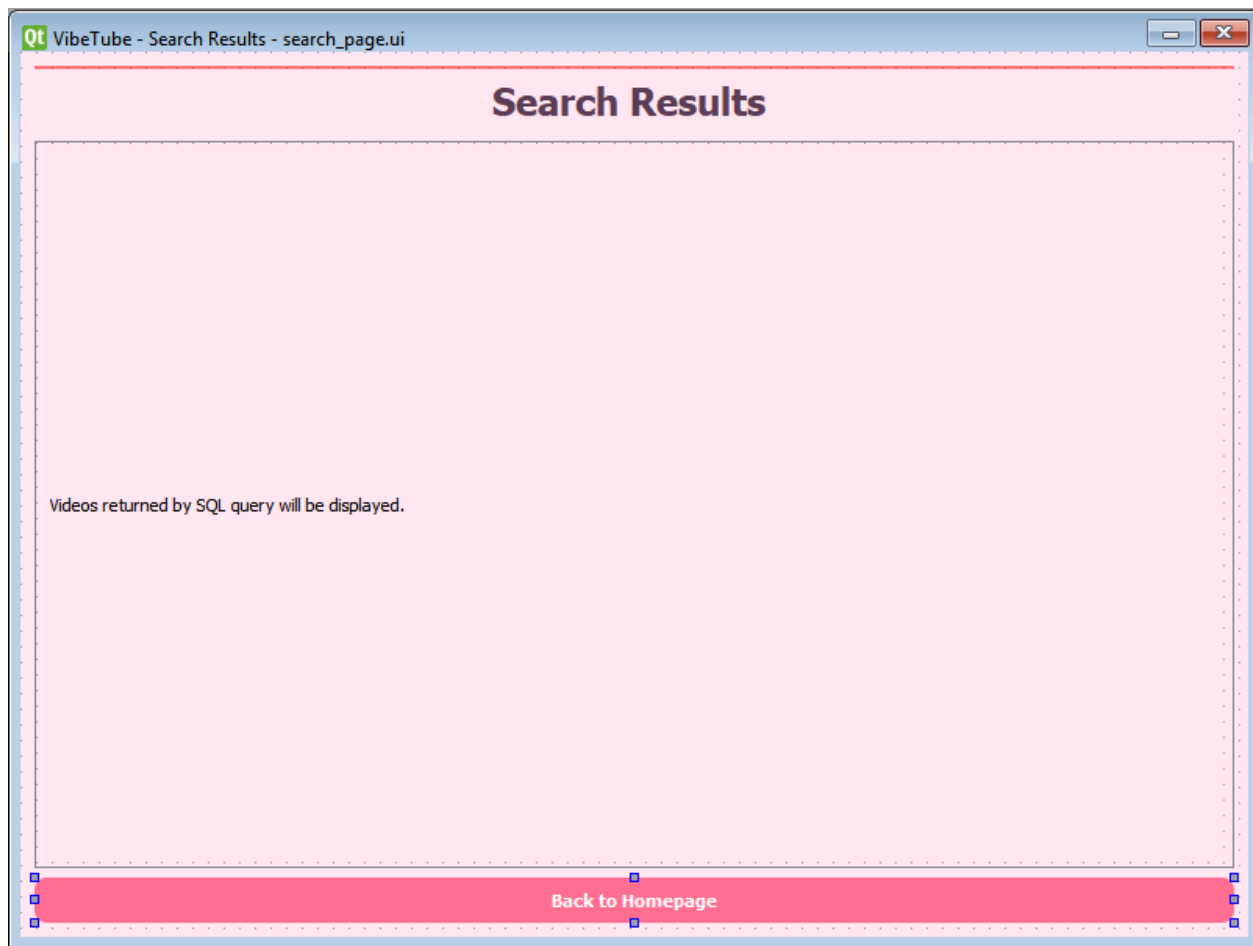
Search videos...

Search

Trending Videos

Logout

UI Screen 3.A: Homepage for Viewers



UI Screen 3.B: Search Results for Viewers



### Functional Requirement 4: Liking, commenting and subscribing by Viewer Nabiha

The system shall allow a Viewer to **view, like and comment on videos** uploaded by different Creators, and also **subscribe** to the channel in this manner.

**Video Title**  
Views: 1200 | Genre: Travel  
Uploaded by: Channel Name (Joined via FK) **Subscribe**

**Like**

**Comments**  
Write a comment... **Post**

**Trending Videos**

**Back to searchpage**

UI Screen 4.A: Viewer Screen when clicked on a video



### **Functional Requirement 5:Trending Videos Both**

The system shall allow a Viewer to see trending videos based on the highest number of likes and views.

The mockup shows a web interface for a viewer's home page. At the top, the title "Viewer Home" is centered in a large, bold, black font. Below the title is a search bar with the placeholder text "Search videos...". Underneath the search bar is a red button with the text "Search" in white. Below the search bar is a section titled "Trending Videos" in a smaller font. This section contains a large, empty rectangular box, likely intended for displaying video thumbnails. At the bottom of the page is a red button with the text "Logout" in white.

