

COMSATS University, Islamabad Pakistan

News Wave: A Participatory Journalism App

By

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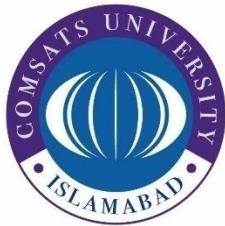
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Bachelor of Science in Computer Science (2020-2024)

The candidate confirms that the work submitted is their own and appropriate credit has been given where reference has been made to the work of others.



COMSATS University, Islamabad Pakistan

News wave: A Participatory Journalism App

**A project presented to
COMSATS University, Islamabad**

**In partial fulfillment
of the requirement for the degree of**

Bachelors of Science in Computer Science (2020-2024)

By

Mohsin Ali CIIT/SP20-BCS-053/ISB

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DECLARATION

We hereby declare that this software, neither whole nor as a part has been copied out from any source. It is further declared that we have developed this software and accompanied report entirely on the basis of our personal efforts. If any part of this project is proved to be copied out from any source or found to be reproduction of some other, we will stand by the consequences. No Portion of the work presented has been submitted of any application for any other degree or qualification of this or any other university or institute of learning.

Mohsin Ali

Muhammad Abdur Rehman

CERTIFICATE OF APPROVAL

It is to certify that the final year project of BS (CS) News Wave was developed by **Mohsin Ali (CIIT/SP20-BCS-053)** and **Muhammad Abdur Rehman (CIIT/SP20-BCS-054)** under the supervision of Mr. Qasim Malik; it is fully adequate, in scope and quality for the degree of Bachelors of Science in Computer Sciences.

Supervisor

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(Department of Computer Science)

Executive Summary

With the passage of the time, traditional way of doing things change and one such thing is the manner in which events are being covered in the world through the use of hired journalists by the big media tycoons. Now it is the age of "Citizen Journalism" in which each individual is a journalist who just happens to be at the right place at the right time. Now comes the question of distribution of content to appropriate news channels and getting paid for it that's where our app News Wave comes into play.

The News Wave app is a platform designed to enable users to report and share news and information with others. News Wave will encourage users to report events as they unfold, fostering the rapid dissemination of important information. This real-time reporting feature will help keep the public informed about breaking news and emergencies. To ensure the credibility of user-generated content, the app will implement machine learning algorithms for content verification. This might include mechanisms for confirming the identity of users and assessing the accuracy of their submissions through fact-checking or partnerships with established news organizations.

News Wave will allow users to monetize their content by offering it to news channels or other users. This feature will empower citizen journalists and content creators to earn from their reporting efforts, encouraging more active participation. News Wave can collaborate with mainstream media outlets to facilitate the seamless integration of user-generated content into their reporting. This partnership can lead to more comprehensive and inclusive news coverage.

News Wave will provide resources and guidelines for ethical reporting. It will offer tips on fact-checking, storytelling, and responsible content creation, further enhancing the quality of citizen journalism. The app will implement stringent measures to protect the identities and personal information of users, as well as safeguard against the spread of false or harmful content.

The News Wave app aspires to revolutionize the way news is gathered, reported, and disseminated in our modern world. It aims to empower individuals, promote transparency, and strengthen the foundation of an informed and engaged global community. Through the collective efforts of citizen journalists, it will contribute to a more diverse, democratic, and accountable media landscape.

Acknowledgement

All praise is to Almighty Allah who bestowed upon us a minute portion of His boundless knowledge by virtue of which we were able to accomplish this challenging task.

We are greatly indebted to our project supervisor Mr Qasim Malik. Without his personal supervision, advice and valuable guidance, completion of this project would have been doubtful. We are grateful to them for their encouragement and continual help during this work.

And we are also thankful to our parents and family who have been a constant source of encouragement for us and brought us with the values of honesty & hard work.

Mohsin Ali

Muhammad Abdur Rehman

Abbreviations

SRS	Software Require Specification
PC	Personal Computer
SDS	Software Design Document
FR	Functional Requirements
NFR	Non functional Requirements
FT	Functional Testing
UT	Unit Testing
IT	Integration Testing
DFD	Data Flow Diagram
AD	Activity Diagram

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1 Introduction

News Wave app is a platform that will provide citizen journalists with the tools and resources they need to produce high-quality and ethical journalism, share their content with a wider audience, including news channels, media outlets, and other users of the app. This could increase the visibility of citizen journalists and help to amplify their voices and perspectives. Users will be able to sell their content and news channel will be able to hire citizen journalists to cover events and get paid for their service encouraging them to continue reporting and building a relationship between the news channels. Our app will ensure that they meet the news channel's standards for accuracy, reliability, and professionalism. Our app will ensure that uploaded content does not violate community guidelines and isn't inappropriate and doesn't contain misinformation.

1.1 Vision Statement

For News channel companies and citizen journalists **who** aren't able to cover the events or incidents due to limited access and want to cover the stories. **The** News Wave is Mobile based application providing a platform that enables citizen journalists to collaborate and co-create compelling and authentic news content. News channels or other users can buy these stories and also hire other citizen journalists to cover certain events and pay them for their service. **Unlike** other related system that provide limited features **our product** will ensure to uphold the highest standard of journalists ethics and accuracy and will also provide better payment methods and multimedia enhancement for delivering high quality content.

1.2 Related System Analysis/Literature Review

Below mentioned are the similar applications that were selected for system analysis.

Table 1.2.1: Related System Analysis with proposed project solution

Application Name	Weakness	Proposed Project Solution
MyScoop [1]	<ul style="list-style-type: none">Only supports live video reporting, doesn't allow uploading content from gallery and internal files.Credibility of sources of news article and the accuracy of stories may vary widely.	<ul style="list-style-type: none">Our proposed system will allow to upload content phone's internal storage and to edit them.We will run checks on the uploaded content to avoid misinformation and inappropriate content

Bambuser [2]	<ul style="list-style-type: none"> Allows only to record video for maximum 3 minutes and charges for extended features. 	<ul style="list-style-type: none"> Our proposed system has no such limit on recording and all the features are available for free.
Newsflare [3]	<ul style="list-style-type: none"> The app takes commission on all content sales, so users may not receive a significant portion of revenue generated by their content. 	<ul style="list-style-type: none"> Our app will not take any commissions citizen journalists will get full payment without any deduction.

1.3 Project Deliverables

News Wave is a mobile application with web-based platform to facilitate the news channels, so the main deliverable of the project is the executable files along with all the documentation of the project i.e. SRS and SDS and Final report.

- 1: Project Scope Document
- 2: Software Requirement Specification (SRS)
- 3: Software Design Document (SDS)
- 4: Final Report.

1.4 System Limitations/Constraints

Following are some limitations of our app.

- LI-1: App may not cover all events or issues in a region, as they depend on users to report them.
- LI-2: App may have limited reach in areas with limited Internet Access.
- LI-3: Filtering out inappropriate content and misinformation will not be 100% accurate.

1.5 Tools and Technologies

Table 1.5.1: Tools and Technologies for News Wave

Tools And Technologies	Tools	Version	Rationale
	Visual Studio Code	2022	IDE
	MongoDB	6.0	DBMS
	Fire Base	9.12.1	DBMS
	Technology	Version	Rationale
	Express JS	4.18.2	Back-end Development
	Python	3.11.0	Programming Language
	Flask	2.2.2	Back-end Development
	React-Native	0.70	Mobile Development
	Material UI	5.10.12	CSS Framework
	JavaScript	ES6	Programming Language
	Node JS	18	Back-end Development
	ReactJS	17.02	Front-end JS Library

1.6 Relevance to Course Modules

There are a majority of courses that helped us a lot in making our Final Year Project possible. As if we consider MAD(Mobile Application and Development), Web Technologies and Topics in Computer Science 1. They helped us in developing our front-end. The Database course played a great role in learning the essentials of database systems which allow us to maintain the databases of our project using MongoDB, whereas SRE(Software Requirement Specification) helped us in our documentation process. Software Testing played a major role throughout our testing process. The HCI course gives us the understanding to design our front end and consistent user interface. The course helped us to understand the factors that determine how people use technology . To develop tools and techniques to enable building suitable systems. Report Writing Skills helped us prepare reports and presentations in a professional and presentable manner. Report writing techniques learn to develop plans, guide budget planning and improve decision-making, to track progress and growth.

2 Problem Definition

2.1 Problem Statement

Due to limited resources, news channels may not have the ability to deploy journalists to cover all events and stories and getting exclusive live coverage of the ongoing event might be difficult because immediate access for news channel employees to cover a story is impossible. This results in a lack of diverse perspectives and coverage, as news channels may rely on the same sources repeatedly. By hiring citizen journalists who have access to a wide range of events and stories, news channels can overcome these limitations and provide comprehensive coverage of local and national events. However, finding and vetting reliable citizen journalists can be a challenge, as well as managing their work and ensuring ethical and accurate reporting. Therefore, there is a need for a citizen journalism app that can connect news channels with a pool of verified and trained citizen journalists who can provide reliable coverage, while providing a platform for managing and distributing their content. By doing so, the app can help to increase access to diverse perspectives and events, while enabling news channels to provide comprehensive and high-quality coverage to their audiences.

2.2 Problem Solution

Our application will provide citizen journalists with the tools and resources they need to produce high-quality and ethical journalism, share their content with a wider audience, including news channels, media outlets, and other users of the app. This could increase the visibility of citizen journalists and help to amplify their voices and perspectives. Users will be able to sell their content and news channel will be able to hire citizen journalists to cover events and get paid for their service encouraging them to continue reporting and building a relationship between the news channels. Our app will ensure that they meet the news channel's standards for accuracy, reliability, and professionalism. Our app will ensure that uploaded content does not violate community guidelines and isn't inappropriate and doesn't contain misinformation.

2.3 Objectives of the Proposed System

- BO-1: Provide a platform for citizen journalists and news channels to interact.
- BO-2: Allow users to upload content using app's tool and features to ensure high quality content.
- BO-3: Providing a centralized system increasing the reach of content to the customers.
- BO-4: Reduce the cost and effort of news channel to get coverage of events.
- BO-5: Provide a platform for citizen journalists to get paid for their content and content security.
- BO-6: Enabling fast on the ground reporting.
- BO-7: Ensure that uploaded content is accurate and appropriate.

2.4 Scope

The project News Wave will be a problem-solving application for several users. It will be designed as a mobile application for users and a web platform for News Channels. There will be two kinds of users: User and News Channel. This application's primary user will be the user/Citizen journalist. Our system will assist citizen journalists to quickly and easily report on breaking news stories in their area which may include accidents, protests or other news worthy events in addition to that they can also upload photos and news articles. Users will be able to record the events use the features such as background audio, special filters, teleprompter helping them to read a script while recording the video, multimedia editing and provide them to news channel or other buyers who are interested to buy the content. A bidding process will ensure that the content owner gets proper payment for the quality of content. The content will run through machine learning algorithms before upload to scan for accuracy, avoid any violation or misinformation. In the system there will be a news feed which will allow us to see the content uploaded by other users and consume different content based on category. News channels will be able to hire citizen journalists to cover events profiles of citizen journalists will appear on an interactive map where news channels will be able to decide who to hire based on the user's review. Our System will also provide chat service to interact with different News channel and other users. Users will also get alerts on events happening in their areas so that they can record them if interested.

2.5 Modules

This Section describes the modules for the project:

2.5.1 Module 1: User Management

This module focuses on account creation and management of users. The user will be able to access the functionalities of the application using Login. They can view their profile and edit their information.

- FE-1: Users will be able to register an account.
- FE-2: Users will be able to login into their Profile.
- FE-3: This module will let to reset the password if forgotten.
- FE-4: This module will let to change the password.
- FE-5: This module will let to manage Two Factor Authentication.
- FE-6: This module will let user to edit profile.
- FE-7: This module will let to deactivate your account.
- FE-8: This module will allow a user to sign out of their account.

2.5.2 Module 2: Content Management

This module will be responsible for organizing and publishing user-generated content and to distribute the content submitted by the user to appropriate channels will include features such as categorization, content sharing, publication, and promotion.

- FE-1: Users will be able to upload content.
- FE-2: View, update, and delete their uploaded content.
- FE-3: Users will be able to assign a category to content using tags.
- FE-4: Users will be able to provide a price for the selling of their content.
- FE-5: Provide their content to appropriate channels for the bidding process.
- FE-6: Users can maintain their uploaded content list.
- FE-7: Users can maintain a record of their sold content.
- FE-8: To track the performance of uploaded content over time by metrics such as views and likes.
- FE-9: Users will be able to view others content on App's homepage.
- FE-10: Highlight the most relevant story on App's homepage or in a specific category.
- FE-11: Users will be able to search for content.

2.5.3 Module 3: Content Moderation

This module will help ensure that the content shared by users is appropriate, accurate, and complies with community guidelines. Machine learning algorithms can scan for keywords and patterns or use tags to identify potential violations and filter out inappropriate content, such as hate speech, harassment, and misinformation.

- FE-1: This module will analyze the content before upload to ensure it is appropriate and accurate.
- FE-2: Users will be provided alerts if the content violates the app policy.
- FE-3: Users will not be able to upload content if it violates app policy.
- FE-4: Users will be able to report content.
- FE-5: Content reported by the majority will be taken down.
- FE-6: Users will be provided clear guidelines on content accuracy.

2.5.4 Module 4: Augmented Reality Aided Video Reporting

This module will provide citizen journalists with a powerful tool to use their phone's camera for covering breaking news and events in real time.

- FE-1: Users will be to record video from their phone's camera.
- FE-2: Users will be able to add a script that can help them while recording.
- FE-3: Users will be able to read a script on a mobile screen while recording.

- FE-4: Script will not be added to the video on upload.
- FE-5: Users will be able to add a caption of covered news on the filter.
- FE-6: Users will be able to capture the location of the video using the phone's GPS.
- FE-7: Users will be able to save the video.

2.5.5 Module 5: Multimedia Upscaling

This module will include features editing tools for videos, the ability to add captions and annotations, and the ability to overlay graphics and animations allowing best practices for creating high-quality multimedia content.

- FE-1: Users will be able to edit videos.
- FE-2: Users will be able to select and apply different effects including size, dimensions, etc.
- FE-3: Users will be able to change the resolution of their video.
- FE-4: Users will be able to add text to their videos or photos.
- FE-5: Users will be able to adjust brightness, contrast, and saturation.

2.5.6 Module 6: Content Privacy

This module will provide users with control over their content and protect their privacy and security. The users will be able to add a watermark on their content so that any other user will not be able to steal it basically a copyright mechanism.

- FE-1: Users will be provided a personal watermark for their content.
- FE-2: Users will be able to add watermark to their videos preventing them to be stolen.
- FE-3: Users will be able to limit access to their content.
- FE-4: if a news channel buys a User's content they will provide their content after removing the watermark.
- FE-5: The news channel will be able to get the content only on payment.

2.5.7 Module 7: Journalist Hiring

This module will allow the News channel to hire citizen journalists to send location-based exclusives.

- FE-1: The News channel will be provided a job posting board, where they can post job opportunities and details about the event or story they need coverage for.
- FE-2: News channel will be able to post application.
- FE-3: Users interested in the news channel request will be able to apply.
- FE-4: News channels will be able to screen out the applying users on basis of their reviews.
- FE-5: News channel and hired journalist will be provided chat service to communicate with each other.

2.5.8 Module 8: Payment and Bidding

This module can enable users to submit their content to news outlets, who can then bid on the content based on its value and potential for publication. It provides a way for citizen journalists to monetize their content and earn compensation for their work.

FE-1: The News channel will be shown payment options, Easy-Paisa, etc to buy a journalist's content.

FE-2: The News channel will be able to bid for the user's content.

FE-3: Users will be able to set a price for their content.

FE-4: Users will be able to track payment histories.

FE-5: The News channel will be able to give a rating on the journalist's content.

FE-6: Users will be provided alerts on payment statuses.

FE-7: Users will be provided bidding updates.

2.5.9 Module 9: Notification and Recommendations

This module provides push notification to users based on a major event taking place around them and also recommend News channels with recommended users.

FE-1: Users will be provided notifications on ongoing events and other relevant information.

FE-2: Users will be able to customize their notification settings.

FE-3: Users will be notified about events based on their location.

FE-4: Users will be able to opt-in or out of notifications and recommendations at any time.

FE-5: News channels will be recommended to Users in their area of interest.

3 Requirement Analysis

This chapter involves the details about usage requirements of the application through two different perspectives (User, NewsChannel). The requirement analysis of News Wave is as follows:

3.1 Requirement Identifying Technique

Use case diagrams for the proposed system are as follow:

3.1.1 Use case Diagram for User Management Module

Figure 3.1 shows the use cases involved in the whole user management process. It involves signup, login, edit profile along-with updating credentials, logging out and deleting account as well.

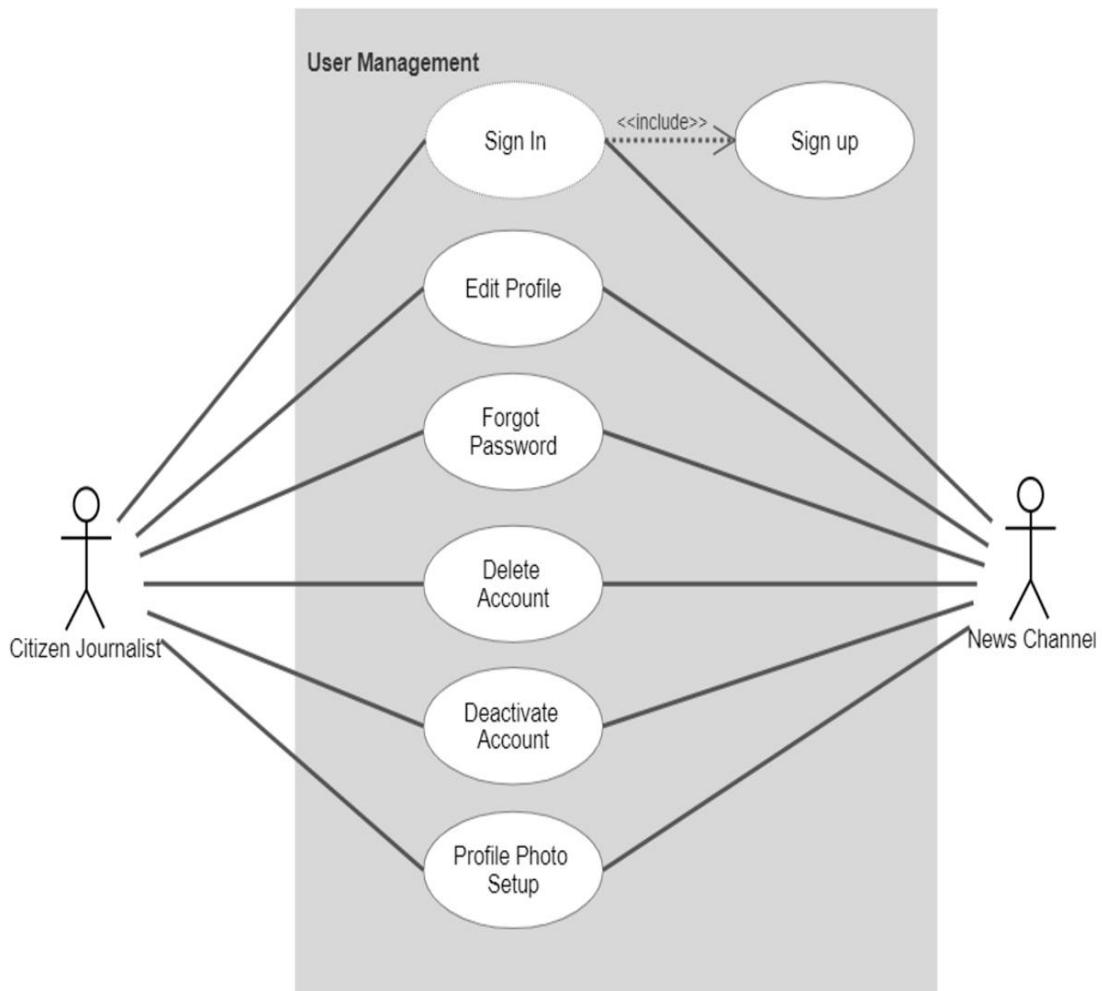


Figure 3.1: Use Case for citizen journalist

3.1.2 Use case Diagram for Content Management Module

Figure 3.2 shows the use cases involved in the whole content management process. It involves upload content, edit content, view content, search content, Price Evaluation.