UI Screen 5.A: Viewer Homepage showing trending videos



**Video Title**

Views: 1200 | Genre: Travel

Uploaded by: Channel Name (Joined via FK) **Subscribe**

**Like**

**Comments**

Write a comment... **Post**

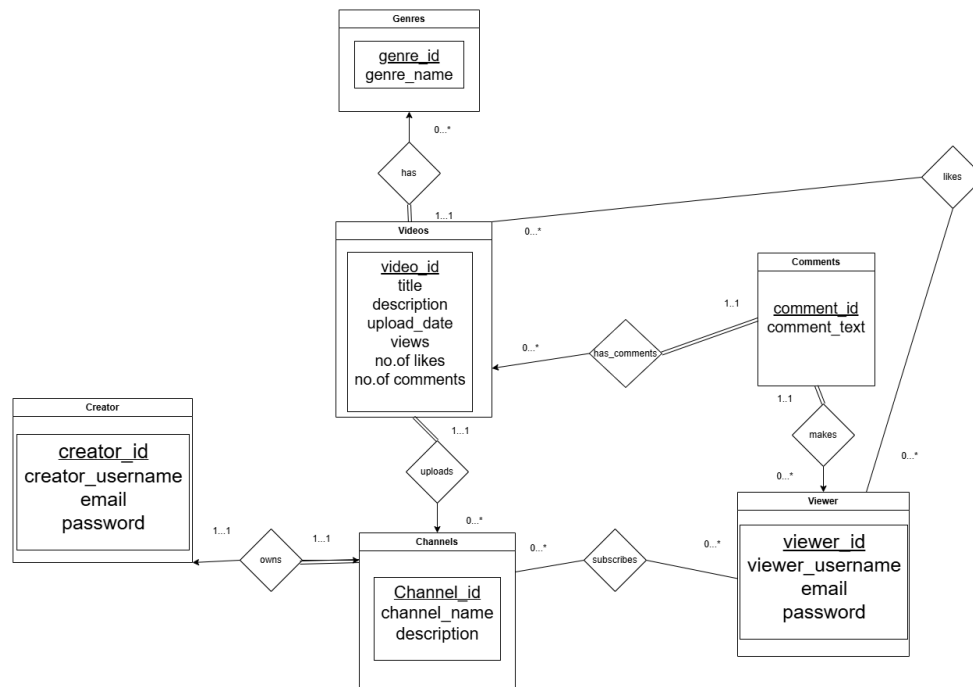
**Trending Videos**

**Back to searchpage**

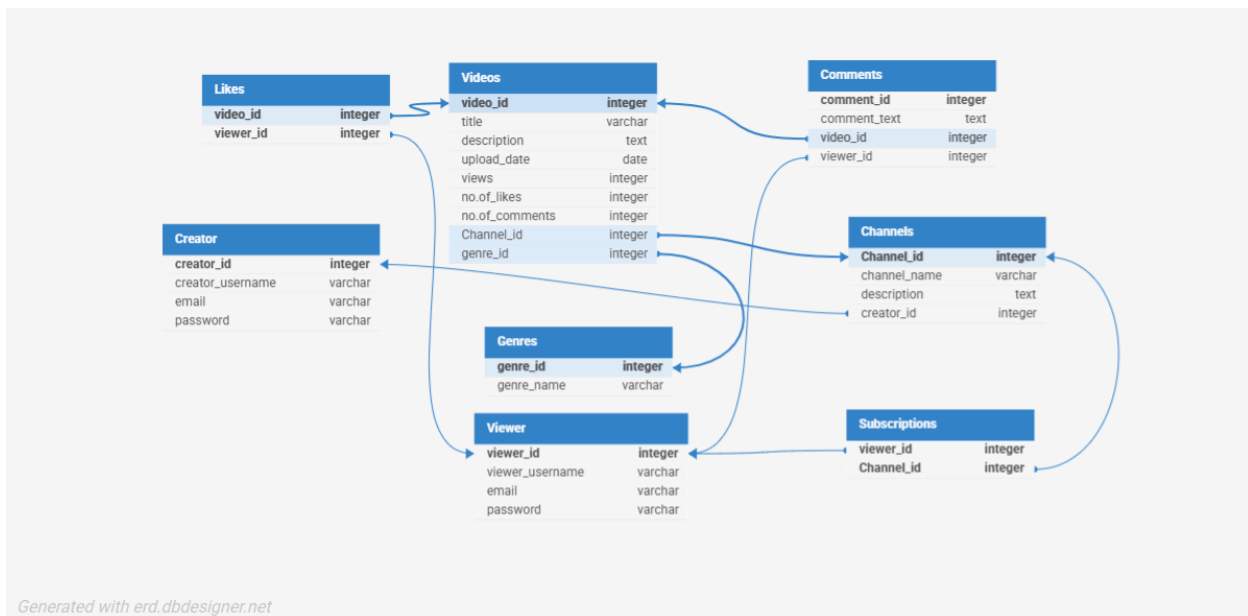
UI Screen 5.B: Video details page showing trending videos on the right



## 4. ERD



## 5. Relation Schema

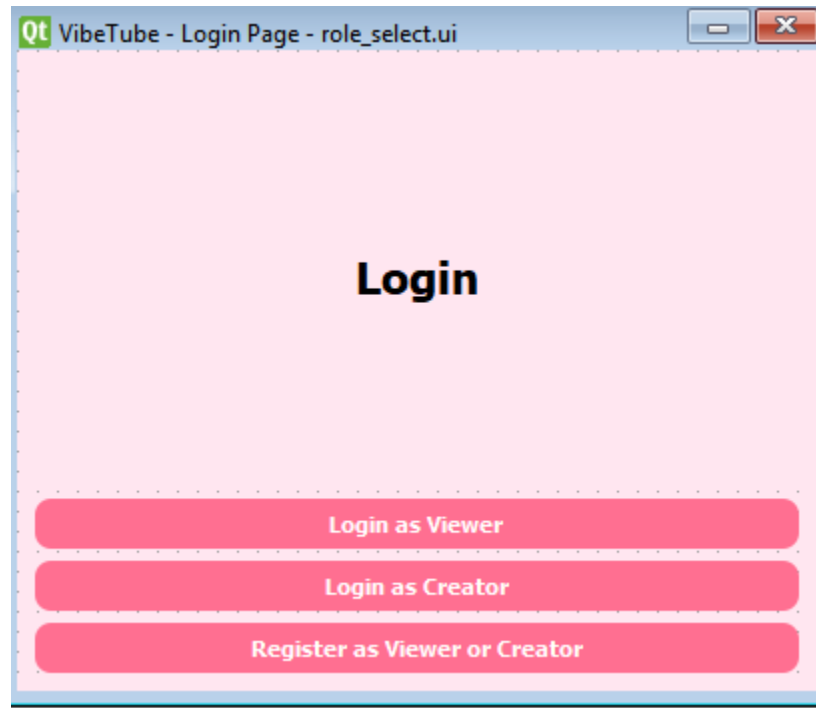


## 6. SQL



## Functional Requirement 1: Register and Login

The system shall allow Viewers and Creators to Register and Login.



UI Screen 1.A: Login Screen



Qt VibeTube - Register Page - register\_page.ui

**Register**

Username

Email

Password

Viewer

Register

UI Screen 1.B: Register New Account Screen

### **SQL Query 1.A.1: Register as Creator**

```
INSERT INTO Creators (name, email, password)
VALUES (?, ?,?);

-- Create a corresponding channel for the new Creator

INSERT INTO Channels (creator_id, channel_name)
VALUES (
  (SELECT creator_id FROM Creators WHERE email = ?),
  ?);
```

### **SQL Query 1.A.2: Register as Viewer**

```
INSERT INTO Viewers (name, email, password)
VALUES (?, ?,?);
```



Qt Creator Login - VibeTube - login.ui

**Login**

Username

Email

Password

Login

Back

UI Screen 1.C: Viewer/Creator Login Screen

### **SQL Query 1.C.1: Creator Login**

```
SELECT creator_id, name
FROM Creators
WHERE email = ? AND password = ?
```

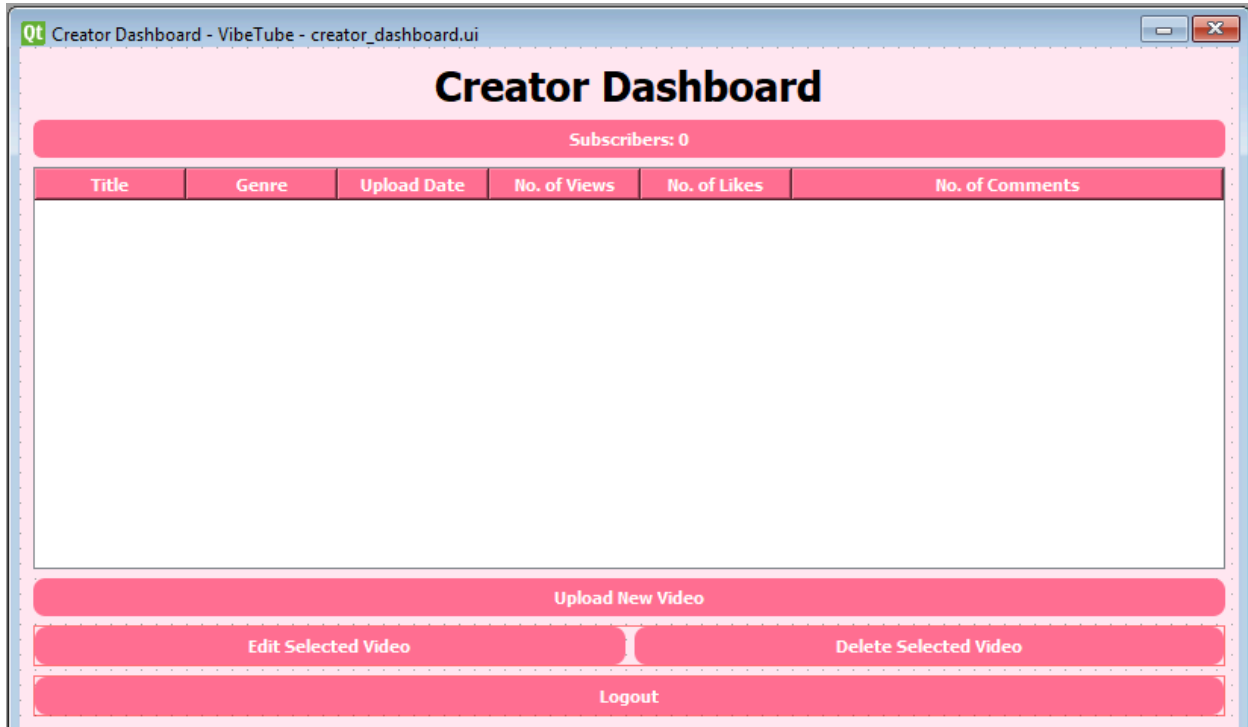
### **SQL Query 1.C.2: Viewer Login**

```
SELECT viewer_id, name
FROM Viewers
WHERE email = ? AND password = ?
```



## Functional Requirement 2: Video Upload and Management by Creator

The system shall allow a Creator to upload, view analytics and delete/edit uploaded videos.



UI Screen 2.A: Main Creator dashboardion

### SQL Query 2.A.1: View Creator's Uploaded Videos with analytics

```
SELECT v.video_id, v.title, g.genre_name, v.upload_date, v.views, v.likes_count, v.comments_count
FROM Videos v
JOIN Genres g ON v.genre_id = g.genre_id
JOIN Channels c ON v.channel_id = c.channel_id
WHERE c.creator_id = [the specific creator id]
```



### **SQL Query 2.A.3: Delete Video**

```
DELETE FROM Videos
```

```
WHERE video_id = [specific video ID]
```

```
AND channel_id = [specific channel ID]; -- ensures creator can only delete own videos
```