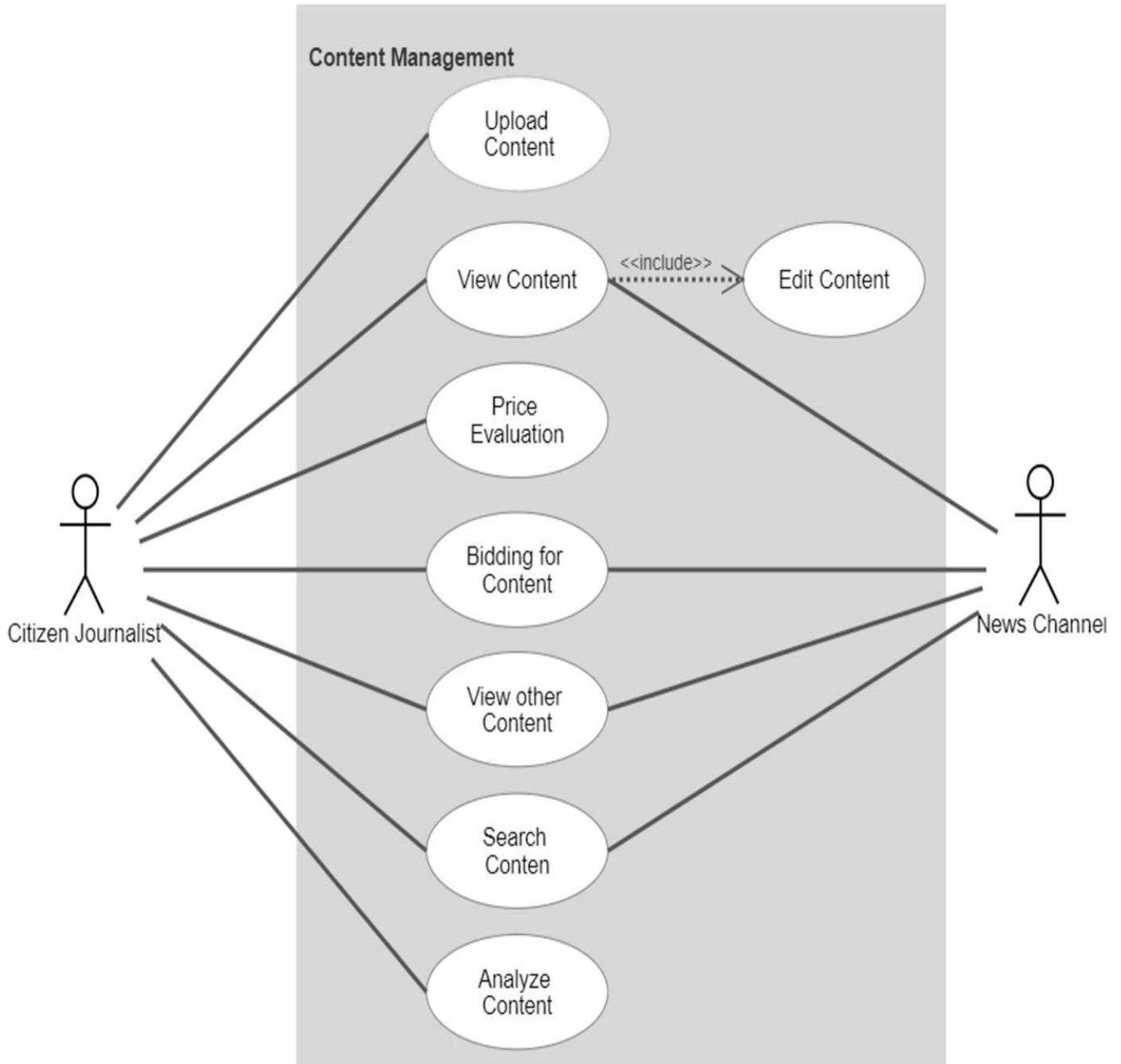


Figure 3.2: Use Case Diagram for content management

3.1.3 Use case Diagram for Content Moderation Module

Figure 3.3 shows the use cases involved in the Content Moderation process. It involves Analyze the Content, Remove Content, Guiding Poilcy, Alert Message.

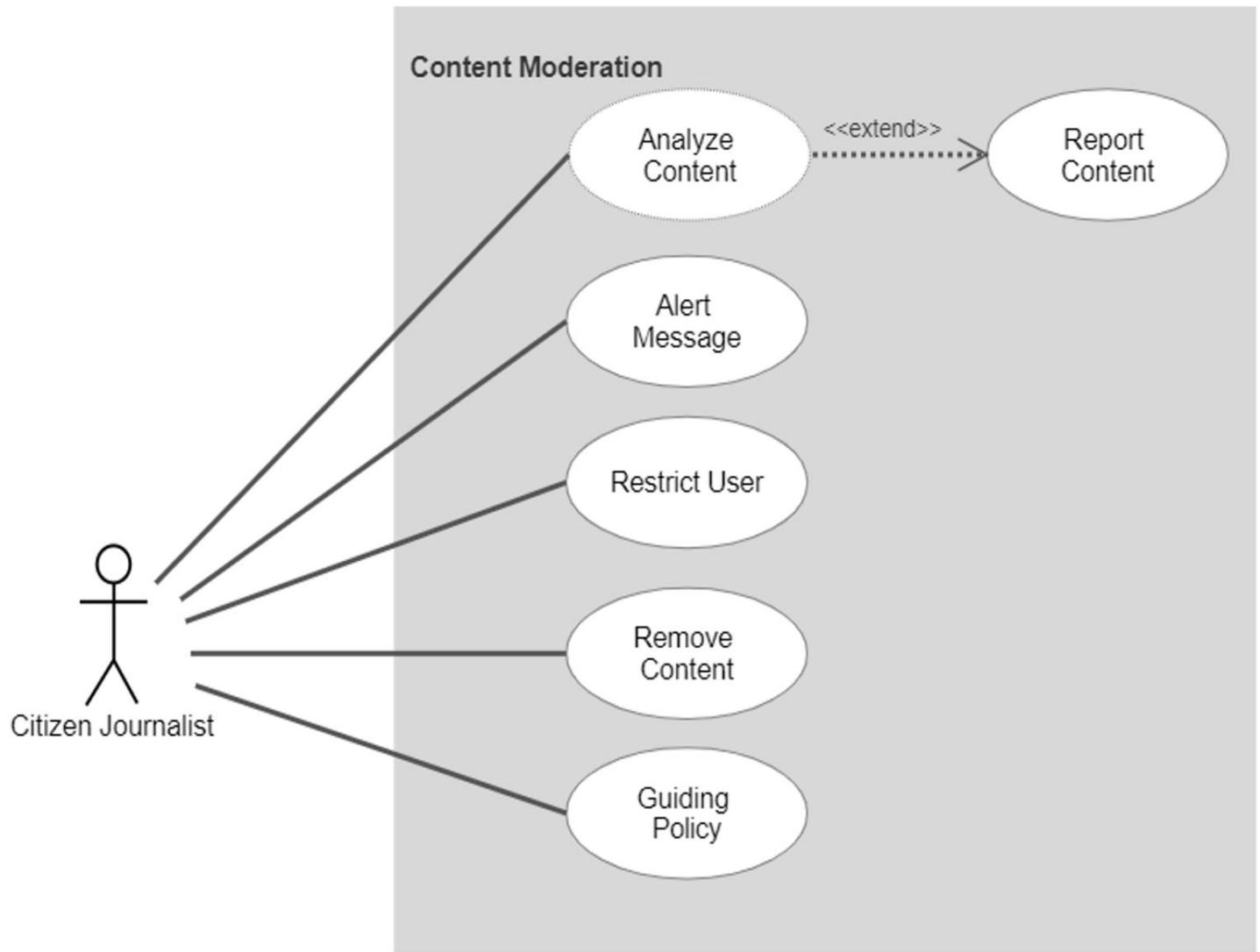


Figure 3.3: Use Case Diagram Content Moderation

3.1.4 Use case Diagram for Augmented Reality Based Video Reporting Module

Figure 3.4 shows the use cases involved in the whole Video Reporting process. It involves Record Video, add Script, apply filter, add caption, get Location.

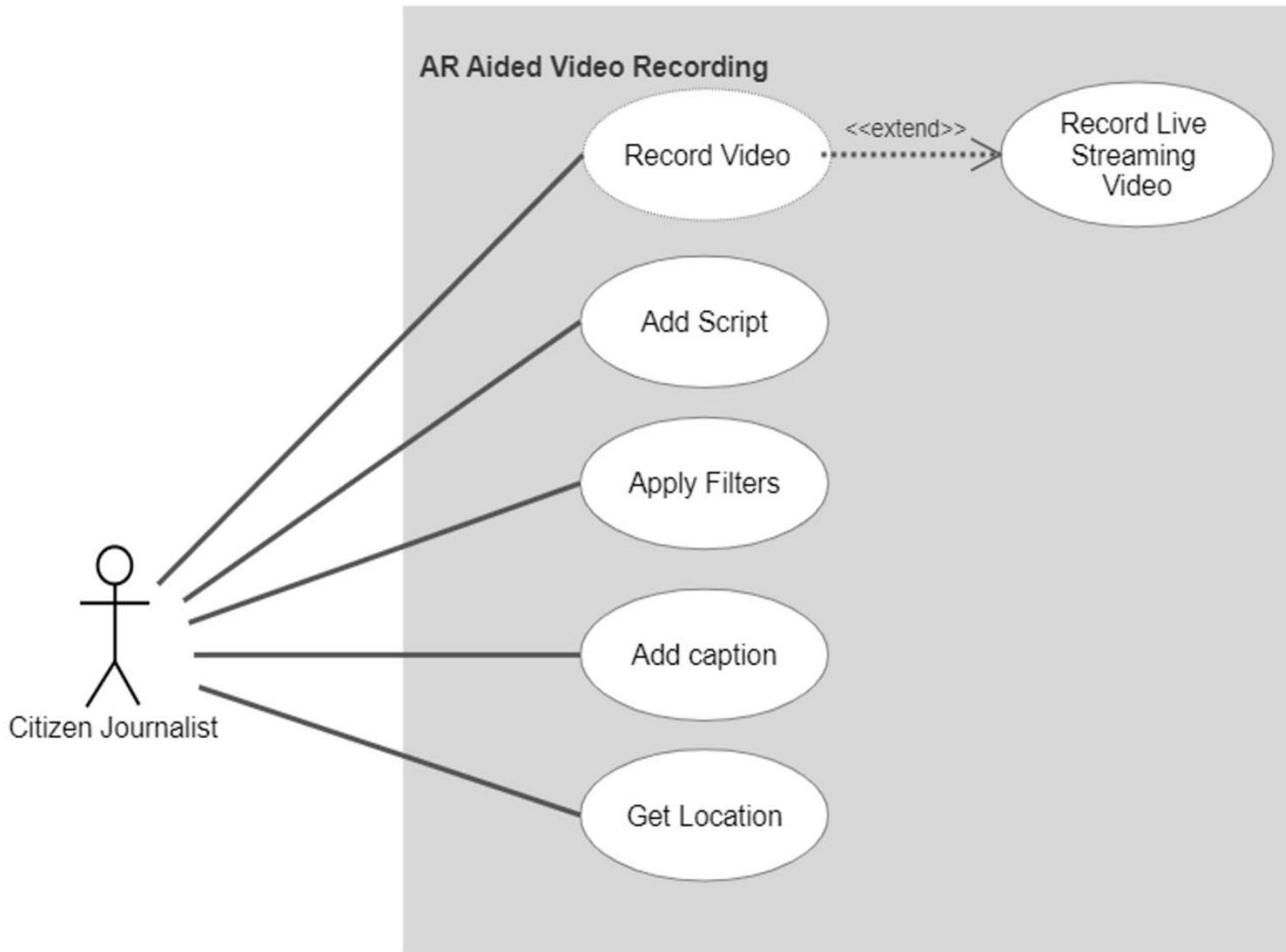


Figure 3.4: Use Case Diagram for AR Aided video reporting

3.1.5 Use case Diagram for Content Privacy Module

Figure 3.5 diagram shows the use cases involved in the whole Content Privay process. It involves adding personal watermark, secure message sharing, personal data protection, private file sharing, Access Restriction.

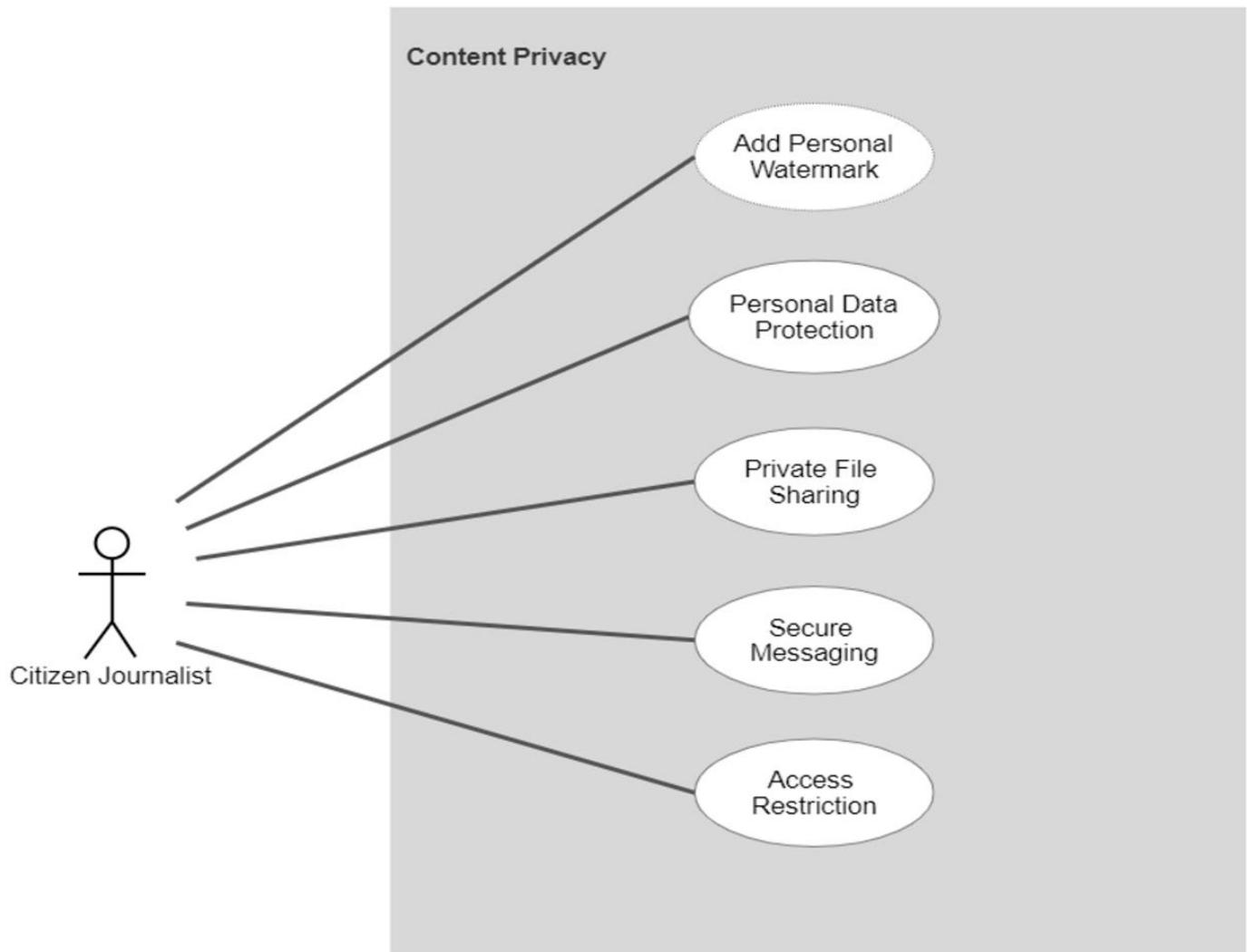


Figure 3.5: Use Case Diagram for content privacy

3.1.6 Use case Diagram for Journalist Hiring Module

Figure 3.6 shows the use cases involved in the whole Journalist Hiring process. It involves Job posting, Application Submission, Hiring Decision, short listing, chat service.

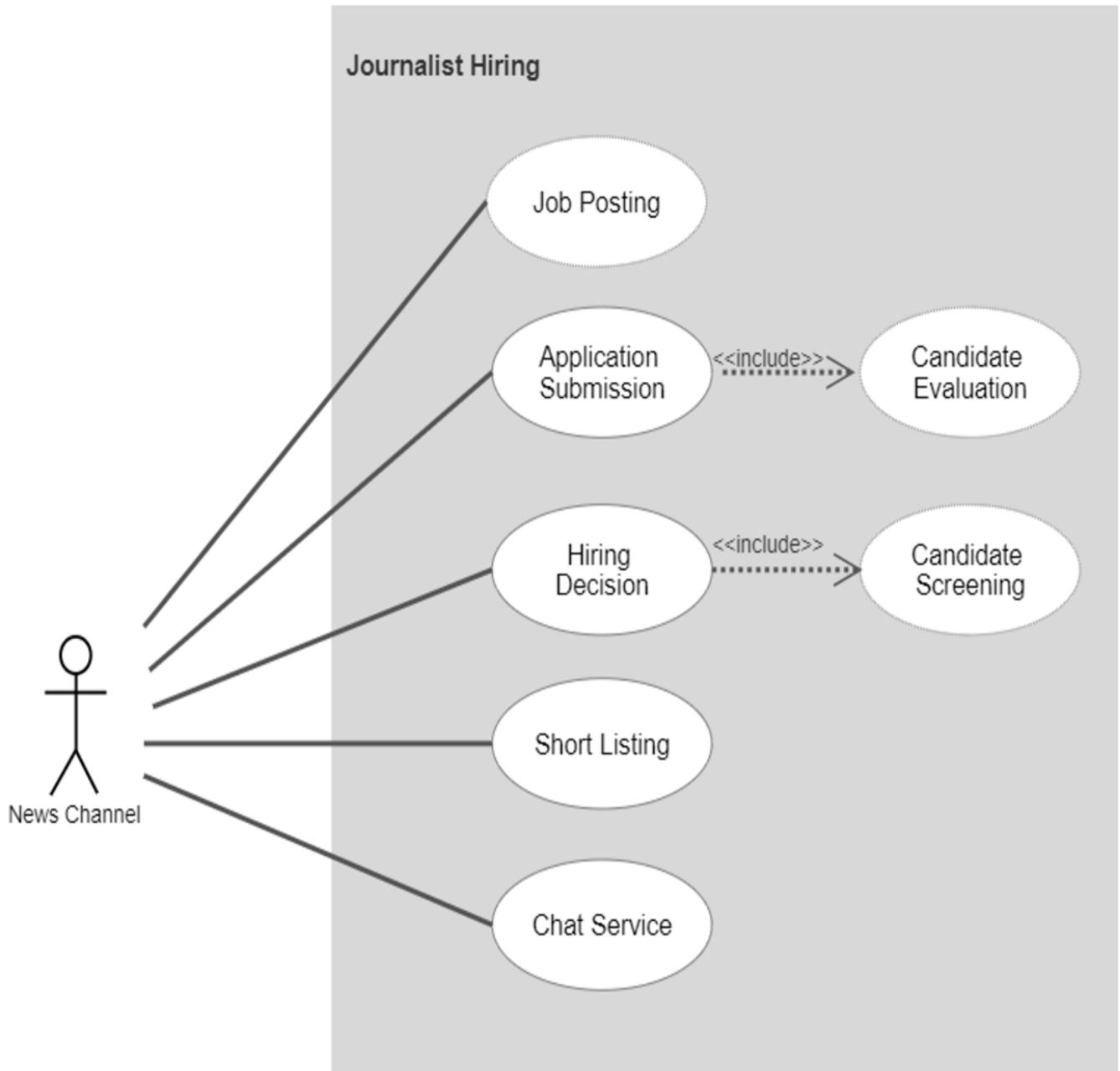


Figure 3.6: Use Case Diagram for journalist hiring

3.1.7 Use case Diagram for Multimedia Up scaling Module

Figure 3.7 shows the use cases involved in the whole Multimedia Enhancement process. It involves improve image quality, image comparison, Accessibility Enhancement, Improve Video Quality, Edit Content.