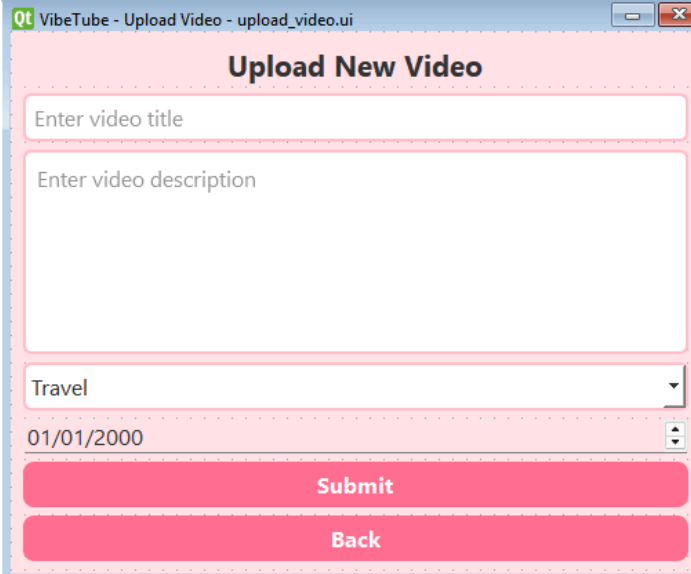
### **SQL Query 2.A.4: Subscriber Count**

```
SELECT COUNT(*)
```

```
FROM Subscriptions s
```

```
JOIN Channels c ON s.channel_id = c.channel_id
```

```
WHERE c.creator_id = ?;
```



UI Screen 2.B: Uploading a video

### **SQL Query 2.B.1: Upload new video**

```
INSERT INTO Videos (channel_id, genre_id, title, description, upload_date, views,  
likes_count, comments_count)
```

```
VALUES ( ?,?,?,?,?, 0, 0, 0);
```



Qt VibeTube - Edit Video - edit\_video.ui

### Edit Video Details

Edit video title

Edit video description

Travel

Save Changes

Cancel

UI Screen 2.C: Editing a video

### SQL Query 2.C.1: Edit Video

UPDATE Videos

SET title = [desired video title], description = [desired video description], genre\_id = [desired video genre], upload\_date = [specific video upload date]

WHERE video\_id = [specific video ID] AND channel\_id = [specific channel ID]; -this ensures creators can only edit their own videos

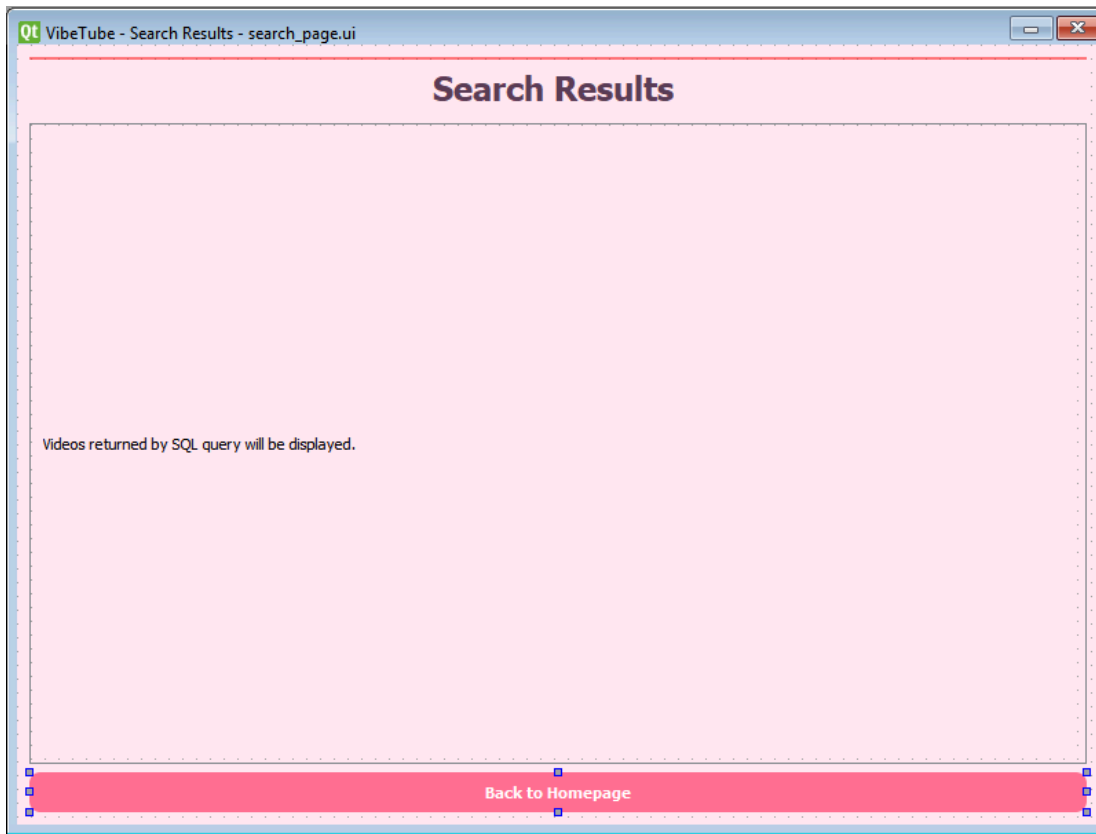


### Functional Requirement 3: Browsing on main page by Viewer

The system shall allow a Viewer to browse/search for videos uploaded by different Creators channels.

The mockup shows a web interface for a viewer's home page. It has a light pink background. At the top, the title "Viewer Home" is centered in a large, bold, black font. Below the title is a search bar with the placeholder text "Search videos...". Underneath the search bar is a solid pink button with the word "Search" in white. Below the button is a section titled "Trending Videos" in a small, black font. This section contains a large, empty rectangular box with a thin black border, intended for video thumbnails. At the bottom of the page is another solid pink button with the word "Logout" in white.