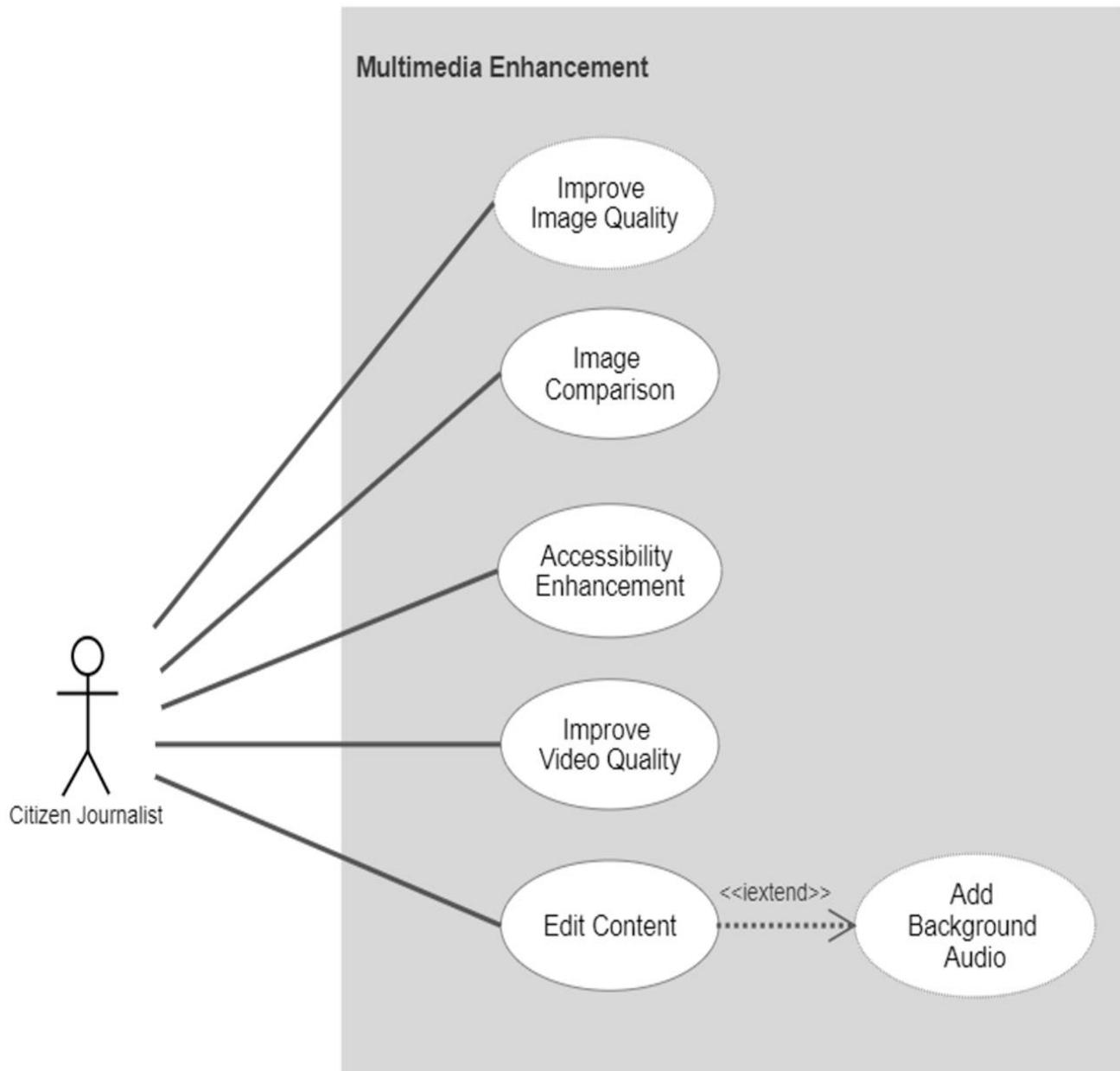


Figure 3.7: Use Case Diagram for multimedia enhancement

3.1.8 Use case Diagram for Payment and Bidding Module

Figure 3.8 shows the use cases involved in the whole Payment and Bidding process. It involves Create Bid, Add payment method, bidding updates, track payment history, alert on payment statuses.

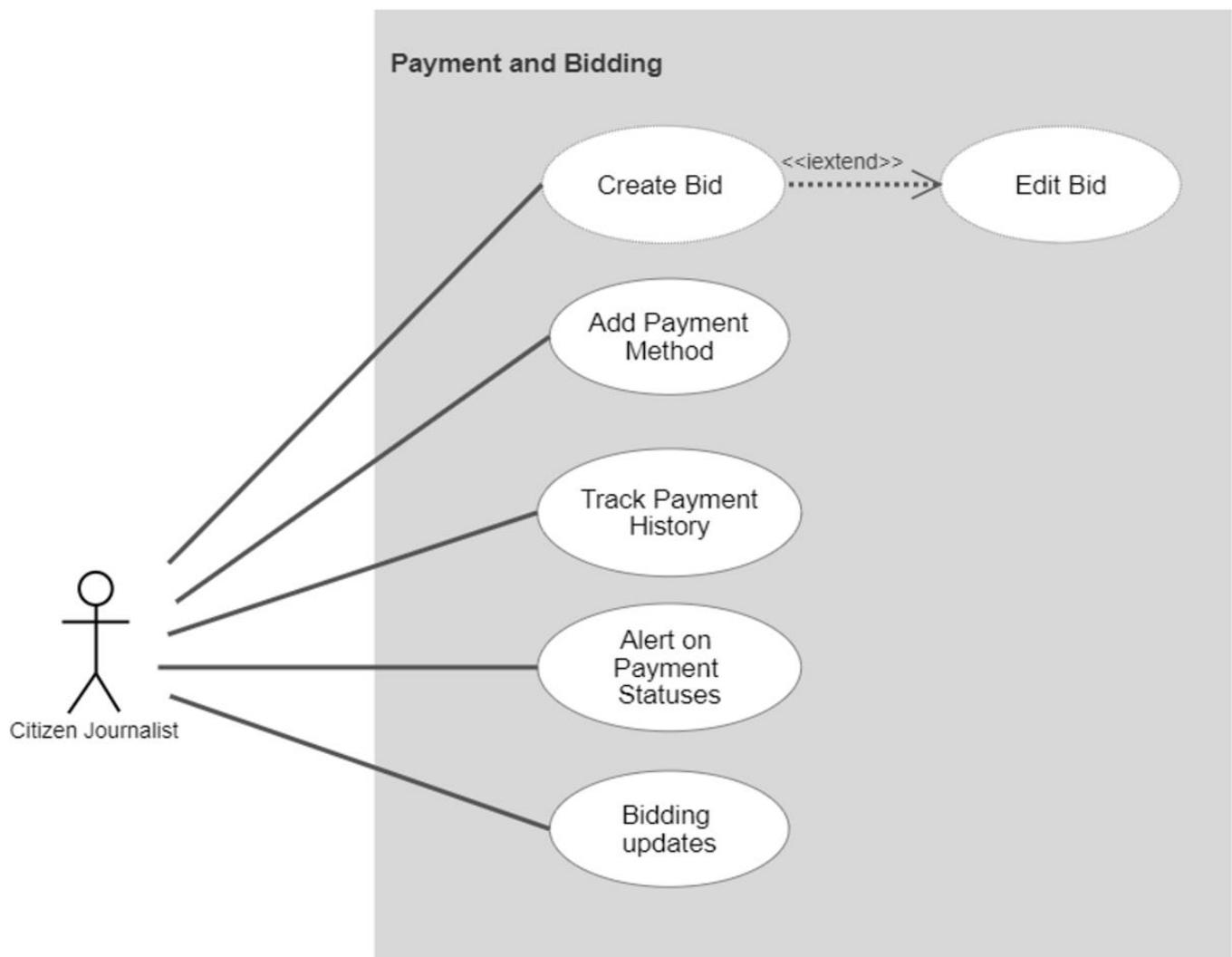


Figure 3.8: Use Case Diagram payment and biding

3.1.9 Use case Diagram for Notification and Recommendations Module

Figure 3.9 shows the use cases involved in the whole Notification and Recommendation process. It involves Push Notification, Send Event Notification, FAQ's, Enable/Disable Notification, Report a problem.

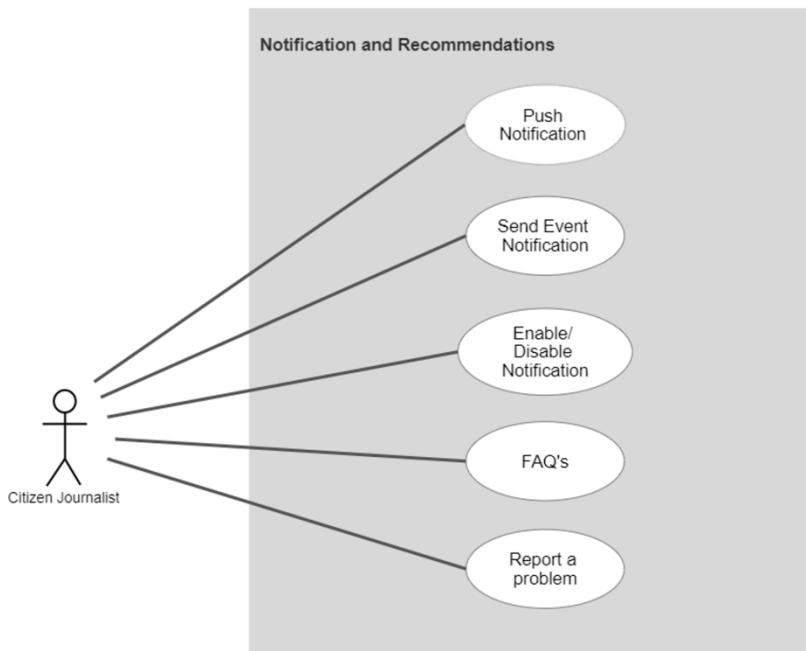


Figure 3.9: Use Case for Notification and recommendations

3.2 Use case Description

This Section shows the Use cases for News Wave mentioned for each module.

3.2.1 Module 1: User Profile Management

Following are the use cases for User Profile management Module.

3.2.1.1 UC-1.1: Sign Up

Table 3.2.1 represents the tabular description of the Sign up use case. In this use case users will be able to create an account by providing Email and Password.

Table 3.2.1 Detailed Use Case Description for UC-1.1: Sign up UC-1.1

Actors:	User
Trigger:	The user will click on “Register Now” button
Preconditions:	1. User must have a valid email. 2. User must have a valid phone number.
Post-conditions:	1. User will be registered in the system. 2. User will be redirected to Login Screen.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click on “Register now” button 2. User will enter full name in Full name Text Field. 3. User will enter valid email address in Email Text Field. 4. User will verify email by clicking “Verify” button next to email text field. 5. User will enter 6-digits code send in the verified email in the Code Text Field. 6. User will enter valid phone number in Phone Number Text Field. 7. User will verify phone number by clicking “Verify” button next to phone text field. 8. User will enter 6-digits code send in the verified phone number in the Code Text Field. 9. User will enter password in Password Text Field. 10. User will re-enter password for confirmation in Re-enter Password Text Field. 11. User will select country from Country Dropdown menu. 12. User will select city from City Dropdown menu. 13. User will click “Sign Up” button. 14. User will be redirected to Sign In screen with a message “Sign Up Successfully”.
Alternative Flows:	N/A
Exceptions:	<p>2a. In step 2 of normal flow, if the full name text field is empty:</p> <ol style="list-style-type: none"> 1. The application will display an error message “Please enter full name”. 2. Application will return to step 2. <p>3a. In step 3 of normal flow, if the email is already registered in the application:</p> <ol style="list-style-type: none"> 1. Application will display an error message “This email address is already register please login or enter new email address”. 2. Application will return to step 3.

	<p>3b. In step 3 of normal flow, if the entered email format is not valid:</p> <ol style="list-style-type: none"> 1. Application will display error Message “Please Enter Valid email address” 2. Application will return to Step 3. <p>4a. In Step 4 of normal flow, if the entered password is less than 8 characters:</p> <ol style="list-style-type: none"> 1. Application will display error Message “Password is less than 8 characters. Please re-enter.” 2. Application will return to Step 4. <p>5a. In Step 5 of normal flow, if the entered password does not match with password entered in the Password Text Field:</p> <ol style="list-style-type: none"> 1. Application will display error Message “Password and confirm password does not match.” 2. Application will return to Step 5. <p>6a. In Step 6 of normal flow, if the entered phone number exceeds 11 digits:</p> <ol style="list-style-type: none"> 1. Application will display an error “Please enter 11 digits of your valid phone number” 2. Application will return to step 6. <p>14a. In step 14 of normal flow, if the entered code doesn't match with the code in email:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Code mismatches, please reenter the code in the email address” 2. Application will return to step 12. <p>14b. In step 14 of normal flow, if the entered code doesn't match with the code in SMS:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Code mismatches, please reenter the code in SMS” 2. Application will return to step 13.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.1.2 UC-1.2: Sign In

Table 3.2.2 represents the tabular description of the Sign In use case. In this use case the user will be able to Sign In by providing Email and Password.

Table 3.2.2 Detailed Use Case Description for UC-1.2: Sign In UC-1.2

Actors:	User
Trigger:	User will click “Login” button
Preconditions:	1. User should have an account in NEWS WAVE application.
Post-conditions:	User will be logged into the system successfully.
Normal Flow:	1. User will enter email address in Email Text Field. 2. User will enter password in Password Text Field. 3. User will click “Login” button.
Alternative Flows:	N/A
Exceptions:	1a. In step 1 of normal flow, if the email is invalid: 1. The application will display an error message “Email or password is invalid, please try again”. 2. Application will return to step 1. 2a. In step 2 of normal flow, if the entered password is invalid: 1. Application will display an error message “Email or password is invalid, please try again”. 2. Application will return to step 2.
Business Rule:	N/A
Assumptions:	1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.1.3 UC-1.3: Edit Profile

Table 3.2.3 represents the tabular description of the Edit Profile use case. In this Usecase user will be able to edit profile information.

Table 3.2.3 Detailed Use Case Description for UC-1.3: Edit ProfileUC-1.3

Actors:	User
Trigger:	User will click “Edit” button
Preconditions:	1. User must have an account in application. 2. User must be logged into the system.
Post-conditions:	User profile will be updated.

Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Profile” icon. 2. User will enter full name in Full name Text Field. 3. User will enter email address in Email Text Field. 4. User will enter phone number in Phone Number Text Field. 5. User will be able to change password. 6. User will select country from Country Dropdown menu. 7. User will select city from City Dropdown menu. 8. User will click “Update Profile” button
Alternative Flows:	N/A
Exceptions:	<ol style="list-style-type: none"> 1a. In step 1 of normal flow, if the Name text field is empty: <ol style="list-style-type: none"> 1. The application will display an error message “Full Name cannot be empty”. 2. Application will return to step 1. 2a. In step 2 of normal flow, if the email text field is empty: <ol style="list-style-type: none"> 1. Application will display an error message “Email field cannot be empty”. 2. Application will return to step 2.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.1.4 UC-1.4: Forgot Password

Table 3.2.4 represents the tabular description of the Forgot Password use case. In this use Case user will be able to click on the forgot password and be able to reset Password.

Table 3.2.4 Detailed Use Case Description for UC-1.4: Forgot Password UC-1.4

Actors:	User
Trigger:	User will click “Forgot password” button
Preconditions:	1. User must be at login screen.
Post-conditions:	User account will be reset.

Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Forgot password” button. 2. User will enter email for the registered account. 3. User will choose to get 6-digits code via Email. 4. User will enter 6-digits code in the given Text Field. 5. User will click “Confirm” button. 6. User will enter new password in the New Password Text Field. 7. User will enter new password in the Re-enter password Text Field. 8. User will click “Create New Password” button. 9. User will be redirected to login screen with “Password reset” message.
Alternative Flows:	<ol style="list-style-type: none"> 1. User will click “Forgot password” button. 2. User will enter email for the registered account. 3. User will choose to get 6-digits code via SMS. 4. User will enter 6-digits code in the given Text Field. 5. User will click “Confirm” button. 6. User will enter new password in the New Password Text Field. 7. User will enter new password in the Re-enter password Text Field. 8. User will click “Create New Password” button. 9. User will be redirected to login screen with “Password reset” message.
Exceptions:	<p>2a. In step 2 of normal flow, if the email is not registered:</p> <ol style="list-style-type: none"> 1. Application will display an error message “There is not account registered with this email”. 2. Application will return to step 2. <p>4a. In step 4 of normal flow, if the code enter doesn't match:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Code entered doesn't matches, please re-enter the code in your email address”. 2. Application will return to step 4. <p>7a. In step 7 of normal flow, if the password entered doesn't matches with the password in step 6:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Password doesn't match. Please try again”. 2. Application will return to step 7.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.1.5 UC-1.5: Delete Account

Table 3.2.5 represents the tabular description of the Delete Account use case. In this Use Case user will be able to delete their Account.

Table 3.2.5 Detailed Use Case Description for UC-1.5: Delete Account UC-1.5

Actors:	User
Trigger:	User will click “Delete account” button
Preconditions:	1. User must have an account in application.
Post-conditions:	User account deleted from system.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Profile” icon. 2. User will click “Delete Account” button. 3. User will enter password in the Password Text Field. 4. User will click “Confirm” button. 5. User will be redirect to login screen with display message “Account has been deleted successfully”.
Alternative Flows:	N/A
Exceptions:	<p>2a. In step 2 of normal flow, if the password is invalid:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Invalid password entered, please try again”. 2. Application will return to step 2.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.1.6 UC-1.6: Deactivate Account

Table 3.2.6 represents the tabular description of the Deactivate Account use case. In this Use case the user will be able to deactivate there account.

Table 3.2.6 Detailed Use Case Description for UC-1.6: Deactivate Account UC-1.6

Actors:	User
Trigger:	User will click “Deactivate account” button
Preconditions:	1. User must have an account in application.
Post-conditions:	User account deactivated.

Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Profile” icon. 2. User will click “Deactivate Account” button. 3. User will enter password in the Password Text Field. 4. User will click “Yes” button in alert dialogue. 5. User will be redirect to login screen with message “Account has been deactivated, use ‘Activate Account’ for reactivation”
Alternative Flows:	N/A
Exceptions:	<p>2a. In step 2 of normal flow, if the password is invalid:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Invalid password entered, please try again”. 2. Application will return to step 2.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.1.7 UC-1.7: Profile Photo Setup

Table 3.2.7 represents the tabular description of the Profile Photo Setup use case. In this Use Case User will be able to set their Profile picture.

Table 3.2.7 Detailed Use Case Description for UC-1.7: Profile Photo Setup UC-1.7

Actors:	User
Trigger:	User will click “Upload profile picture” button
Preconditions:	1. User must be signing in the for the first time.
Post-conditions:	User will be able to setup new profile picture after sign in process.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Upload profile picture” button. 2. User will be able to select picture from local directory. 3. User will be able to take new photo. 4. User will click “Save picture” button.
Alternative Flows:	N/A

Exceptions:	<p>2a. In step 2 of normal flow, if the select picture size is too big:</p> <ol style="list-style-type: none"> 1. Application will show an error message “Picture size is too big, please select an image having size less than 2 MBs and try again.” 2. Application will return to step 1. <p>2b. In step 2 of normal flow, if the select picture resolution is too small:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Picture resolution must be equal to or greater than 150x150.” 2. Application will return to step 1. <p>3a. In step 3 of normal flow, if the select picture size is too big:</p> <ol style="list-style-type: none"> 1. Application will show an error message “Picture size is too big, please select an image having size less than 2 MBs and try again.” 2. Application will return to step 1.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.1.8 UC-1.8: Activate Account

Table 3.2.8 represents the tabular description of the Activate Account use case. In this use case the user will be able to activate their deactivated account.

Table 3.2.8 Detailed Use Case Description for UC-1.8: Activate AccountUC-1.8

Actors:	User
Trigger:	User will click “Activate account” button
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User account must be deactivated.
Post-conditions:	User account reactivated.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Activate Account” button. 2. User will enter email address for the deactivated account. 3. User will enter the 6-digits code in the Code from Email Text Field. 4. User will be redirected to login screen with display message “Account activation successful”
Alternative Flows:	<ol style="list-style-type: none"> 1. User will click “Activate Account” button. 2. User will enter phone number for the deactivated account. 3. User will enter the 6-digits code in the Code from SMS Text Field. 4. User will be redirected to login screen with display message “Account activation successful”

Exceptions:	<p>2a. In step 2 of normal flow, if the email entered is invalid:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Invalid email address, no account exists.” 2. Application will remain at step 2. <p>2a. In step 2 of alternative flow, if the phone number is invalid:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Invalid phone number, no account exists.” 2. Application will remain at step 2. <p>3a. In step 3 of normal flow, if the code doesn’t match:</p> <ol style="list-style-type: none"> 1. Application will display an error message “Code mismatch, please reenter the code in the email.” 2. Application will return to step 3.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.1.9 UC-1.9: Change Password

Table 3.2.9 represents the tabular description of the Change Password use case. In this Use Case the user will be able to change their Password.

Table 3.2.9 Detailed Use Case Description for UC-1.9: Change PasswordUC-1.9

Actors:	User
Trigger:	User will click “Change Password” button
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	User account password changed
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Change Password” button. 2. User will enter old password in Old Password Text Field. 3. User will enter new password in New Password Text Field. 4. User will enter confirm new password in Confirm New Password Text Field. 5. User will click “Confirm Change Password” button.
Alternative Flows:	N/A
Exceptions:	<p>3a. In step 3 of normal flow, if the new password text field is empty:</p> <ol style="list-style-type: none"> 1. Application will display an error message, “New password field cannot be empty”

	<p>2. Application will remain at step 3.</p> <p>4a. In step 4 of normal flow, if the confirm new password text field is empty:</p> <ol style="list-style-type: none"> 1. Application will display an error message, “Confirm New password cannot be empty”. 2. Application will remain at step 4. <p>4b. In step 4 of normal flow, if the confirm new password doesn't matches the new password:</p> <ol style="list-style-type: none"> 1. Application will display an error message, “Password mismatch!” 2. Application will remain at step 4. <p>5a. In step 5 of normal flow, if the old password is invalid:</p> <ol style="list-style-type: none"> 1. Application will display an error message, “Old password is invalid, please try again”. 2. Application will return to step 2.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.2 Module 2: Content Management

Following are the use cases for Content management Module.

3.2.2.1 UC-2.1:Upload Content

Table 3.2.10 represents the tabular description of the Upload Content use case. In this Use Case the user will be able to upload Content.

Table 3.2.10 Detailed Use Case Description for UC-2.1: Upload Content UC-2.1

Actors:	User
Trigger:	User will click “Upload ” button
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	Content has been uploaded to the application.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Upload” button. 2. User will select the type of content. 3. Select file 4. User will write description about the content. 5. User will click on “Upload content” button.

	6. User will click on the “Confirm” button.
Alternative Flows:	N/A
Exceptions:	<p>3a. In step 3 of normal flow, if the file size is very large.</p> <ol style="list-style-type: none"> 1. Application will display an error message, “File Size Exceeds the limit” 2. Application will remain at step 3.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.2.2 UC-2.2: View Content

Table 3.2.11 represents the tabular description of the View Content use case. In this Use case the user will be able to view their uploaded content.

Table 3.2.11 Detailed Use Case Description for UC-2.2: View Content UC2.2

Actors:	User
Trigger:	User will click “Content” button
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application. 3. User should have already uploaded some content
Post-conditions:	User can view the content
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Content” button. 2. All the data about contents uploaded by the user will be displayed
Alternative Flows:	N/A
Exceptions:	<p>1a. In step 1 of normal flow, if there is no previous uploaded content.</p> <ol style="list-style-type: none"> 1. Application will display an error message, “No Content found.” 2. Application will remain at step 1.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications.

	2. User understands English language
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3.2.2.3 UC-2.3: Edit Content

Table 3.2.12 represents the tabular description of the Edit Content use case. In this use case the user will be able to edit their content.

Table 3.2.12 Detailed Use Case Description for UC-2.3: Edit ContentUC-2.3

Actors:	User
Trigger:	User will click “Edit Content” button
Preconditions:	<ul style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application. 3. User should have already uploaded some content
Postconditions:	User can edit the content
Normal Flow:	<ul style="list-style-type: none"> 1. User will click “Edit Content” button. 2. All the data about contents uploaded by the user will be displayed. 3. User will select the specific content. 4. User will click on the update button. 5. User will update the content. 6. User will click on submit button. 7. Content would be updated.
Alternative Flows:	<ul style="list-style-type: none"> 1. By clicking on submit button, confirmation screen will pop up. 2. User will click on confirm. 3. Content would be updated.
Exceptions:	<ul style="list-style-type: none"> 1a. In step 1 of normal flow, if there is no previous uploaded content. 1. Application will display an error message, “No Content found” 2. Application will remain at step 1.
Business Rule:	N/A
Assumptions:	<ul style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.2.4 UC-2.4: View Price

Table 3.2.13 represents the tabular description of the View Price use case. In this Use case the user will be able to view the price of uploaded content.

Table 3.2.13 Detailed Use Case Description for UC-2.4: View PriceUC-2.4

Actors:	User
Trigger:	User will click “View Price” button
Preconditions:	1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	Price will be displayed for content
Normal Flow:	1. User will upload the content. 2. User will click “View Price” button. 3. System will show the price for the content.
Alternative Flows:	N/A
Exceptions:	1a. In step 1 of normal flow, if the content is not valid. 1. Application will display an error message, “Invalid Content” 2. Application will remain at step 1.
Business Rule:	N/A
Assumptions:	1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.2.5 UC-2.5: Bid for Content

Table 3.2.14 represents the tabular description of the Bid for Content use case. In this use case Citizen will be able to get bids for the content from appropriate channels.

Table 3.2.14 Detailed Use Case Description for UC-2.5: Bid for Content UC-2.5

Actors:	News Wave
Trigger:	It will be triggered when content is uploaded.
Preconditions:	1. User must have an account in application. 2. Content should be valid 3. User should have accepted the terms and policies.
Post-conditions:	System will get bids for the content
Normal Flow:	1. User will click “Upload Content” button. 2. Content would be uploaded. 3. System will send this content to appropriate channels for bidding process. 4. System will get bids and will display to the users.
Alternative Flows:	N/A

Exceptions:	4a. In step 1 of normal flow, if there is no interested channel. <ol style="list-style-type: none"> 1. Application will display an error message, “No interested channel found” 2. Application will remain at step 3.
Business Rule:	N/A
Assumptions:	1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.2.6 UC-2.6: View others Content

Table 3.2.15 represents the tabular description of the View others Content use case. In this Use case User will be able to view contents of other users in application.

Table 3.2.15 Detailed Use Case Description for UC-2.6: View others ContentUC-2.6

Actors:	User
Trigger:	User will click “View Others Content” button
Preconditions:	1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	User can view others content.
Normal Flow:	1. User will click “View Others Content” button. 2. User will click on “Category” button. 3. User will select the category for the content. 4. All the data available for visibility on the selected category would be displayed.
Alternative Flows:	1. By clicking on “view content” button, confirmation screen will pop up.
Exceptions:	2a. In step 1 of normal flow, if the selected category is not available to be displayed. <ol style="list-style-type: none"> 1. Application will display an error message, “Category not available” 2. Application will remain at step 2.
Business Rule:	N/A
Assumptions:	1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.2.7 UC-2.7: Search Content

Table 3.2.16 represents the tabular description of the Search Content use case. In this Use case User will be able to search for content on application

Table 3.2.16 Detailed Use Case Description for UC-2.7: Search ContentUC-2.7

Actors:	User
Trigger:	User will click “Search” button
Preconditions:	<ul style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	User can search for the content
Normal Flow:	<ul style="list-style-type: none"> 1. User will click “Search” icon. 2. Search box will be highlighted 3. User will type inside the search box. 4. User will click on the search icon again. 5. Related results will appear on the screen
Alternative Flows:	N/A
Exceptions:	<p>3a. In step 4 of normal flow, if there is no relevant content</p> <ul style="list-style-type: none"> 1. Application will display an error message, “No Content found” 2. Application will remain at step 2.
Business Rule:	N/A
Assumptions:	<ul style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.2.8 UC-2.8: Review Content

Table 3.2.17 represents the tabular description of the Review Content use case. In this Use case User will be able to track the performance of uploaded content over time. User will be able to track the performance of uploaded content over time.

Table 3.2.17 Detailed Use Case Description for UC-2.8: Review ContentUC-2.8

Actors:	User
Trigger:	User will click “Analytic” icon.
Preconditions:	<ul style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application 3. User should have already uploaded some content
Post-conditions:	User can analyze thecontent.

Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Analytics” icon. 2. User will click on “views”. 3. User will click on “Analyze views”. 4. User will click on specific day. 5. Number of views are displayed on the screen.
Alternative Flows 1:	<ol style="list-style-type: none"> 1. User will click “Analytics” icon. 2. User will click on “Likes”. 3. User will click on “Track Likes”. 4. User will click on specific day. 5. Number of Likes are displayed on the screen with specific time.
Alternative Flows 2:	<ol style="list-style-type: none"> 1. User will click “Analytics” icon. 2. User will click on “Reach”. 3. User will click on “Track content”. 4. User will click on specific day. 5. Result for the reach will be displayed in the form of graph.
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.3 Module 3: Content Moderation

Following are the use cases for Content Moderation Module.

3.2.3.1 UC-3.1: Analyze Content

Table 3.2.18 represents the tabular description of the Analyze Content use case. In this use case News Wave will analyze the accuracy of user content.

Table 3.2.18 Detailed Use Case Description for UC-3.1: Analyze Content UC-3.1

Actors:	News Wave
Trigger:	User will Upload the content
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application 3. User should have already uploaded some content
Post-conditions:	Application can analyze the content according to app policy.

Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Upload” button. 2. Application will analyze the content 3. Application check for the accuracy of the content 4. Application will display the result of analysis.
Alternative Flows:	N/A
Exceptions:	<p>1a. In the step 1 of normal flow, if the size of content exceeds the limits.</p> <ol style="list-style-type: none"> 1. Application will display the error message, “Content exceeds the limit.” 2. Application will remain at step 1.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.3.2 UC-3.2: Alert Message

Table 3.2.19 represents the tabular description of the Alert Message use case. In this use case News Wave will send alert message to the user.

Table 3.2.19 Detailed Use Case Description for UC-3.2: Alert Message UC-3.2

Actors:	News Wave
Trigger:	User will upload the content
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application 3. User should have already uploaded some content
Post-conditions:	Application sends the alert message to the user.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Upload” button. 2. Application will analyze the content 3. Application check for the accuracy of the content 4. Application will give an alert message on the screen
Alternative Flows:	N/A
Exceptions:	<p>1a. In the step 1 of normal flow, if the size of content exceeds the limits.</p> <ol style="list-style-type: none"> 1. Application will display the error message, “Content exceeds the limit.” 2. Application will remain at step 1.
Business Rule:	N/A

Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language
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3.2.3.3 UC-3.3: Restrict User

Table 3.2.20 represents the tabular description of the Restrict User use case. In this use case News Wave will restrict the user if it violates the app policy.

Table 3.2.20 Detailed Use Case Description for UC-3.3: Restrict User UC-3.3

Actors:	News Wave
Trigger:	User will upload the content
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application 3. User should have already uploaded some content
Post-conditions:	Application will restrict the user.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Upload” button. 2. Application will analyze the content 3. Application check for the accuracy of the content 4. Application will give an alert message on the screen 5. Application will restrict the user on second attempt if it fails to follow the terms and policies of application.
Alternative Flows:	<ol style="list-style-type: none"> 1. User will click “Upload” button. 2. Application will analyze the content 3. Application check for the accuracy of the content 4. Application will give an alert message on the screen 5. Application will restrict the user on second attempt if it fails to follow the terms and policies of application. 6. User will click on “Challenge” button. 7. Application will analyze the content again. 8. User will click on “Confirm” button
Exceptions:	<ol style="list-style-type: none"> 1a. In the step 1 of normal flow, if the size of content exceeds the limits. <ol style="list-style-type: none"> 1. Application will display the error message, “Content exceeds the limit.” 2. Application will remain at step 1. 6a. In the step 6 of normal flow, if the user has already challenged once. <ol style="list-style-type: none"> 1. Application will display the error message, “You cannot challenge the decision”. 2. Application will return to the main screen.

Business Rule:	N/A
Assumptions:	N/A

3.2.3.4 UC-3.4: Report Content

Table 3.2.21 represents the tabular description of the Report Content use case. In this use case User will report the content of other user if it violates the ethical rules.

Table 3.2.21 Detailed Use Case Description for UC-3.4: Report Content UC-3.4

Actors:	User
Trigger:	User will report the content
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	Application will display the message, “Content under review”
Normal Flow:	<ol style="list-style-type: none"> 1. User will click on report button 2. User will select the reasons. 3. User will write the description 4. User will write its username 5. User will click on “Submit” button
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.3.5 UC-3.5: Remove Content

Table 3.2.22 represents the tabular description of the Remove Content use case. In this use case News Wave will remove the content if reported by majority.

Table 3.2.22 Detailed Use Case Description for UC-3.5: Remove Content UC-3.5

Actors:	News Wave
Trigger:	Content reported by majority.
Preconditions:	<ol style="list-style-type: none"> User reporting the content must have an account in application. Content has already been reviewed by the application.
Post-conditions:	Application will display the message, “Content has been removed”
Normal Flow:	<ol style="list-style-type: none"> Majority of user click on “report” button for a specific content. Application will analyze the content. Application will analyze the reaction of audience. Application will remove the content.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> User knows the basic knowledge of using smart phones and web applications. User understands English language

3.2.3.6 UC-3.6: Guiding Policy

Table 3.2.23 represents the tabular description of the Guiding Policy use case. In this use case News Wave will provide policy guidance to the user

Table 3.2.23 Detailed Use Case Description for UC-3.6: Guiding Policy UC-3.6

Actors:	News Wave, User
Trigger:	User click on “guidance” button.
Preconditions:	<ol style="list-style-type: none"> User must have an account in application. User must be logged into the application
Post-conditions:	Application will display the message, “Thank you for visiting guidance policy”
Normal Flow:	<ol style="list-style-type: none"> User will click on the “guidance button”. User will select the category for guidance. User click on next after every guidance screen. User will click on “End” button. User will click on “confirm” button.
Alternative Flows:	N/A

Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.4 Module 4: Augmented Reality Based Video Reporting

Following are the use cases for Augmented Reality based Video Reporting Module.

3.2.4.1 UC-4.1: Record Video

Table 3.2.24 represents the tabular description of the Record Video use case. In this use case User will be able to record video from phone's camera.

Table 3.2.24 Detailed Use Case Description for UC-4.1:Record Video UC-4.1

Actors:	User
Trigger:	The user will click on “Camera” icon
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	Video is recorded and uploaded on the application.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click on mobile icon. 2. User will select the “record video” option. 3. User will record the video 4. User will click on the upload button 5. User will add description 6. User will click “Confirm” button.
Alternative Flows:	<ol style="list-style-type: none"> 1. User will click on mobile icon. 2. User select the video from mobile gallery 3. User click on “upload” button 4. User will add description 5. User will click “Confirm” button.

Exceptions:	4a. In the step 4 of normal flow, if the size of content exceeds the limits. <ol style="list-style-type: none"> 1. Application will display the error message, “Content exceeds the limit.” 2. Application will remain at step 1.
Business Rule:	N/A
Assumptions:	1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.4.2 UC-4.2: Record Live Streaming Video

Table 3.2.25 represents the tabular description of the Record Live Streaming Video use case. In this use case User will be able to record live video from phone's camera.

Table 3.2.25 Detailed Use Case Description for UC-4.2: Record Live Streaming Video

Actors:	User
Trigger:	The user will click on “Live Streaming” icon
Preconditions:	1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	User will do live streaming on phone's camera.
Normal Flow:	1. User will click on mobile icon. 2. User will select the “record video” option. 3. User will click on “live streaming” 4. User will click on the “start” button. 5. User will click “Confirm” button.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.4.3 UC-4.3: Add Script

Table 3.2.26 represents the tabular description of the Add Script use case. In this use case User will be able to add script while recording the news.

Table 3.2.26 Detailed Use Case Description for UC-4.3: Add Script UC-4.3

Actors:	User
Trigger:	The user will click on “Add Script” button
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	User will add script in the account.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click on “Add Script” button. 2. User will upload the script on the account. 3. User will save the script.
Alternative Flows:	<ol style="list-style-type: none"> 1. User will click on “Add Script” button. 2. User will type the script. 3. User will save the script.
Exceptions:	<p>2a. In step 2 of normal flow, if the uploaded file is not supported by the application.</p> <ol style="list-style-type: none"> 1. System will display an error message, “File not supported”. 2. System will return to step 1.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.4.4 UC-4.4: Apply Filter

Table 3.2.27 represents the tabular description of the Apply Filter use case. In this use case User will be able to apply filters.