UI Screen 3.A: Homepage for Viewers



UI Screen 3.B: Search Results for Viewers

**SQL Query 3.A.1: Search by genre/ title/ channel name**

```
SELECT V.video_id, V.title, V.description, C.channel_name, G.genre_name, V.views
FROM Videos V
JOIN Channels C ON V.channel_id = C.channel_id
JOIN Genres G ON V.genre_id = G.genre_id
WHERE V.title LIKE '%[Search Term]%'      -- Search by Title
OR C.channel_name LIKE '%[Search Term]%'  -- Search by Channel Name
OR G.genre_name LIKE '%[Searched Genre Name]%' -- Search by Genre name
ORDER BY V.views DESC;
```



## **Functional Requirement 4: Liking, commenting and subscribing by Viewer**

The system shall allow a Viewer to view, like and comment on videos uploaded by different Creators, and also subscribe to the channel in this manner.

**Video Title**  
Views: 1200 | Genre: Travel  
Uploaded by: Channel Name (Joined via FK) **Subscribe**

**Like**

**Comments**  
Write a comment... **Post**

**Trending Videos**

**Back to searchpage**

UI Screen 4.A: Viewer Screen when clicked on a video

### **SQL Query 4.A.1: Views:Executed every time a viewer opens a video details page.**

```
UPDATE Videos  
  
SET views = views + 1  
  
WHERE video_id = [Specific Video ID];
```

### **SQL Query 4.A.2: Like a Video**

```
INSERT INTO Likes (viewer_id, video_id)  
  
VALUES ( ?,? );
```



UPDATE Videos -- also update videos table with increasing likes

SET likes\_count = likes\_count + 1

WHERE video\_id = [specific video ID];

### **SQL Query 4.A.3: Comment on Video**

INSERT INTO Comments (viewer\_id, video\_id, comment\_text)

VALUES ( ?,?,?);

UPDATE Videos

SET comments\_count = comments\_count + 1

WHERE video\_id = [specific video ID];

### **SQL Query 4.A.4: Subscribe**

INSERT INTO Subscriptions (viewer\_id, channel\_id)

VALUES ( ?,?);

### **Functional Requirement 5:Trending Videos**



The system shall allow a Viewer to see trending videos based on the highest number of likes and views.

**Viewer Home**

Search videos...

Search

Trending Videos

Logout

UI Screen 5.A: Viewer Homepage showing trending videos

### **SQL Query 5.A.1: Trending Videos**

```
SELECT TOP 10 v.video_id, v.title, g.genre_name, c.channel_name, v.views, v.likes_count
FROM Videos v
JOIN Genres g ON v.genre_id = g.genre_id
JOIN Channels c ON v.channel_id = c.channel_id
ORDER BY v.views DESC, v.likes_count DESC;
```



The image shows a wireframe of a video details page. On the left, there is a section for a specific video with a title, view count (1200), genre (Travel), uploader information, a subscribe button, a like button, and a comments section with a text input and a post button. On the right, there is a 'Trending Videos' section with a large empty box for video thumbnails. At the bottom right, there is a 'Back to searchpage' button.

UI Screen 5.B: Video details page showing trending videos on the right

**SQL Query 5.B.1: Trending Videos (Same query as 5.A.1 because the trending videos are just appearing in two places in UI for enhanced user experience but they display the same result)**

```
SELECT TOP 10 v.video_id, v.title, g.genre_name, c.channel_name, v.views, v.likes_count
FROM Videos v
JOIN Genres g ON v.genre_id = g.genre_id
JOIN Channels c ON v.channel_id = c.channel_id
ORDER BY v.views DESC, v.likes_count DESC;
```



## 7. Final Demo Screenshots

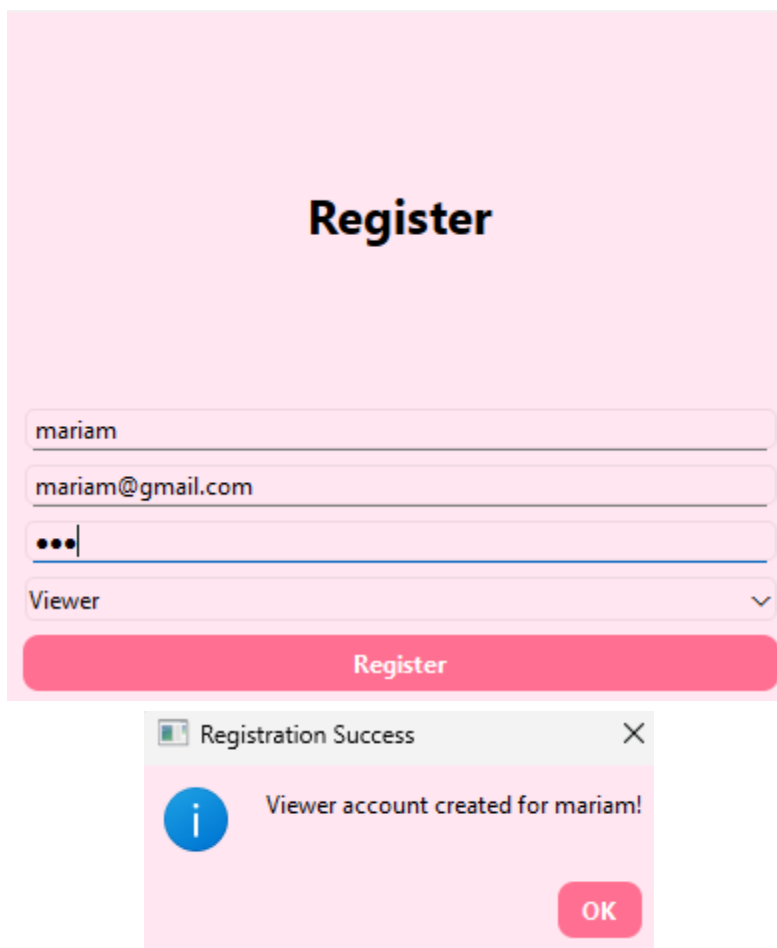
### Functional Requirement 1: Register and Login Bushra

The system shall allow Viewers and Creators to Register and Login.