Table 3.2.27 Detailed Use Case Description for UC-4.4: Apply Filter UC-4.4

Actors:	User
Level:	Medium
Trigger:	The user will click on “Filter” button
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application

Post-conditions:	User will be able to apply filter.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click on “Filter” button. 2. User will select the news channel. 3. User will select the area. 4. User will click on “Apply filter” button. 5. User will click on “confirm” button.
Alternative Flows:	N/A
Exceptions:	<p>4a. In step 2 of normal flow, if no data is selected.</p> <ol style="list-style-type: none"> 1. System will display an error message, “No filter Selected”. 2. System will remain in step 4.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.4.5 UC-4.5: Add Caption

Table 3.2.28 represents the tabular description of the Add Caption use case. In this use case User will be able to add caption on the content.

Table 3.2.28 Detailed Use Case Description for UC-4.5: Add Caption UC-4.5

Actors:	User
Trigger:	The user will click on “Add caption” button
Preconditions:	<ol style="list-style-type: none"> 3. User must have an account in application. 4. User must be logged into the application
Post-conditions:	User will add caption to the content.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click “Upload” button. 2. User will select the type of content. 3. Select file 4. User will write description about the content. 5. User will click on “Add Caption”. 6. User will write caption 7. User will click on “Upload content” button 8. User will click on the “Confirm” button.
Alternative	N/A

Flows:	
Exceptions:	<p>5a. In step 5 of normal flow, if the caption is not appropriate or include illegal word.</p> <ol style="list-style-type: none"> 1. System will display an error message, "Invalid caption". 2. System will remain on step 5.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.4.6 UC-4.6: Get Location

Table 3.2.29 represents the tabular description of the Get Location use case. In this use case User will be able to get location while capturing the video.

Table 3.2.29 Detailed Use Case Description for UC-4.6:Get Location UC-4.6

Actors:	User, System
Trigger:	The user will click on "Get location" button
Preconditions:	User must have a device with location capabilities (e.g. GPS), and must have granted permission for the system to access their device's location.
Post-conditions:	System successfully retrieves the user's current location.
Normal Flow:	<ol style="list-style-type: none"> 1. User initiates the "Get Location" feature by clicking on the relevant button or selecting the relevant option in the menu. 2. System requests permission from the user to access their device's location. 3. User grants permission. 4. System retrieves the user's current location using their device's location capabilities. 5. System displays the user's current location on a map or as text.
Alternative Flows:	<p>2a. User denies permission.</p> <ol style="list-style-type: none"> 1. System displays an error message to the user explaining that permission is required to use the "Get Location" feature. 2. User can either grant permission or cancel the operation. <p>4a. System is unable to retrieve the user's location.</p> <ol style="list-style-type: none"> 1. System displays an error message to the user explaining that their location cannot be retrieved. 2. User can either try again later or contact support.

	<p>5a. User chooses to view their location in a different format (e.g. text vs. map).</p> <ol style="list-style-type: none"> 1. System provides the user with options for viewing their location in different formats 2. User selects the desired format. 3. System displays the user's location in the selected format.
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.5 Module 5: Content Privacy

Following are the use cases for Content Privacy Module.

3.2.5.1 UC-5.1: Add personal watermark

Table 3.2.30 represents the tabular description of the Add personal watermark use case. In this use case User will be able to add personal watermark on the content.

Table 3.2.30 Detailed Use Case Description for UC-5.1: Add personal watermark UC-5.1

Actors:	User
Trigger:	The user selects the "Add personal watermark" option
Preconditions:	<ol style="list-style-type: none"> 1. User is logged into the system 2. User has a personal watermark image file stored on their device
Post-conditions:	The user has a file with a personal watermark added to it.
Normal Flow:	<ol style="list-style-type: none"> 1. User selects the image(s) they want to watermark 2. User selects the option to add a watermark to the selected image(s) 3. System prompts user to upload their personal watermark image file 4. User selects the personal watermark image file from their device 5. System adds the personal watermark to the selected image(s) at the position specified by the user 6. User previews the watermarked image(s) to ensure the watermark is positioned correctly 7. User confirms the watermarked image(s) are acceptable and selects the

	option to save the watermarked image(s) to their account on the system 8. System saves the watermarked image(s) to the user's account
Alternative Flows:	3a. The user chooses not to upload a watermark and instead selects a default watermark from a list. 5a. The user chooses to have the watermark automatically placed in a default location and size. 5b. The user chooses to have the watermark tiled across the file.
Exceptions:	1a. The user does not have an image file to add a watermark. 4a. The preview image does not accurately reflect the final image with the watermark added. 5a. The user does not have permission to save the image file with the added watermark.
Business Rule:	N/A
Assumptions:	1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.5.2 UC-5.2: Protect personal data

Table 3.2.31 represents the tabular description of the Protect personal data use case. This use case provide enhanced privacy protections for users' personal data

Table 3.2.31 Detailed Use Case Description for UC-5.2: Protect personal data UC-5.2

Actors:	User
Trigger:	User enters personal data into the app
Preconditions:	Users must be registered and logged in to News Wave
Post-conditions:	User's personal data is protected and used only as intended
Normal Flow:	1. User is presented with options for controlling who can view their personal data 2. User selects appropriate privacy settings 3. App ensures that personal data is encrypted and used only for its intended purpose
Alternative Flows:	1. If user selects too-restrictive privacy settings, app notifies them of potential consequences (e.g., inability to connect with other users) 2. If app detects unauthorized access to personal data, it notifies the user and takes appropriate security measures

Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.5.3 UC-5.3: Share Private Files

Table 3.2.32 represents the tabular description of the Share Private Files use case. This usecase will allow users to share files privately and securely.

Table 3.2.32 Detailed Use Case Description for UC-5.3: Share Private Files UC-5.3

Actors:	User
Trigger:	User selects "share file" from the app menu on selling.
Preconditions:	Users must be registered and logged in to News Wave
Post-conditions:	Users can engage in private file sharing with end-to-end encryption
Normal Flow:	<ol style="list-style-type: none"> 1. User selects recipient(s) for file 2. User selects file to share and encrypts it 3. Recipient(s) receive and decrypt file 4. Users can get payment from the recipient.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.5.4 UC-5.4: Secure Messaging

Table 3.2.33 represents the tabular description of the Secure Messaging use case. This usecase allow users to exchange messages securely and privately

Table 3.2.33 Detailed Use Case Description for UC-5.4: Secure Messaging UC-5.4

Actors:	User
Trigger:	User selects "send message" from the app menu
Preconditions:	Users must be registered and logged in to News Wave
Post-conditions:	Users can engage in secure conversation with end-to-end encryption
Normal Flow:	<ol style="list-style-type: none">1. User selects recipient(s) for message2. User writes and sends encrypted message3. Recipient(s) receive and decrypt message4. Users can engage in secure conversation
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none">1. User knows the basic knowledge of using smart phones and web applications.2. User understands English language

3.2.5.5 UC-5.5: Access Restriction

Table 3.2.34 represents the tabular description of the Access Restriction use case. This use case restricts access to certain areas of a website or application.

Table 3.2.34 Detailed Use Case Description for UC-5.5: Access Restriction UC-5.5

Actors:	News Wave
Trigger:	User enters personal data into the app
Preconditions:	Users have different levels of access to the website or application
Post-conditions:	Users can only access areas that they have permission to
Normal Flow:	<ol style="list-style-type: none">1. User logs in to the website or application.2. Depending on their permissions, User can access certain areas of the website or application.3. If User tries to access an area they do not have permission to, they are denied access.
Alternative Flows:	N/A

Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.6 Module 6: Journalist Hiring

Following are the use cases for Journalist Hiring Module.

3.2.6.1 UC-6.1: Post Job

Table 3.2.35 represents the tabular description of the Post Job use case. This use case will allow Channel's HR team to create and publish job postings for journalist positions

Table 3.2.35 Detailed Use Case Description for UC-6.1: Post Job UC-6.1

Actors:	Channel HR team
Trigger:	HR team selects "create job posting" from the app menu
Preconditions:	HR team must have identified the need to hire journalists
Post-conditions:	HR team has published a job posting for journalist positions and potential candidates are aware of the opportunity
Normal Flow:	<ol style="list-style-type: none"> 1. HR team enters job posting details, such as job title, description, required qualifications, and application instructions 2. System saves the job posting and publishes it on News Wave's website and other relevant job boards 3. System sends job posting notifications to potential candidates who have subscribed to News Wave's job alerts
Alternative Flows:	<ol style="list-style-type: none"> 1. If HR team needs to update or remove a job posting, they can do so through the app 2. If HR team wants to promote a job posting through social media or other channels, they can share the job posting link through the app 3. If a candidate has questions about the job posting or application process, they can contact HR team through the app or website
Exceptions:	N/A

Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.6.2 UC-6.2: Submit Application

Table 3.2.36 represents the tabular description of the Submit Application use case. This use case will allow potential candidates to apply for journalist positions posted by different channels.

Table 3.2.36 Detailed Use Case Description for UC-6.2: Submit Application UC-6.2

Actors:	User
Trigger:	User selects "apply now" on the job posting or selects the job posting from their saved job searches
Preconditions:	Channels must have posted job openings for journalist positions on the app or website
Post-conditions:	User have applied for journalist positions and HR team can review the applications and move forward with the hiring process
Normal Flow:	<ol style="list-style-type: none"> 1. User enters their contact information, resume/CV, and cover letter 2. System confirms receipt of the application and sends a notification to the channels. 3. HR team reviews the application and contacts the user for further consideration or to schedule an interview
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.6.3 UC-6.3: Evaluate and Hire Candidate

Table 3.2.37 represents the tabular description of the Evaluate and Hire Candidate use case. This use case will allow channel's HR team to evaluate candidate applications and make informed hiring decisions

Table 3.2.37 Detailed Use Case Description for UC-6.3: Evaluate and Hire Candidate

Actors:	Channels HR Team
Trigger:	HR team selects "review applications" from the app menu
Preconditions:	HR team must have received candidate applications
Post-conditions:	HR team selects and hires the most qualified candidate for the journalist position
Normal Flow:	<ol style="list-style-type: none">1. HR team reviews candidate applications and evaluates them based on predetermined criteria (e.g., education, experience, skills)2. HR team contacts top candidates to schedule interviews3. HR team conducts interviews with candidates and evaluates them based on their responses and overall fit with the organization4. HR team makes a hiring decision and notifies the selected candidate
Alternative Flows:	<ol style="list-style-type: none">1. If HR team needs more information from a candidate, they can request it through the app2. If a candidate declines an interview or job offer, HR team can continue evaluating other candidates
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none">1. User knows the basic knowledge of using smart phones and web applications.2. User understands English language

3.2.6.4 UC-6.4: Screen out and Shortlist candidate

Table 3.2.38 represents the tabular description of the Screen out and Shortlist candidateuse case. This usecase will allow HR team to screen and shortlist journalist candidates based on their qualifications and experience

Table 3.2.38 Detailed Use Case Description for UC-6.4: Screen out and Shortlist candidate

Actors:	Channels HR Team
Trigger:	HR team selects "screen candidates" from the app menu
Preconditions:	HR team must have received candidate applications

Post-conditions:	Hired journalists and HR team can communicate efficiently and effectively through the app
Normal Flow:	<ol style="list-style-type: none"> 1. HR team reviews candidate applications and screens them based on predetermined criteria (e.g., education, experience, skills) 2. HR team shortlists candidates who meet the criteria for further evaluation 3. HR team contacts shortlisted candidates to schedule interviews
Alternative Flows:	<ol style="list-style-type: none"> 1. If HR team needs more information from a candidate, they can request it through the app 2. If a candidate declines an interview, HR team can continue evaluating other shortlisted candidates
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. HR team has a shortlist of qualified journalist candidates for further evaluation and interview

3.2.6.5 UC-6.5: Chat Service

Table 3.2.39 represents the tabular description of the Chat Service use case. This use case will allow communication between hired journalists and HR team

Table 3.2.39 Detailed Use Case Description for UC-6.5:Chat Service UC-6.5

Actors:	Channels HR Team
Trigger:	Journalist logs into the app and selects the communication service
Preconditions:	Journalists must have been hired by Channels.
Post-conditions:	Hired journalists and HR team can communicate efficiently and effectively through the app
Normal Flow:	<ol style="list-style-type: none"> 1. Journalist can send messages to HR team regarding work-related issues or concerns 2. HR team can send messages to journalist regarding their work performance, assignments, or any other relevant matters 3. The app keeps track of the communication history between journalist and HR team for reference
Alternative Flows:	<ol style="list-style-type: none"> 1. If HR team needs to communicate with multiple journalists, they can send a message to a group of journalists at once 2. If HR team needs to schedule a meeting with a journalist, they can use

	<p>the app to arrange a time and date</p> <p>3. If journalist has an urgent matter that requires immediate attention, they can contact HR team directly through the app or by phone</p>
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> User knows the basic knowledge of using smart phones and web applications. User understands English language

3.2.7 Module 7: Multimedia Upscaling

Following are the use cases for Multimedia Upscaling Module.

3.2.7.1 UC-7.1: Improve Image Quality

Table 3.2.40 represents the tabular description of the Improve Image Quality use case. In this use case the user can enhance the quality of images uploaded by users

Table 3.2.40 Detailed Use Case Description for UC-7.1: Improve Image Quality UC-7.1

Actors:	User, News Wave
Trigger:	User click on “Enhance image”
Preconditions:	User uploads image
Post-conditions:	Enhanced image is available on News Wave
Normal Flow:	<ol style="list-style-type: none"> User uploads an image to News Wave. Image enhancement tool is used to improve the clarity, color, and sharpness of the image. Enhanced image is available for viewing and analysis on News Wave.
Alternative Flows:	If the image cannot be enhanced, the original image is used.
Exceptions:	Image enhancement tool fails to improve the quality of the image.
Business Rule:	N/A

Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language
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3.2.7.2 UC-7.2: Compare Image

Table 3.2.41 represents the tabular description of the Compare Image use case. In this use case allow users to compare enhanced images to original images

Table 3.2.41 Detailed Use Case Description for UC-7.2: Compare Image UC-7.2

Actors:	User, News Wave
Trigger:	User click on “Compare image”
Preconditions:	Enhanced images are available on News Wave
Post-conditions:	Comparison images are available for viewing
Normal Flow:	<ol style="list-style-type: none"> 1. User selects an enhanced image to compare. 2. Image enhancement tool is used to display the original image and the enhanced image side by side. 3. Comparison images are available for viewing and analysis on News Wave.
Alternative Flows:	If the original image cannot be retrieved, the comparison image is not available.
Exceptions:	Image enhancement tool fails to display the comparison images.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.7.3 UC-7.3: Enhance Accessibility

Table 3.2.42 represents the tabular description of the Enhance Accessibility use case. In this use case Improve the accessibility of images for visually impaired users

Table 3.2.42 Detailed Use Case Description for UC-7.3: Enhance Accessibility UC-7.3

Actors:	User, News Wave
Trigger:	User click on “Accessibility”
Preconditions:	User requests accessibility enhancements for an image

Post-conditions:	Enhanced image with accessibility features is available for viewing
Includes:	N/A
Normal Flow:	<ol style="list-style-type: none"> 1. User requests accessibility enhancements for an image on News Wave. 2. Image enhancement tool is used to add accessibility features to the image, such as alt text or audio descriptions. 3. Enhanced image with accessibility features is available for viewing on News Wave.
Alternative Flows:	If the image cannot be enhanced for accessibility, the original image is used.
Exceptions:	Image enhancement tool fails to add accessibility features to the image.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.7.4 UC-7.4: Improve Video Quality

Table 3.2.43 represents the tabular description of the Improve Video Quality use case. In this use case Enhance the quality of videos uploaded by users

Table 3.2.43 Detailed Use Case Description for UC-7.4:Improve Video Quality UC-7.4

Actors:	User, News Wave
Trigger:	User click on “Enhance Video”
Preconditions:	User uploads video
Post-conditions:	Enhanced video is available on News Wave
Includes:	N/A
Normal Flow:	<ol style="list-style-type: none"> 1. User uploads a video to News Wave. 2. Video enhancement tool is used to improve the clarity, color, and sharpness of the video. 3. Enhanced video is available for viewing and analysis on News Wave
Alternative Flows:	If the video cannot be enhanced, the original video is used.
Exceptions:	Video enhancement tool fails to improve the quality of the video.

Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.7.5 UC-7.5: Edit Content

Table 3.2.44 represents the tabular description of the Edit Content use case. In this use case Allow users to edit content uploaded to News Wave

Table 3.2.44 Detailed Use Case Description for UC-7.5:Edit Content UC-7.5

Actors:	User
Trigger:	User click on “Edit content”
Preconditions:	User uploads content to News Wave.
Post-conditions:	Edited content is available on News Wave
Normal Flow:	<ol style="list-style-type: none"> 1. User selects a content to edit on News Wave. 2. Video and image editing tool is used to trim, cut, add text, or add effects to the content. 3. Edited content is saved and available for viewing on News Wave.
Alternative Flows:	If the content cannot be edited, the original content is used.
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.7.6 UC-7.6: Add background Audio

Table 3.2.45 represents the tabular description of the Add background Audio use case. In this use case Allow users to add background audio to video content uploaded to News Wave

Table 3.2.45 Detailed Use Case Description for UC-7.6: Add background Audio UC-7.6

Actors:	User
Trigger:	User click on “Edit content”

Preconditions:	User uploads a video to News Wave
Post-conditions:	Video with background audio is available on News Wave
Normal Flow:	<ol style="list-style-type: none"> 1. User selects a video to add background audio on News Wave. 2. User selects an audio file to add as background audio. 3. Audio file is uploaded to News Wave. 4. Audio file is synced with the video content using the video editing tool. 5. Edited video with background audio is saved and available for viewing on News Wave.
Alternative Flows:	If the audio file cannot be uploaded or synced with the video content, the original video without background audio is used.
Exceptions:	Audio file fails to upload or sync with the video content
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.8 Module 8: Payment and Bidding

Following are the use cases for Payment and bidding Module.

3.2.8.1 UC-8.1: Create Bid

Table 3.2.46 represents the tabular description of the Create Bid use case. In this use case Allows a bidder to create a bid for the content.

Table 3.2.46 Detailed Use Case Description for UC-8.1: Create Bid UC-8.1

Actors:	Channels bidding team
Trigger:	The bidder is authenticated and has an active account.
Preconditions:	Journalists must have been hired by Channels.
Post-conditions:	A bid has been created by the channel bidding team.

Normal Flow:	<ol style="list-style-type: none"> 1. The bidder selects a content to bid on. 2. The bidder enters their maximum bid amount. 3. The bidder confirms their bid. 4. The bids would be visible to the user and he can select the desired bid.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 3. User knows the basic knowledge of using smart phones and web applications. 4. User understands English language

3.2.8.2 UC-8.2: Create Payment Method

Table 3.2.47 represents the tabular description of the Create Payment Method use case. In this use case The user wants to add a new payment method to their account, such as a credit card or bank account.

Table 3.2.47 Detailed Use Case Description for UC-8.2: Create Payment Method UC-8.2

Actors:	User
Trigger:	User will click on "Payment method" button.
Preconditions:	The user is logged into their account and has navigated to the "Payment Method" section of their account settings.
Post-conditions:	A payment method has been added to the user account.
Normal Flow:	<ol style="list-style-type: none"> 1. The user selects the "Add Payment Method" option within the "Payment Method" section of their account settings. 2. The system presents the user with a form to enter their payment information, such as the credit card number, expiration date, and billing address. 3. The user fills out the form with their payment information and clicks the "Add Payment Method" button to submit the information to the system. 4. The system verifies the payment information and adds the new payment method to the user's account. 5. The system presents a confirmation message to the user indicating that their payment method has been successfully added to their account.

Alternative Flows:	<p>2a. If the user selects a payment method that is already associated with their account, the system displays an error message and prompts the user to select a different payment method or edit the existing payment method.</p> <p>3a. If the user enters invalid payment information, such as an expired credit card or incorrect billing address, the system displays an error message and prompts the user to correct the information before submitting the form.</p> <p>4a. If the system is unable to verify the payment information, such as if the credit card is declined or the bank account is closed, the system displays an error message and prompts the user to enter a different payment method.</p>
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.8.3 UC-8.3: Create Payment History

Table 3.2.48 represents the tabular description of the Create Payment History use case. In this use case The user wants to view a history of their past payments, such as a list of all the sales they've made using their account's payment methods.

Table 3.2.48 Detailed Use Case Description for UC-8.3: Create Payment History UC-8.3

Actors:	User
Trigger:	User will click on "Payment History"
Preconditions:	The user is logged into their account and has navigated to the "Payment History" section of their account settings.
Post-conditions:	The user can view a list of their past payments and related details, such as transaction date, amount, and payment method used.
Normal Flow:	<ol style="list-style-type: none"> 1. The user selects the "Payment History" option within the "Account Settings" section of their account. 2. The system retrieves and displays a list of the user's past payments, sorted by date or another relevant criteria. 3. The user can select a specific payment from the list to view more details, such as the transaction date, amount, and payment method used. 4. The user can also filter the list of payments based on various criteria, such as date range, payment method, or transaction status.
Alternative Flows:	<p>2a. If the user has not made any payments using their account, the system displays a message indicating that no payment history is available.</p>

	<p>3a. If the user selects a payment from the list that is no longer available or has been deleted, the system displays an error message and prompts the user to select a different payment to view.</p> <p>4a. If the user applies a filter that results in an empty list of payments, the system displays a message indicating that no payments match the selected criteria.</p>
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.8.4 UC-8.4: Alert on Payment statuses

Table 3.2.49 represents the tabular description of the Alert on Payment statuses use case. In this use case The system wants to notify users of changes to their payment status, such as when a payment has been received or declined, or when a subscription or membership is about to expire.

Table 3.2.49 Detailed Use Case Description for UC-8.4: Alert on Payment statuses UC-8.4

Actors:	User, News Wave
Trigger:	User will click on “Give rating”
Preconditions:	The user has a payment account set up on the application, and the application allows for alerts to be provided on payment statuses
Post-conditions:	The user receives an alert on their payment status and can take appropriate action as needed.
Normal Flow:	<ol style="list-style-type: none"> 1. The system detects a change in the user's payment status, such as when a payment is received, declined, or refunded, or when a subscription or membership is about to expire. 2. The system sends an alert to the user via email, text message, or another preferred communication channel, informing them of the change in their payment status and providing instructions or next steps as needed. 3. The user receives the alert and takes appropriate action, such as updating their payment information, renewing their subscription, or contacting customer support for assistance.
Alternative Flows:	<p>1a. If the system is unable to detect a change in the user's payment status, such as due to a technical error or network interruption, the system may retry the operation or alert the user of the issue.</p>

	<p>2a. If the user has opted out of receiving payment alerts, the system may skip this step and instead provide the user with a summary of their payment status during their next login or account check-in.</p> <p>3a. If the user encounters difficulties in taking appropriate action based on the alert, such as if the instructions provided are unclear or if the user needs further assistance, the system may provide additional support options, such as live chat or phone support.</p>
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.8.5 UC-8.5: Bidding Updates

Table 3.2.50 represents the tabular description of the Bidding Updates use case. In this use case The system will notify users of updates on the bids.

Table 3.2.50 Detailed Use Case Description for UC-8.5: Bidding Updates UC-8.5

Actors:	User, News Wave
Trigger:	User will click on “Bidding status”
Preconditions:	<ol style="list-style-type: none"> 1. User must have an account in application. 2. User must be logged into the application
Post-conditions:	The user receives an alert on their bidding status and can take appropriate action as needed.
Normal Flow:	<ol style="list-style-type: none"> 1. The system detects a change in the user's bidding status 2. The system sends an alert to the user via email, text message, or another preferred communication channel, informing them of the change in their bidding status and providing instructions or next steps as needed. 3. The user receives the alert and takes appropriate action
Alternative Flows:	<p>1a. If the system is unable to detect a change in the user's bidding status, such as due to a technical error or network interruption, the system may retry the operation or alert the user of the issue.</p> <p>2a. If the user has opted out of receiving bidding updates, the system may skip this step and instead provide the user with a summary of their bidding status during their next login or account check-in.</p> <p>3a. If the user encounters difficulties in taking appropriate action based on</p>

	the alert, such as if the instructions provided are unclear or if the user needs further assistance, the system may provide additional support options, such as live chat or phone support.
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User knows the basic knowledge of using smart phones and web applications. 2. User understands English language

3.2.9 Module 9: Notification Management

Following are the use cases for Notification management Module.

3.2.9.1 UC-9.1: Push Notification

Table 3.2.51 represents the tabular description of the Push Notification use case. In this use case News Wave will send push notifications of default milestones(weekly/monthly) or customized notifications set by user

Table 3.2.51 Detailed Use Case Description for UC-9.1: Push Notification UC-9.1

Actors:	System
Trigger:	When a milestone (for e.g., likes/followers etc.) is reached
Preconditions:	<ol style="list-style-type: none"> 1. User must have posted at least one content. 2. User must have enabled the notifications.
Post-conditions:	N/A
Normal Flow:	<ol style="list-style-type: none"> 1. User will click on “Enable push notification” button. 2. User will click on “Add milestone”. 3. Application validates the milestone. 4. Application monitors current statistics and milestones. 5. Application will check if current statistics and milestones are equal. 6. Application push notification is generated.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A

Assumptions:	N/A
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3.2.9.2 UC-9.2: Send Event Notification

Table 3.2.52 represents the tabular description of the Send Event Notification use case. In this use case Users will be able to get notifications for events.

Table 3.2.52 Detailed Use Case Description for UC-9.2: Send Event Notification UC-9.2

Actors:	User, News Wave
Trigger:	User clicks on “Customize Notifications” button
Preconditions:	1. User must have enabled the notifications. 2. User must have subscribed at least one service.
Post-conditions:	User will receive notification when an event will occur in its area.
Normal Flow:	1. User will click on “Dashboard” from within application. 2. User will be shown list of subscriptions. 3. User will click on desired subscription from list. 4. User will click on “Customize Notifications” button. 5. User will click on “Event notification” and turn it on
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	1. User has basic knowledge of using web/android application. 2. User understands English language.

3.2.9.3 UC-9.3: Enable / Disable Notification

Table 3.2.53 represents the tabular description of the Enable / Disable Notification use case. In this use case Users will be able to enable or disable notifications.

Table 3.2.53 Detailed Use Case Description for UC-9.3: Enable / Disable Notification

Actors:	User
Trigger:	Users will toggle “Notifications” switch button
Preconditions:	1. User must be signed into the application.

Post-conditions:	Notifications of the application will be toggled.
Normal Flow:	1. User will click on “Settings” button. 2. User will click enable toggle by the “Notifications” switch button.
Alternative Flows:	1. User will click on “Settings” button. 2. User will click disable toggle by the “Notifications” switch button
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	11. User has basic knowledge of using web/android application. 12. User understands English language.

3.2.9.4 UC-9.3: FAQ'S

Table 3.2.54 represents the tabular description of the FAQ'S use case. In this use case Users will be able to view FAQ's questions.

Table 3.2.54 Detailed Use Case Description for UC-9.3: FAQ'S UC-9.3

Actors:	User
Trigger:	Users will click “FAQ’s” button in settings.
Preconditions:	3. User must be signed into the application.
Post-conditions:	Dark mode of the app will be toggled.
Normal Flow:	1. User will click on “Settings” button. 2. User will click on “FAQ” button. 3. System will display a list of questions and answers for the user.
Alternative Flows:	N/A
Exceptions:	N/A
Business Rule:	N/A
Assumptions:	1. User has basic knowledge of using web/android application. 2. User understands English language.

3.2.9.5 UC-9.4: Report a Problem

Table 3.2.55 represents the tabular description of the Report a Problem use case. In this use case Users will be able to report a problem related to the system.

Table 3.2.55 Detailed Use Case Description for UC-9.4: Report a Problem UC-9.4

Actors:	User
Trigger:	Users will click “Report a Problem” button in settings.
Preconditions:	4.User must be signed into the application.
Post-conditions:	User will successfully report a problem.
Normal Flow:	<ol style="list-style-type: none"> 1. User will click on “Settings” button. 2. User will click “Report a Problem” button. 3. User will select a category of a problem in the “Category” field. 4. User will write “Subject of Problem” in text field. 5. User will write description of a Problem in text field. 6. User will click on “Report” button.
Alternative Flows:	N/A
Exceptions:	<p>3a. In step 3 of normal flow, If the user has not selected any category:</p> <ol style="list-style-type: none"> 1. System will display an error message “Select a Category. Chose others if not specified”. 2. System will return to step 3. <p>4a. In step 4 of normal flow, if the Subject text field is empty:</p> <ol style="list-style-type: none"> 1. System will display an error message “this field cannot be empty.” 2. System will return to step 4. <p>5a. In step 5 of normal flow, if the Description text field is empty:</p> <ol style="list-style-type: none"> 1. System will display an error message “This field cannot be empty.” 2. System will return to step 5.
Business Rule:	N/A
Assumptions:	<ol style="list-style-type: none"> 1. User has basic knowledge of using web/android application. 2. User understands English language.

3.3 Event Response Table

This Section shows the event responses table of News Wave.

3.3.1 Module 2: Content Management

Table 3.3.1 shows Content Management module which has the following events and responses

Table 3.3.1: Event-Response Table for content Management

Event	System State	Response
User Clicks on the Search icon	App is on Home screen	A new screen search screen will appear allowing user to enter data to search.
User click on the home icon	App is on the profile screen	Home screen will open allowing user to view other content
User clicks on the profile icon	App is on Home screen	Profile Screen will appear allowing the user to view his uploaded content
User Clicks on the camera icon	App is on Home screen	The phone camera will open allowing the user to record video
User click on the download button at the Home Screen	App is on Home screen	The app will switch to a new screen which will show the user price of the content and allowing him to buy content.

3.3.2 Module 3: Content Moderation

Table 3.3.2 represents Content moderation module which has the following events and responses

Table 3.3.2: Event-Response Table for a content moderation

Event	System State	Response
User clicks on the upload button	Users is in the upload content screen	The system will scan the content for any misinformation or inappropriate content if it contains any such thing the system will not allow to post the content and send an alert message if the content is free of any troubles the content will be uploaded and give an alert message content uploaded successfully.

3.3.3 Module 4: Augmented Reality Aided Video Reporting:

Table 3.3.3 represents Augmented Reality Aided Video Reporting module which has the following events and responses

Table 3.3.3: Event-Response Table for AR Aided Video Recording

Event	System State	Response
Click on the Camera icon	App is in the home Screen	The Phone Camera will open.
Click on the record button	App is in the phone camera Screen	Video will start recording
Click on the filters icon next to the record button	App is in the phone camera Screen	Filters will pop up swipe to apply filter of your choice.
Click on the Script option on the screen	App is in the phone camera Screen	A new screen will open that will allow to add script for aiding in recording video
Click on the record button again	App is in the phone camera Screen	The video will stop recording and will give the option to upload or record again.

3.4 Functional Requirements

This Section Shows the Functional Requirements for News Wave.

3.4.1 Functional Requirement for User Management

Below are the Functional Requirements for User Profiling module.

3.4.1.1 FR-1.1.1: Enter Personal Information

Table 3.4.1 represents the tabular description of the Enter Personal Information functional requirement.

Table 3.4.1: Enter Personal Information

Identifier	FR-1.1.1
Title	Enter Personal Information
Requirement	Users will be able to enter their email, password and phone number for signing up.
Source	Student
Rationale	This requirement will facilitate the user to create an account.
Business Rule (if required)	N/A

Dependencies	N/A
Priority	High

3.4.1.2 FR-1.1.2: Verify Email

Table 3.4.2 represents the tabular description of the Verify Email functional requirement.

Table 3.4.2: Verify Email

Identifier	FR-1.1.2
Title	Verify Email Button
Requirement	User will be able verify their email by clicking verify button.
Source	Supervisor
Rationale	This requirement will facilitate the user to verify their email address.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1
Priority	High

3.4.1.3 FR-1.1.3: Verify Phone number

Table 3.4.3 represents the tabular description of the Verify Phone number functional requirement.

Table 3.4.3: Verify Phone number

Identifier	FR-1.1.3
Title	Verify Phone Number Button
Requirement	User will be able verify their phone number by clicking verify button.
Source	Supervisor
Rationale	This requirement will facilitate the user to verify their phone number.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1
Priority	High

3.4.1.4 FR-1.1.4: Select Country

Table 3.4.4 represents the tabular description of the Select Country functional requirement.

Table 3.4.4: Select Country

Identifier	FR-1.1.4
Title	Select Country
Requirement	User will be able to select country from dropdown menu for signing up.
Source	Student
Rationale	This requirement will facilitate the user to create an account.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.5 FR-1.1.5: Select City

Table 3.4.5 represents the tabular description of the Select City functional requirement.

Table 3.4.5: Select City

Identifier	FR-1.1.5
Title	Select City
Requirement	User will be able to select city from dropdown menu for signing up.
Source	Student
Rationale	This requirement will facilitate the user to create an account.
Business Rule (if required)	N/A
Dependencies	FR-1.1.4
Priority	High

3.4.1.6 FR-1.1.6: Enter 6 Digit Code (Email verification)

Table 3.4.6 represents the tabular description of the Enter 6 digit Code functional requirement.

Table 3.4.6: Enter 6-Digits Code (Email Verification)

Identifier	FR-1.1.6
Title	Enter 6-Digits Code (Email Verification)
Requirement	User will be able to verify email address by entering 6-digits code received in email, in text filed for signing up.
Source	Student
Rationale	This requirement will facilitate the user to verify their email and create an account.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1
Priority	High

3.4.1.7 FR-1.1.7: Enter 6 Digit Code (phone number Verification)

Table 3.4.7 represents the tabular description of the Enter 6 Digit Code functional requirement.

Table 3.4.7: Enter 6-Digits Code (Phone Number Verification)

Identifier	FR-1.1.7
Title	Enter 6-Digits Code (Phone Number Verification)
Requirement	User will be able to verify phone number by entering 6-digits code received in SMS, in text filed for signing up.
Source	Student
Rationale	This requirement will facilitate the user to verify their phone number and create an account.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1
Priority	High

3.4.1.8 FR-1.2.1: Enter Email, Password

Table 3.4.8 represents the tabular description of the Enter Email, Password functional requirement.

Table 3.4.8: Enter Email and Password

Identifier	FR-1.2.1
Title	Enter Email, Password
Requirement	User will be able to enter their email in the text field to login the account.
Source	Student
Rationale	This requirement will facilitate the users to login to their account.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.9 FR-1.2.2: Login

Table 3.4.9 represents the tabular description of the Login functional requirement.

Table 3.4.9: Login

Identifier	FR-1.2.2
Title	Login
Requirement	User will be able to login their account by clicking “Login” button.
Source	Student
Rationale	This requirement will facilitate the users to login to their account.
Business Rule (if required)	N/A
Dependencies	FR-1.2.1
Priority	High

3.4.1.10 FR-1.3.1: Profile

Table 3.4.10 represents the tabular description of the Profile functional requirement.

Table 3.4.10: Profile

Identifier	FR-1.3.1
Title	Profile
Requirement	User will be able to click on “Profile” icon button to access their profile.
Source	Student
Rationale	This requirement will facilitate the users to access their profile credentials.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.11 FR-1.3.2: Edit Full name

Table 3.4.11 represents the tabular description of the Edit Full name functional requirement.

Table 3.4.11: Edit Full Name

Identifier	FR-1.3.2
Title	Edit Full Name
Requirement	User will be able to edit their Full Name for previously added full name.
Source	Student
Rationale	This requirement will facilitate the users to confirm the change of their full name.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1
Priority	High

3.4.1.12 FR-1.3.3: Edit Email Address

Table 3.4.12 represents the tabular description of the Edit Email Address functional requirement.

Table 3.4.12: Edit Email Address

Identifier	FR-1.3.3
Title	Edit Email Address
Requirement	User will be able to edit their email address for the previously added email address.
Source	Student
Rationale	This requirement will facilitate the users to confirm the change of their email address.
Business Rule (if required)	N/A
Dependencies	FR-1.1.2
Priority	High

3.4.1.13 FR-1.3.4: Edit Phone Number

Table 3.4.13 represents the tabular description of the Edit Phone Number functional requirement.

Table 3.4.13: Edit Phone Number

Identifier	FR-1.3.4
Title	Edit Phone Number
Requirement	User will be able to edit their phone number for the previously added phone number.
Source	Student
Rationale	This requirement will facilitate the users to confirm the change of their phone number.
Business Rule (if required)	N/A
Dependencies	FR-1.1.4
Priority	High

3.4.1.14 FR-1.3.7: Update Profile

Table 3.4.14 represents the tabular description of the Update Profile functional requirement.

Table 3.4.14: Update Profile

Identifier	FR-1.3.7
Title	Update Profile
Requirement	User will be able to update the changes in the information in profile section.
Source	Student
Rationale	This requirement will facilitate the users to update information in their profile
Business Rule (if required)	N/A
Dependencies	FR-1.4.1, FR-1.4.2, FR-1.4.3, FR-1.4.4, FR-1.4.5, FR-1.4.6, FR-1.4.7
Priority	High

3.4.1.15 FR-1.4.1: Forgot Password Button

Table 3.4.15 represents the tabular description of the Forgot Password Button functional requirement.

Table 3.4.15: Forgot Password Button

Identifier	FR-1.4.1
Title	Forgot Password Button
Requirement	User will be able to reset their account password.
Source	Supervisor
Rationale	This requirement will facilitate the users to reset the password for account.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.16 FR-1.4.2: Enter Email

Table 3.4.16 represents the tabular description of the Enter Email functional requirement.

Table 3.4.16: Enter Email

Identifier	FR-1.4.2
Title	Enter Email
Requirement	User will be able to enter their email in the text field for resetting their account password
Source	Student
Rationale	This requirement will facilitate the users to receive 6-digits code for resetting their account password.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.17 FR-1.4.3: Enter 6-Digits Code

Table 3.4.17 represents the tabular description of the Enter 6-Digits Code functional requirement.

Table 3.4.17: Enter 6-Digits Code

Identifier	FR-1.4.3
Title	Enter 6-Digits Code
Requirement	User will be able to enter 6-digits code for confirmation received in their email.
Source	Student
Rationale	This requirement will facilitate the user to confirm their email address for resetting their account password.
Business Rule (if required)	N/A
Dependencies	FR-1.5.2
Priority	High

3.4.1.18 FR-1.5.1: Profile

Table 3.4.18 represents the tabular description of the Profile functional requirement.