Demo Screenshot 1 A: Login Screen (First Screen)

Upon pressing Register as Viewer or Creator, they get to the following screen:



The image shows a web interface for registering a new account. The main container has a light pink background. At the top, the word "Register" is centered in a bold, black font. Below it are four input fields: a text field containing "mariam", an email field containing "mariam@gmail.com", a password field with three dots and a cursor, and a dropdown menu currently showing "Viewer". A large pink button labeled "Register" is positioned below the inputs. Below the main form, a smaller window titled "Registration Success" is open. It features a blue information icon, the text "Viewer account created for mariam!", and a pink "OK" button.

Demo Screenshot 1.B: Register New Account Screen (Viewer)

A screenshot of a web registration form titled "Register" in bold black text. The form is set against a light pink background. It contains four input fields: a username field with "saim", an email field with "saim@gmail.com", a password field with three dots, and a dropdown menu labeled "Creator" with a downward arrow. Below these fields is a large pink button labeled "Register".

**Register**

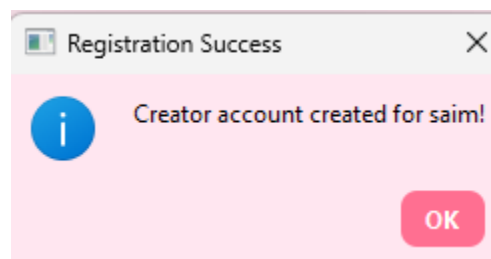
saim

saim@gmail.com

...

Creator

Register



Demo Screenshot 1.B: Register New Account Screen (Creator)



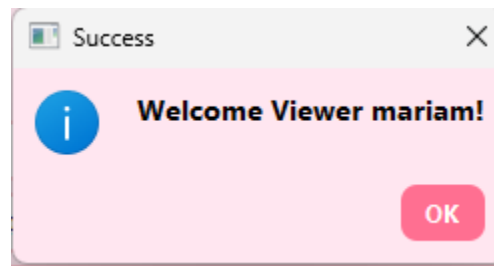
After pressing register, they get back to Screen 1.A:



Demo Screenshot 1.A: Login Screen (First Screen)

Upon pressing login as viewer or login as creator, they get to the following screen:





Demo Screenshot 1.C: Viewer Login Screen

**Login**

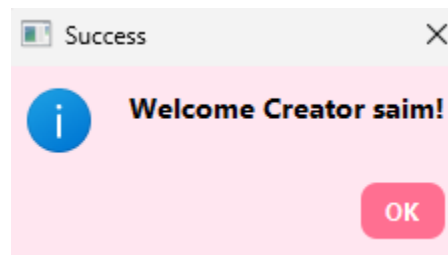
saim

saim@gmail.com

...

Login

Back



Demo Screenshot 1.D: Creator Login Screen

## Functional Requirement 2: Video Upload and Management by Creator Bushra

The system shall allow a Creator to upload, view analytics and delete/edit uploaded videos.

Creator Dashboard - saira

Subscribers: 5

	Title	Genre	Upload Date	No. of Views	No. of Likes	No. of Comments
1	day in my life ...	Lifestyle	2025-11-16	11	2	2
2	come with me t...	Travel	2025-11-16	13	4	1
3	vlog for back in...	Lifestyle	2025-11-30	1	1	0

Upload New Video

Edit Selected VideoDelete Selected Video

Logout

Demo Screenshot 2.A: Main Creator dashboard



### Upload New Video

fun day at uni with friends<3

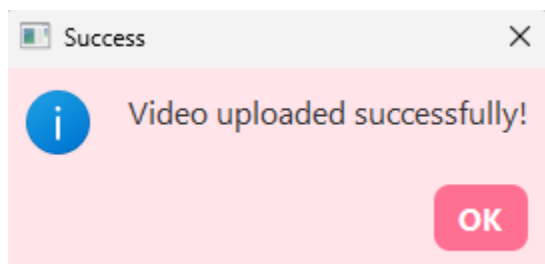
hi guys i hope u enjoy this video pls like and subscribe<3

Lifestyle

30/11/2025

Submit

Back



1	day in my life ...	Lifestyle	2025-11-16	11	2	2
2	come with me t...	Travel	2025-11-16	13	4	1
3	vlog for back in...	Lifestyle	2025-11-30	1	1	0
4	fun day at uni ...	Lifestyle	2025-11-30	0	0	0

Demo Screenshot 2.B: Uploading a video



### Edit Video Details

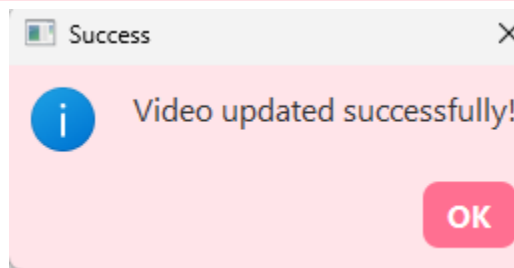
fun day at uni studying<3

hi guys i hope u enjoy this video pls like and subscribe<3

Study

Save Changes

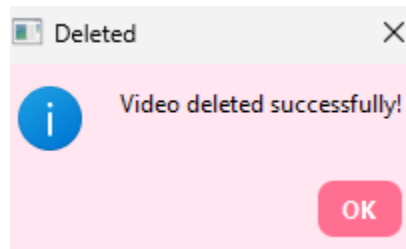
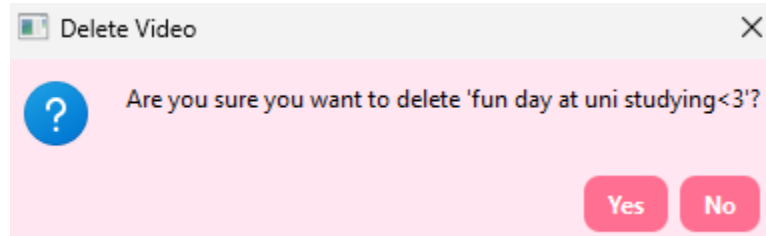
Cancel