Table 3.4.18: Profile

Identifier	FR-1.5.1
Title	Profile
Requirement	User will be able to click on “Profile” icon button to access their profile.
Source	Student
Rationale	This requirement will facilitate the users to access their profile credentials.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.19 FR-1.5.2: Delete Account

Table 3.4.19 represents the tabular description of the Delete Account functional requirement.

Table 3.4.19: Delete Account

Identifier	FR-1.5.2
Title	Delete Account Button
Requirement	User will be able to delete their account from the system by clicking delete account button.
Source	Supervisor
Rationale	This requirement will facilitate the users delete their account.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.20 FR-1.5.3: Confirm Password

Table 3.4.20 represents the tabular description of the Confirm Password functional requirement.

Table 3.4.20: Confirm Password

Identifier	FR-1.5.3
Title	Confirm Password
Requirement	User will be able to enter their password in the text field for deleting the account.
Source	Student
Rationale	This requirement will facilitate the user to make sure they are deleting their account not a third party.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.21 FR-1.5.4: Confirm

Table 3.4.21 represents the tabular description of the Confirm functional requirement.

Table 3.4.21: Confirm

Identifier	FR-1.5.4
Title	Confirm Button
Requirement	User will be able to delete their account by click “Confirm” button after entering their password
Source	Student
Rationale	This requirement will facilitate the users confirm their decision before deleting the account permanently.
Business Rule (if required)	N/A
Dependencies	FR-1.6.3
Priority	High

3.4.1.22 FR-1.6.1: Profile

Table 3.4.22 represents the tabular description of the Profile functional requirement.

Table 3.4.22: Profile

Identifier	FR-1.6.1
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Title	Profile
Requirement	User will be able to click on “Profile” icon button to access their profile.
Source	Student
Rationale	This requirement will facilitate the users to access their profile credentials.
Restrictions and Risk	N/A
Dependencies	N/A
Priority	High

3.4.1.23 FR-1.6.2: Deactivate Account

Table 3.4.23 represents the tabular description of the Deactivate Account functional requirement.

Table 3.4.23: Deactivate Account

Identifier	FR-1.6.2
Title	Deactivate Account Button
Requirement	User will be able to delete their account from the system by clicking delete account button.
Source	Student
Rationale	This requirement will facilitate the users delete their account.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.24 FR-1.6.3: Confirm Password

Table 3.4.24 represents the tabular description of the Confirm Password functional requirement.

Table 3.4.24: Confirm Password

Identifier	FR-1.6.3
Title	Confirm Password
Requirement	User will be able to enter their password in the text field for deactivating the account.

Source	Student
Rationale	This requirement will facilitate the user to make sure they are deactivating their account not a third party.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.25 FR-1.6.4: Confirm Button

Table 3.4.25 represents the tabular description of the Confirm Button functional requirement.

Table 3.4.25: Confirm Button

Identifier	FR-1.6.4
Title	Confirm Button
Requirement	User will be able to deactivate their account by click “Confirm” button after entering their password
Source	Student
Rationale	This requirement will facilitate the users confirm their decision before deactivating the account.
Business Rule (if required)	N/A
Dependencies	FR-1.7.3
Priority	High

3.4.1.26 FR-1.7.1: Update Profile Picture

Table 3.4.26 represents the tabular description of the Update Profile Picture functional requirement.

Table 3.4.26: Update Profile Picture

Identifier	FR-1.7.1
Title	Update Profile Picture Button
Requirement	User will be able to update their profile picture during sign in process.
Source	Supervisor

Rationale	This requirement will facilitate the users to setup their profile picture.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.27 FR-1.7.2: Select New Picture (Local Directory)

Table 3.4.27 represents the tabular description of the Select New Picture(local Directory) functional requirement.

Table 3.4.27: Select Picture (Local Directory)

Identifier	FR-1.7.2
Title	Select Picture (Local Directory)
Requirement	User will be able to select picture from their local directory.
Source	Student
Rationale	This requirement will facilitate the users to setup their profile picture via local directory.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.28 FR-1.7.3: Take New Photo

Table 3.4.28 represents the tabular description of the Take New Photo functional requirement.

Table 3.4.28: Take New Photo

Identifier	FR-1.7.3
Title	Take New Photo
Requirement	User will be able to take new picture from their device camera.
Source	Student
Rationale	This requirement will facilitate the users to setup their profile picture via device camera.

Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.29 FR-1.7.4: Save

Table 3.4.29 represents the tabular description of the Save functional requirement.

Table 3.4.29: Save

Identifier	FR-1.7.4
Title	Save Button
Requirement	User will be able to save the selected picture as profile picture.
Source	Student
Rationale	This requirement will facilitate the users to update their profile picture.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.30 FR-1.8.1: Activate Account

Table 3.4.30 represents the tabular description of the Activate Account functional requirement.

Table 3.4.30: Activate Account

Identifier	FR-1.8.1
Title	Activate Account Button
Requirement	User will be able to activate their account by clicking “Activate Account” button.
Source	Supervisor
Rationale	This requirement will facilitate the users activate their deactivated account.
Business Rule (if required)	N/A
Dependencies	N/A

Priority	High
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3.4.1.31 FR-1.8.2: Enter Email

Table 3.4.31 represents the tabular description of the Enter Email functional requirement.

Table 3.4.31: Enter Email

Identifier	FR-1.8.2
Title	Enter Email
Requirement	User will be able to enter email in the text field for activating their account.
Source	Student
Rationale	This requirement will facilitate the users activate their deactivated account.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.1.32 FR-1.8.3: Enter 6-Digits Code

Table 3.4.32 represents the tabular description of the Enter 6-Digits Code functional requirement.

Table 3.4.32: Enter 6-Digits Code

Identifier	FR-1.8.3
Title	Enter 6-Digits Code
Requirement	User will be able to enter 6-digits code sent to their email address.
Source	Student
Rationale	This requirement will facilitate the users activate their deactivated account.
Business Rule (if required)	N/A
Dependencies	FR-1.10.2
Priority	High

3.4.2 Functional Requirement for Content Moderation

Below are the Functional Requirements for Content Management module.

3.4.2.1 FR-2.1.1: Enter Full Name

Table 3.4.33 represents the tabular description of the Enter Full Name functional requirement.

Table 3.4.33: Enter Full Name

Identifier	FR-2.1.1
Title	Upload Photo
Requirement	User will be able to select the photos he wants to upload.
Source	Student
Rationale	This requirement will help users to upload content in the form of images.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.2 FR-2.1.2: Upload Video

Table 3.4.34 represents the tabular description of the Upload Video functional requirement.

Table 3.4.34: Upload Video

Identifier	FR-2.1.2
Title	Upload Video
Requirement	User will be able to select the video he wants to upload.
Source	Student
Rationale	This requirement will help users to upload content in the form of videos.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.3 FR-2.1.4: Upload Button

Table 3.4.35 represents the tabular description of the Upload Button functional requirement.

Table 3.4.35: Upload Button

Identifier	FR-2.1.4
Title	Upload Button
Requirement	User will be able to upload the selected content using this.
Source	Student
Rationale	This requirement will help users to upload the content they have selected.
Business Rule (if required)	N/A
Dependencies	FR-2.2.1, FR-2.1.2, FR-2.1.3
Priority	High

3.4.2.4 FR-2.2.1: Zoom In

Table 3.4.36 represents the tabular description of the Zoom In functional requirement.

Table 3.4.36: Zoom In

Identifier	1.2.1
Title	FR-2.2.1
Requirement	Zoom In
Source	User will be able to zoom in the content to see a specified portion.
Rationale	Student
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.2.5 FR-2.2.2: Zoom Out

Table 3.4.37 represents the tabular description of the Zoom Out functional requirement.

Table 3.4.37: Zoom Out

Identifier	FR-2.2.2
Title	Zoom Out
Requirement	User will be able to zoom out of the zoomed in content.
Source	Student
Rationale	This requirement will help users to zoom out of a content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.6 FR-2.2.3: Viewing Audience

Table 3.4.38 represents the tabular description of the Viewing Audience functional requirement.

Table 3.4.38: Viewing Audience

Identifier	FR-2.2.3
Title	Viewing Audience
Requirement	User will be able to select a specific audience that can view their content.
Source	Student
Rationale	This requirement will help users to specify an audience for which the content is meant for.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.2.7 FR-2.3.1: Edit Button

Table 3.4.39 represents the tabular description of the Edit Button functional requirement.

Table 3.4.39: Edit Button

Identifier	FR-2.3.1
Title	Edit Button
Requirement	User will be able to edit their already uploaded content.
Source	Student
Rationale	This requirement will help users to change the content they already uploaded.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.8 FR-2.3.2: Change Viewing Audience

Table 3.4.40 represents the tabular description of the Change Viewing Audience functional requirement.

Table 3.4.40: Change Viewing Audience

Identifier	FR-2.3.2
Title	Change Viewing Audience
Requirement	User will be able to change the selected audience that can view their content.
Source	Student
Rationale	This requirement will help users to change the audience for which the content is meant for.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.2.9 FR-2.3.3: Update Button

Table 3.4.41 represents the tabular description of the Update Button functional requirement.

Table 3.4.41: Update Button

Identifier	FR-2.3.3
Title	Update Button
Requirement	User will be able to save the changes after pressing the update button.
Source	Student
Rationale	This requirement will help users to save the changes after editing the content.
Business Rule (if required)	N/A
Dependencies	FR-2.2.1
Priority	High

3.4.2.10 FR-2.3.4: Delete Content

Table 3.4.42 represents the tabular description of the Delete Content functional requirement.

Table 3.4.42: Delete Content

Identifier	FR-2.3.4
Title	Delete Content
Requirement	User will be able to delete the content after uploading it.
Source	Student
Rationale	This requirement will help users to delete the content in case they want to remove it.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.11 FR-2.4.1: Increase Price

Table 3.4.43 represents the tabular description of the Increase Price functional requirement.

Table 3.4.43: Increase Price

Identifier	FR-2.4.1
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Title	Increase Price
Requirement	User will be able to increase the price of the content.
Source	Student
Rationale	This requirement will help users to increase the price of the content with ease.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.12 FR-2.4.3: Set Price Button

Table 3.4.44 represents the tabular description of the Set Price Button functional requirement.

Table 3.4.44: Set Price Button

Identifier	FR-2.4.3
Title	Set Price Button
Requirement	User will be able to set the price of the content using this button.
Source	Student
Rationale	This requirement will help users to set the price of the content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.13 FR-2.5.1: Bid Request Creation

Table 3.4.45 represents the tabular description of the Bid Request Creation functional requirement.

Table 3.4.45: Bid Request Creation

Identifier	FR-2.5.1
Title	Bid Request Creation

Requirement	Channel's Bidding Team can create a bid request for their content
Source	Student
Rationale	This requirement will facilitate the users to create bid for the content.
Business Rule (if required)	This is the core functionality of the feature, and must be included
Dependencies	N/A
Priority	High

3.4.2.14 FR-2.5.2: Proposal Submission

Table 3.4.46 represents the tabular description of the Enter Personal Information functional requirement.

Table 3.4.46: Proposal Submission

Identifier	FR-2.5.2
Title	Proposal Submission
Requirement	Bidders can submit proposals in response to bid requests
Source	Student
Rationale	This requirement will facilitate the users to submit proposal against the bids for their content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.15 FFR-2.5.3: Bid Requirement Specification

Table 3.4.47 represents the tabular description of the Enter Personal Information functional requirement.

Table 3.4.47: Bid Requirement Specification

Identifier	FR-2.5.3
Title	Bid Requirement Specification

Requirement	Content creators can specify bid requirements, such as minimum payment, deadline, and content specifications
Source	Student
Rationale	This requirement will facilitate the user to specify bid requirements.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.16 FR-2.5.4: Bid Request Viewing

Table 3.4.48 represents the tabular description of the Bid Request Viewing functional requirement.

Table 3.4.48: Bid Request Viewing

Identifier	FR-2.5.4
Title	Bid Request Viewing
Requirement	Bidders can view bid requests and requirements.
Source	Student
Rationale	This requirement will facilitate the users view the request and requirements of the bids.
Business Rule (if required)	N/A
Dependencies	FR-2.5.1
Priority	High

3.4.2.17 FR-2.5.5: Proposal Withdrawal

Table 3.4.49 represents the tabular description of the Proposal Withdrawal functional requirement.

Table 3.4.49: Proposal Withdrawal

Identifier	FR-2.5.5
Title	Proposal Withdrawal
Requirement	Bidders can withdraw their proposals before acceptance.

Source	Student
Rationale	This requirement will facilitate the Bidders to withdraw their bids when they are no more interested in the content.
Business Rule (if required)	N/A
Dependencies	FR-2.5.1
Priority	Medium

3.4.2.18 FR-2.6.1: Display Content List

Table 3.4.50 represents the tabular description of the Display Content List functional requirement.

Table 3.4.50: Display Content List

Identifier	FR-2.6.1
Title	Display Content List
Requirement	The app shall display a list of content created by other users, sorted by most recent
Source	Student
Rationale	Users want to quickly and easily find new content to view
Business Rule (if required)	The list must be limited to a reasonable number of entries
Dependencies	N/A
Priority	High

3.4.2.20 FR-2.6.2: Select Content

Table 3.4.51 represents the tabular description of the Select Content functional requirement.

Table 3.4.51: Select Content

Identifier	FR-2.6.2
Title	Select Content
Requirement	The app shall allow users to select a specific piece of content to view
Source	Student

Rationale	Users want to be able to choose which content they view
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.21 FR-2.6.3: Display Content

Table 3.4.52 represents the tabular description of the Display Content functional requirement.

Table 3.4.52: Display Content

Identifier	FR-2.6.3
Title	Display Content
Requirement	The app shall display the selected content, including any text, images, or videos that were included
Source	Student
Rationale	Users want to be able to see all aspects of the content
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.21 FR-2.6.4: Leave Comments

Table 3.4.53 represents the tabular description of the Leave Comments functional requirement.

Table 3.4.53: Leave Comments

Identifier	FR-2.6.4
Title	Leave Comments
Requirement	The app shall allow users to leave comments on the content they are viewing
Source	Student
Rationale	Users want to be able to engage with the content and provide feedback to other users

Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.22 FR-2.6.5: Login Prompt

Table 3.4.54 represents the tabular description of the Login Prompt functional requirement.

Table 3.4.54: Log In Prompt

Identifier	FR-2.6.5
Title	Log In Prompt
Requirement	The app shall prompt the user to log in before they can view other users' content if the user is not logged in
Source	Student
Rationale	Users want to access their own account to view content and leave comments
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.22 FR-2.6.6: Report Inappropriate Content

Table 3.4.55 represents the tabular description of the Report Inappropriate Content functional requirement.

Table 3.4.55: Report Inappropriate Content

Identifier	FR-2.6.6
Title	Report Inappropriate Content
Requirement	The app shall allow users to report inappropriate content to the app moderators
Source	Student
Rationale	Users want to help maintain a safe and appropriate community
Business Rule (if required)	N/A

Dependencies	N/A
Priority	High

3.4.2.23 FR-2.7.1: Search Bar

Table 3.4.56 represents the tabular description of the Search Bar functional requirement.

Table 3.4.56: Search Bar

Identifier	FR-2.7.1
Title	Search Bar
Requirement	The app shall have a search bar for users to enter their search queries
Source	Supervisor
Rationale	Users want to quickly and easily search for content
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.23 FR-2.7.2: Search Filters

Table 3.4.57 represents the tabular description of the Search Filters functional requirement.

Table 3.4.57: Search Filters

Identifier	FR-2.7.2
Title	Search Filters
Requirement	The app shall provide filters for users to refine their search results by category, date, location, and/or content type
Source	Student
Rationale	Users want to find content that is relevant to their interests
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.24 FR-2.7.3: Select Content

Table 3.4.58 represents the tabular description of the Select Content functional requirement.

Table 3.4.58: Select Content

Identifier	FR-2.7.3
Title	Select Content
Requirement	The app shall allow users to select a specific piece of content from the search results to view
Source	Student
Rationale	Users want to be able to choose which content they view
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.25 FR-2.7.4: Share Content

Table 3.4.59 represents the tabular description of the Share Content functional requirement.

Table 3.4.59: Share Content

Identifier	FR-2.7.4
Title	Share Content
Requirement	The app shall allow users to share the content they are viewing via social media or other channels
Source	Student
Rationale	Users want to be able to share content with their own network
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.26 FR-2.8.1: Content Review

Table 3.4.60 represents the tabular description of the Content Review functional requirement.

Table 3.4.60: Content Review

Identifier	FR-2.8.1
Title	Content Review
Requirement	The app shall provide a mechanism for users to review and rate the content uploaded by other users.
Source	Supervisor
Rationale	Users want to be able to provide feedback and help improve the quality of the content on the app.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.27 FR-2.8.2: Analysis Views of Content

Table 3.4.61 represents the tabular description of the Analysis Views of Content functional requirement.

Table 3.4.61: Analysis views of Content

Identifier	FR-2.8.2
Title	Analysis views of Content
Requirement	User will be able to track the number of views of uploaded content over time.
Source	Student
Rationale	This requirement will facilitate the users to analyze the number of views on its content with time.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.2.28 FR-2.8.3: Analysis Likes of Content

Table 3.4.62 represents the tabular description of the Analysis Likes of Content functional requirement.

Table 3.4.62: Analysis Likes of Content

Identifier	FR-2.8.3
Title	Analysis Likes of Content
Requirement	User will be able to track the likes on uploaded content over time.
Source	Student
Rationale	This requirement will facilitate the users to analyze the number of likes on its content with time.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.2.29 FR-2.8.4: Analysis Reach of Content

Table 3.4.63 represents the tabular description of the Analysis Reach of Content functional requirement.

Table 3.4.63: Analysis Reach of Content

Identifier	FR-2.8.4
Title	Analysis Reach of Content
Requirement	User will be able to track the reach of the content over time.
Source	Student
Rationale	This requirement will facilitate the users to analyze the number of likes on its content with time.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.3 Functional Requirements for Content Moderation

Below are the Functional Requirements for Content Moderation module.

3.4.3.1 FR-3.1.1: Analyze Content

Table 3.4.64 represents the tabular description of the Analyze Content functional requirement.

Table 3.4.64: Analyze Content

Identifier	FR-3.1.1
Title	Analysis of User-Uploaded Content
Requirement	The user must be able to perform a thorough analysis of the user-uploaded content to verify its accuracy and credibility.
Source	Student
Rationale	Ensures that the Button is able to maintain its reputation.
Business Rule (if required)	The accuracy of the analysis is dependent on the quality of the analysis algorithms, which may result in inaccurate analysis results. Additionally, performing a thorough analysis may cause delays in the processing of user-generated content.
Dependencies	N/A
Priority	High

3.4.3.2 FR-3.1.2: Detect Plagiarism

Table 3.4.65 represents the tabular description of the Detect Plagiarism functional requirement.

Table 3.4.65: Detect Plagiarism

Identifier	FR-3.1.2
Title	Detection of Plagiarism
Requirement	The user should be able to identify any plagiarism or copyright infringement in the uploaded content.
Source	user
Rationale	Helps to prevent any legal issues
Business Rule (if required)	The accuracy of the plagiarism detection algorithm is dependent on the quality of the algorithm, which may result in false positives or false negatives.
Dependencies	N/A

Priority	Medium
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3.4.3.3 FR-3.1.3: Compare Info

Table 3.4.66 represents the tabular description of the Compare Info functional requirement.