1	day in my life ...	Lifestyle	2025-11-16	11	2	2
2	come with me t...	Travel	2025-11-16	13	4	1
3	vlog for back in...	Lifestyle	2025-11-30	1	1	0
4	fun day at uni ...	Study	2025-11-30	0	0	0

Demo Screenshot 2.C: Editing a video

## Deleting a Video:



1	day in my life ...	Lifestyle	2025-11-16	11	2	2
2	come with me t...	Travel	2025-11-16	13	4	1
3	vlog for back in...	Lifestyle	2025-11-30	1	1	0

Demo Screenshots 2D: Deleting a Video



### Functional Requirement 3: Browsing on main page by Viewer    Nabiha

The system shall allow a Viewer to browse/search for videos uploaded by different Creators channels.

Note: The following screen will also show trending videos (Functional Requirement 5).

### Viewer Home

Search

#### Trending Videos

come with me to NYC and explore touristy sites | Travel | saira's Channel | 13 views | 4 likes

day in my life Vlog 01 | Lifestyle | saira's Channel | 11 views | 2 likes

sister's day out | Lifestyle | sana's Channel | 5 views | 4 likes

vlog 1: mini day in my life | Lifestyle | nabiha's Channel | 3 views | 3 likes

vlog 2: fun day at uni | Travel | nabiha's Channel | 2 views | 2 likes

vlog 3: hang out with me and Niha | Lifestyle | nabiha's Channel | 2 views | 2 likes

vlog 4: spend my holidays w me | Lifestyle | nabiha's Channel | 2 views | 2 likes

vlog for back in karachi | Lifestyle | saira's Channel | 1 views | 1 likes

Chords for "Sweater Weather" | Music | Beat Drop Studio | 1 views | 1 likes

Chords for "From the Start" | Music | Beat Drop Studio | 1 views | 1 likes

Logout

Demo Screenshot 3.A: Homepage for Viewers



### Search Results for: 'saira'

**\*\*Title:\*\* come with me to NYC and explore touristy sites** Views: 13  
Channel: saira's Channel

**\*\*Title:\*\* day in my life Vlog 01** Views: 11  
Channel: saira's Channel

**\*\*Title:\*\* vlog for back in karachi** Views: 1  
Channel: saira's Channel

Back to Homepage

Demo Screenshot 3.B: Search Results for Viewers (channel name)



## Search Results for: 'lifestyle'

**\*\*Title:\*\* day in my life Vlog 01**

Channel: saira's Channel

Views: 11

**\*\*Title:\*\* sister's day out**

Channel: sana's Channel

Views: 5

**\*\*Title:\*\* vlog 1: mini day in my life**

Channel: nabiha's Channel

Views: 3

**\*\*Title:\*\* vlog 3: hang out with me and Niha**

Channel: nabiha's Channel

Views: 2

**\*\*Title:\*\* vlog 4: spend my holidays w me**

Channel: nabiha's Channel

Views: 2

**\*\*Title:\*\* vlog for back in karachi**

Channel: saira's Channel

Views: 1

Back to Homepage

Demo Screenshot 3.C: Search Results for Viewers (genre)



### Search Results for: 'vlog'

<b>**Title:** vlog 1: mini day in my life</b> Channel: nabiha's Channel	Views: 3
<b>**Title:** vlog 2: fun day at uni</b> Channel: nabiha's Channel	Views: 2
<b>**Title:** vlog 3: hang out with me and Niha</b> Channel: nabiha's Channel	Views: 2
<b>**Title:** vlog 4: spend my holidays w me</b> Channel: nabiha's Channel	Views: 2
<b>**Title:** vlog for back in karachi</b> Channel: saira's Channel	Views: 1
<b>**Title:** gilgit travel vlog</b> Channel: Global Journeys	Views: 0
<b>**Title:** sweden northern lights vlog</b> Channel: Global Journeys	Views: 0

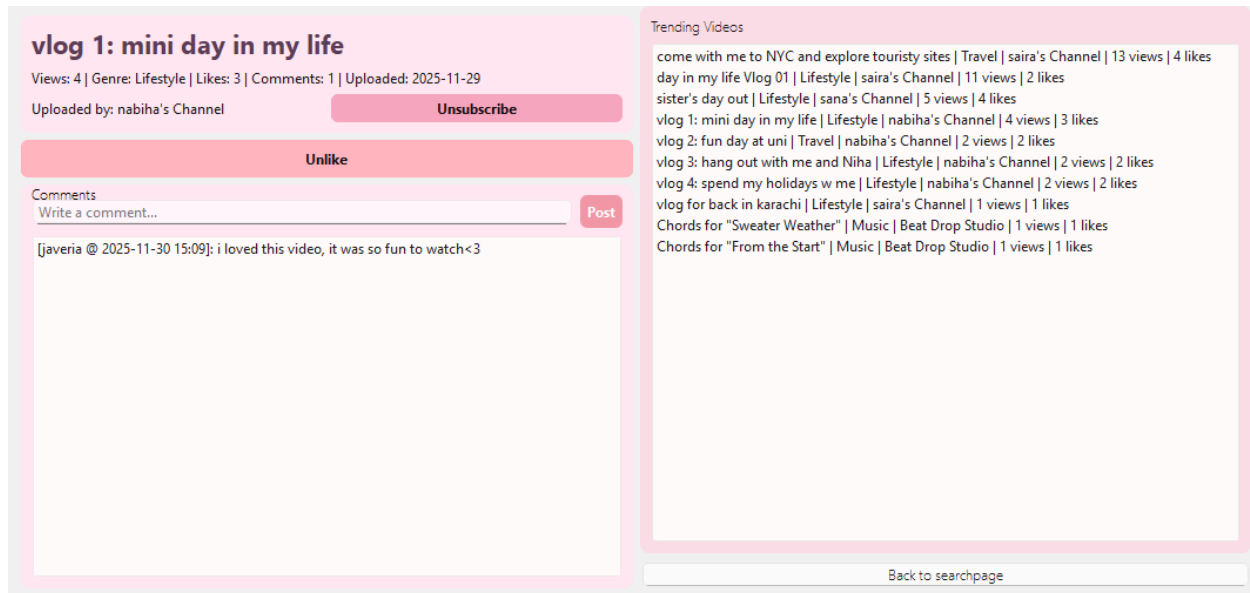
[Back to Homepage](#)

Demo Screenshot 3.D: Search Results for Viewers (video title)

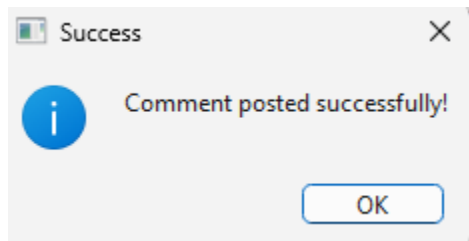


## Functional Requirement 4: Liking, commenting and subscribing by Viewer Nabiha

The system shall allow a Viewer to **view, like and comment on videos** uploaded by different Creators, and also **subscribe** to the channel in this manner.



Demo Screenshot 4.A: Viewer Screen when clicked on a video



[bushra @ 2025-11-30 16:58]: great video<3  
[javeria @ 2025-11-30 15:09]: i loved this video, it was so fun to watch<3

Demo Screenshot 4.B: Viewer Screen when commenting on a video



## Functional Requirement 5: Trending Videos Both

The system shall allow a Viewer to see trending videos based on the highest number of likes and views.

### Viewer Home

Search

#### Trending Videos

come with me to NYC and explore touristy sites | Travel | saira's Channel | 13 views | 4 likes

day in my life Vlog 01 | Lifestyle | saira's Channel | 11 views | 2 likes

sister's day out | Lifestyle | sana's Channel | 5 views | 4 likes

vlog 1: mini day in my life | Lifestyle | nabiha's Channel | 3 views | 3 likes

vlog 2: fun day at uni | Travel | nabiha's Channel | 2 views | 2 likes

vlog 3: hang out with me and Niha | Lifestyle | nabiha's Channel | 2 views | 2 likes

vlog 4: spend my holidays w me | Lifestyle | nabiha's Channel | 2 views | 2 likes

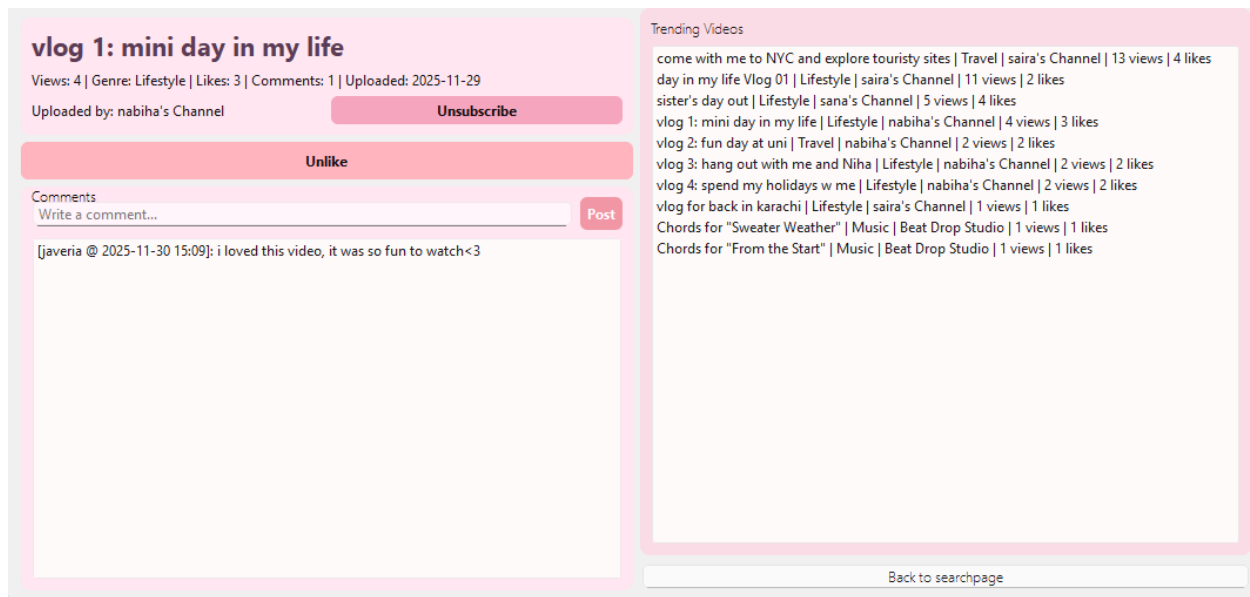
vlog for back in karachi | Lifestyle | saira's Channel | 1 views | 1 likes

Chords for "Sweater Weather" | Music | Beat Drop Studio | 1 views | 1 likes

Chords for "From the Start" | Music | Beat Drop Studio | 1 views | 1 likes

Logout

Demo Screenshot 5.A: Viewer Homepage showing trending videos



Demo Screenshot 5.B: Video details page showing trending videos on the right