Table 3.4.66: Compare Info

identifier	FR-3.1.3
Title	Comparison with Verified Information
Requirement	The user must be capable of comparing the uploaded content against a database of verified information to determine its authenticity.
Source	user
Rationale	Ensures that the content shared on the platform is accurate.
Business Rule (if required)	The accuracy of the comparison is dependent on the quality of the verified information database, which may result in inaccurate analysis results.
Dependencies	Access to a database of verified information
Priority	High

3.4.3.4 FR-3.1.4: Generate Report

Table 3.4.67 represents the tabular description of the Generate Report functional requirement.

Table 3.4.67: Generate Report

Identifier	FR-3.1.4
Title	Detailed Analysis Report
Requirement	The user should be able to see a detail report, including any inaccuracies or areas of concern found in the content.
Source	user
Rationale	Allows the user to make any necessary changes.
Business Rule (if required)	The accuracy of the analysis report is dependent on the quality of the analysis algorithms, which may result in inaccurate analysis results.
Dependencies	N/A
Priority	Medium

3.4.3.5 FR-3.1.5: Upload Button

Table 3.4.68 represents the tabular description of the Upload Button functional requirement.

Table 3.4.68: Upload Button

Identifier	FR-3.1.5
Title	Upload Button
Requirement	The application must provide a functional "Upload" button that allows the user to upload content to the platform.
Source	User
Rationale	Allows the user to share their content with other users on the platform.
Business Rule (if required)	The functionality of the "Upload" button is dependent on the quality of the application's code and hardware resources available to the application.
Dependencies	N/A
Priority	High

3.4.3.6 FR-3.2.1: Display of Alert Messages

Table 3.4.69 represents the tabular description of the Display of Alert Messages functional requirement.

Table 3.4.69: Display of Alert Messages

Identifier	FR-3.2.1
Title	Display of Alert Messages
Requirement	The user must be able to see the display alert messages when there is an issue that requires their attention or action.
Source	Stakeholder
Rationale	Allows the user to quickly and easily identify and resolve any issues or errors that may arise while using the application.
Business Rule (if required)	The accuracy and timing of the alert messages are dependent on the quality of the application's code and the hardware resources available to the application.
Dependencies	N/A
Priority	High

3.4.3.7 FR-3.2.2: Customizable

Table 3.4.70 represents the tabular description of the Customizable functional requirement.

Table 3.4.70: Customizable

Identifier	FR-3.2.2
Title	Customizable Alert Messages
Requirement	The user should allow to the customization of alert messages, including the text and styling of the message.
Source	User
Rationale	Allows the user to tailor alert messages to the specific needs and preferences of the user or organization.
Business Rule (if required)	The customization of alert messages may require additional development time and resources.
Dependencies	N/A
Priority	Medium

3.4.3.8 FR-3.2.3: Dismissal

Table 3.4.71 represents the tabular description of the Dismissal functional requirement.

Table 3.4.71: Dismissal

Identifier	FR-3.2.3
Title	Alert Message Dismissal
Requirement	The application must provide a way for the user to dismiss alert messages once they have been read or addressed.
Source	Stakeholder
Rationale	Prevents unnecessary clutter and distractions from alert messages that are no longer relevant.
Business Rule (if required)	The ability to dismiss alert messages may be dependent on the quality of the application's code and hardware resources available to the application.
Dependencies	N/A
Priority	High

3.4.3.9 FR-3.2.4: Alert Message Timing

Table 3.4.72 represents the tabular description of the Alert Message Timing functional requirement.

Table 3.4.72: Alert Message Timing

Identifier	FR-3.2.4
Title	Alert Message Timing
Requirement	The user able to see alert messages in a timely manner.
Source	User
Rationale	Prevents the user from missing important information or experiencing delays in addressing issues.
Business Rule (if required)	The timing of alert messages is dependent on the quality of the application's code and the hardware resources available to the application.
Dependencies	N/A
Priority	High

3.4.3.10 FR-3.2.5: Alert Message Persistence

Table 3.4.73 represents the tabular description of the Alert Message Persistence functional requirement.

Table 3.4.73: Alert Message Persistence

Identifier	FR-3.2.5
Title	Alert Message Persistence
Requirement	The application should provide a way to view past alert messages that have been dismissed or resolved.
Source	Stakeholder
Rationale	Allows the user to review past issues and identify any trends or recurring issues.
Business Rule (if required)	The persistence of alert messages may require additional development time and resources.
Dependencies	N/A
Priority	Medium

3.4.3.11 FR-3.3.1: Upload Content

Table 3.4.74 represents the tabular description of the Upload Content functional requirement.

Table 3.4.74: Upload Content

Identifier	FR-3.3.1
Title	Upload Content
Requirement	The system shall analyze the user's uploaded content for accuracy.
Source	User
Rationale	This functionality is required to ensure that the content uploaded by the user is accurate and meets the application's policy and guidelines.
Business Rule (if required)	The content analysis may not be 100% accurate due to limitations in the analysis algorithm.
Dependencies	N/A
Priority	High

3.4.3.12 FR-3.3.2: Account Suspension

Table 3.4.75 represents the tabular description of the Account Suspension functional requirement.

Table 3.4.75: Account Suspension

Identifier	FR-3.3.2
Title	User Account Suspension
Requirement	The application must allow System to suspend or disable user accounts in cases where the user is in violation of the platform's terms of service or community guidelines.
Source	Supervisor
Rationale	Allows the platform to enforce its rules and maintain a safe and respectful environment for all users.
Business Rule (if required)	The ability to suspend user accounts may require additional development time and resources.
Dependencies	N/A
Priority	High

3.4.3.13 FR-3.3.3: Restriction on Second Attempt

Table 3.4.76 represents the tabular description of the Restriction on Second Attempt functional requirement.

Table 3.4.76: Restriction on Second Attempt

Identifier	FR-3.3.3
Title	User Restriction on Second Attempt
Requirement	The system should restrict the user from uploading content on the second attempt if the user fails to follow the terms and policies of the application on the first attempt.
Source	User
Rationale	This requirement is necessary to enforce the terms and policies of the application and prevent users from repeatedly violating them.
Business Rule (if required)	The system should clearly communicate the reasons for the user's restriction, and provide a means for the user to appeal the decision.
Dependencies	N/A
Priority	High

3.4.3.14 FR-3.3.5: Confirm Button

Table 3.4.77 represents the tabular description of the Confirm Button functional requirement.

Table 3.4.77:Confirm Button

Identifier	FR-3.3.5
Title	Confirm Button
Requirement	The system shall include a Confirm Button for potentially irreversible actions.
Source	User feedback and usability testing.
Rationale	To prevent users from accidentally performing irreversible actions that can lead to negative consequences.
Restrictions	The Confirm Button should only appear for actions that have potential consequences or cannot be undone.
Risk	Failure to include a Confirm Button for such actions could result in user error and data loss.
Dependencies	N/A

3.4.3.15 FR-3.4.1: Report Button

Table 3.4.78 represents the tabular description of the Report Button functional requirement.

Table 3.4.78:Report Button

Identifier	FR-3.4.1
Title	Report Button
Requirement	The system should provide a "Report" button for users to report content that violates the terms and policies of the application.
Source	StakeHolders
Rationale	This requirement is necessary to allow users to report content that violates the terms and policies of the application.
Business Rule (if required)	The system should have mechanisms in place to prevent false or malicious reports and should ensure that only legitimate reports are acted upon.
Dependencies	This requirement depends on the system's ability to accurately identify and classify content that violates the terms and policies.
Priority	High

3.4.3.16 FR-3.4.2: Select Reasons

Table 3.4.79 represents the tabular description of the Select Reasons functional requirement.

Table 3.4.79:Select Reasons

Identifier	FR-3.4.2
Title	Select Reasons for Report
Requirement	The system should provide users with a list of reasons to choose from when reporting content that violates the terms and policies of the application.
Source	User
Rationale	This requirement ensures that the system can accurately classify and respond to reports of content that violates the terms and policies of the application.
Business Rule (if required)	The system should ensure that the list of reasons provided is comprehensive and covers all possible violations of the terms and policies of the application.
Dependencies	N/A
Priority	High

3.4.3.17 FR-3.4.3: Write Description

Table 3.4.80 represents the tabular description of the Write Description functional requirement.

Table 3.4.80:Write Description

Identifier	FR-3.4.3
Title	Write Description for Report
Requirement	The system should allow users to provide a description of the content they are reporting to provide more information about the violation.
Source	User
Rationale	This requirement helps the system to better understand the nature and severity of the violation and take appropriate action.
Business Rule (if required)	The system should ensure that the description provided by the user is within the acceptable length and format, and does not contain any inappropriate content.
Dependencies	This requirement depends on the system's ability to accurately identify and classify content that violates the terms and policies.
Priority	Medium

3.4.3.18 FR-3.4.4: Select Reason Option

Table 3.4.81 represents the tabular description of the Select Reason Option functional requirement.

Table 3.4.81:Select Reasons

Identifier	FR-3.4.4
Title	Select Reason Option
Requirement	The system shall provide the user with a list of reasons to select from when reporting inappropriate content
Source	User
Rationale	Providing a list of reasons will help the user to choose the most appropriate reason for reporting the content
Business Rule (if required)	N/A
Dependencies	N/A

Priority	High
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3.4.3.19 FR-3.4.5: Submit Button Functionality

Table 3.4.82 represents the tabular description of the Submit Button Functionality functional requirement.

Table 3.4.82: Select Reasons

Identifier	FR-3.4.5
Title	Submit Button Functionality
Requirement	The system should provide a "Submit" button for users to submit their report after selecting the reasons and providing a description.
Source	User
Rationale	The "Submit" button is an essential part of the reporting process, as it allows users to confirm their decision to report the content and trigger the appropriate actions in the system.
Business Rule (if required)	The system should ensure that the "Submit" button is only enabled after the user has provided all the required information
Dependencies	This requirement depends on the system's ability to accurately identify and classify content that violates the terms and policies of the application
Priority	High

3.4.3.20 FR-3.5.1: Report Button

Table 3.4.83 represents the tabular description of the Report Button functional requirement.

Table 3.4.83:Report Button

Identifier	FR-3.5.1
Title	Report Button
Requirement	The system should provide a "Report" button for users to report content that violates the terms and policies of the application.
Source	StakeHolders
Rationale	This requirement is necessary to allow users to report content that violates the terms and policies of the application.
Business Rule (if	The system should have mechanisms in place to prevent false

required)	or malicious reports and should ensure that only legitimate reports are acted upon.
Dependencies	N/A
Priority	High

3.4.3.21 FR-3.5.2: Analyze

Table 3.4.84 represents the tabular description of the Analyze functional requirement.

Table 3.4.84:Analyze

Identifier	FR-3.5.2
Title	Analyze
Requirement	The system should be able to analyze the reported content
Source	User
Rationale	This System should check the reported requests validity
Business Rule (if required)	Requested should be authentic
Dependencies	N/A
Priority	High

3.4.3.22 FR-3.5.3: Reaction Checker

Table 3.4.85 represents the tabular description of the Reaction Checker functional requirement.

Table 3.4.85:Reaction checker

Identifier	FR-3.5.3
Title	Reaction checker
Requirement	The system should be able to analyze the audience reaction by real time data modules
Source	System
Rationale	This System should check the reported requests validity
Business Rule (if required)	Requested should be authentic
Dependencies	N/A
Priority	High

3.4.3.23 FR-3.5.1: Removal of Data

Table 3.4.86 represents the tabular description of the Removal of Data functional requirement.

Table 3.4.86:Removal of data

Identifier	FR-3.5.4
Title	Removal
Requirement	The system should be able to remove the content
Source	System
Rationale	This System should authenticate the user and then could proceed to the removal of the content
Business Rule (if required)	Requested should be authentic
Dependencies	N/A
Priority	High

3.4.3.24 FR-3.5.5: Message Display

Table 3.4.87 represents the tabular description of the Message Display functional requirement.

Table 3.4.87:Message Display

Identifier	FR-3.5.5
Title	Removal Message
Requirement	The system should be able to display message after the removal of the content
Source	System
Rationale	This System should authenticate the user and then could proceed to the removal of the content and then must show a message.
Business Rule (if required)	Requested should be authentic
Dependencies	N/A
Priority	High

3.4.3.25 FR-3.6.1: Policy Display

Table 3.4.88 represents the tabular description of the Policy Display functional requirement.

Table 3.4.88:Policy Display

Identifier	FR-3.6.1
Title	Policy Display
Requirement	The system shall display the applicable policies for the user
Source	Supervisor
Rationale	Users need to be aware of the policies they must follow
Business Rule (if required)	Users may ignore policies if they are not clearly displayed
Dependencies	N/A
Priority	High

3.4.3.26 FR-3.6.2: Policy Agreement

Table 3.4.89 represents the tabular description of the Policy Agreement functional requirement.

Table 3.4.89:Policy Agreement

Identifier	FR-3.6.2
Title	Policy Agreement
Requirement	The system shall require users to agree to the policies before using the system
Source	Supervisor
Rationale	Users must agree to the policies to use the system
Business Rule (if required)	Users may use the system inappropriately if they do not agree to the policies
Dependencies	N/A
Priority	High

3.4.3.27 FR-3.6.3: Policy Versioning

Table 3.4.90 represents the tabular description of the Policy Versioning functional requirement.

Table 3.4.90:Policy Versioning

Identifier	FR-3.6.3
Title	Policy Versioning

Requirement	The system shall keep track of policy versions and notify users of updates
Source	Supervisor
Rationale	Users need to be aware of policy changes
Business Rule (if required)	Users may continue to follow outdated policies if not notified of updates
Dependencies	N/A
Priority	High

3.4.3.28 FR-3.6.4: Policy Acknowledgment

Table 3.4.91 represents the tabular description of the Policy Acknowledgment functional requirement.

Table 3.4.91:Policy Acknowledgment

Identifier	FR-3.6.4
Title	Policy Acknowledgment
Requirement	The system shall require users to acknowledge and confirm understanding of policies on a periodic basis
Source	Supervisor
Rationale	Users need to be reminded of policies on a regular basis
Business Rule (if required)	Users may forget policies if not reminded of them
Dependencies	N/A
Priority	High

3.4.3.29 FR-3.5.5: Policy Enforcement

Table 3.4.92 represents the tabular description of the Policy Enforcement functional requirement.

Table 3.4.92: Policy Enforcement

Identifier	FR-3.6.5
Title	Policy Enforcement
Requirement	The system shall enforce policies and restrict access if policies are violated
Source	Supervisor

Rationale	Violation of policies can lead to legal or ethical issues
Business Rule (if required)	Users may violate policies if not enforced
Dependencies	N/A
Priority	High

3.4.4 Functional Requirement for Augmented Reality Aided Video Reporting

Below are the Functional Requirements for Augmented Reality Aided Video Reporting module.

3.4.4.1 FR-4.1.1: Record Video Button

Table 3.4.93 represents the tabular description of the Record Video Button functional requirement.

Table 3.4.93: Record Video Button

Identifier	FR-4.1.1
Title	Record Video Button
Requirement	The app shall have a record video button that allows users to start recording video content
Source	Student
Rationale	Users want to be able to easily initiate the recording process
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.2 FR-4.1.2: Pause/Resume Video

Table 3.4.94 represents the tabular description of the Pause/Resume Video functional requirement.

Table 3.4.94: Pause/Resume Video

Identifier	FR-4.1.2
Title	Pause/Resume Video

Requirement	The app shall allow users to pause and resume the video recording process
Source	Student
Rationale	Users want to be able to pause and resume recordings to improve the quality of their content
Business Rule (if required)	The pause and resume buttons must be easily accessible
Dependencies	N/A
Priority	High

3.4.4.3 FR-4.1.3:Record Timer

Table 3.4.95 represents the tabular description of the Record Timer functional requirement.

Table 3.4.95: Record Timer

Identifier	FR-4.1.3
Title	Record Timer
Requirement	The app shall display a timer indicating the duration of the video recording
Source	Student
Rationale	Users want to know how long they have been recording for.
Business Rule (if required)	N/A
Dependencies	FR-4.1.2
Priority	High

3.4.4.4 FR-4.1.4:Camera Switch

Table 3.4.96 represents the tabular description of the Camera Switch functional requirement.

Table 3.4.96: Camera Switch

Identifier	FR-4.1.4
Title	Camera Switch
Requirement	The app shall allow users to switch between front and rear-facing cameras while recording video

Source	Student
Rationale	Users want to be able to capture video from different perspectives
Business Rule (if required)	The camera switch button must be easily accessible
Dependencies	FR-4.1.2
Priority	Medium

3.4.4.5 FR-4.1.5:Preview Video

Table 3.4.97 represents the tabular description of the Preview Video functional requirement.

Table 3.4.97: Preview Video

Identifier	FR-4.1.5
Title	Preview Video
Requirement	The app shall display a preview of the video content recorded before the user saves or publishes it
Source	Student
Rationale	Users want to be able to review their footage before sharing it with others
Business Rule (if required)	The preview must be of sufficient quality to accurately represent the recorded video
Dependencies	N/A
Priority	High

3.4.4.6 FR-4.1.6:Save Video

Table 3.4.98 represents the tabular description of the Save Video functional requirement

Table 3.4.98: Save Video

Identifier	FR-4.1.6
Title	Save Video
Requirement	The app shall allow users to save their recorded video content to their device
Source	Student
Rationale	Users want to be able to save their content for future use or

	editing
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.7 FR-4.1.7: Publish Video

Table 3.4.99 represents the tabular description of the Publish Video functional requirement.

Table 3.4.99: Publish Video

Identifier	FR-4.1.7
Title	Publish Video
Requirement	The app shall allow users to publish their recorded video content to the NewsWave app for others to view
Source	Student
Rationale	Users want to be able to share their content with others
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.8 FR-4.1.8:Edit Video

Table 3.4.100 represents the tabular description of the Edit Video functional requirement.

Table 3.4.100: Edit Video

Identifier	FR-4.1.8
Title	Edit Video
Requirement	The app shall allow users to edit their recorded video content within the app
Source	Supervisor
Rationale	Users want to be able to make changes to their content before publishing or sharing it
Business Rule (if required)	N/A
Dependencies	N/A

Priority	High
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3.4.4.12 FR-4.2.4:Streaming Quality Options

Table 3.4.101 represents the tabular description of the Streaming Quality Options functional requirement.

Table 3.4.101: Streaming Quality Options

Identifier	FR-4.2.4
Title	Streaming Quality Options
Requirement	The app shall provide options for users to choose the quality of their live streaming video content
Source	Student
Rationale	Users want to be able to balance video quality with network speed and data usage
Business Rule (if required)	The quality options must be clearly defined and easy to access
Dependencies	N/A
Priority	High

3.4.4.12 FR-4.3.1:Upload Script Button

Table 3.4.102 represents the tabular description of the Upload Script Button functional requirement.

Table 3.4.102: Upload Script Button

Identifier	FR-4.3.1
Title	Upload Script Button
Requirement	The app shall have a button that allows users to upload a script or transcript
Source	Student
Rationale	Users want to be able to easily upload their script or transcript for their video content
Business Rule (if required)	N/A
Dependencies	N/A

Priority	High
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3.4.4.13 FR-4.3.2:Automatic Transcription

Table 3.4.103 represents the tabular description of the Automatic Transcription functional requirement.

Table 3.4.103: Automatic Transcription

Identifier	FR-4.3.2
Title	Automatic Transcription
Requirement	The app shall provide an option for users to automatically transcribe their video content
Source	Student
Rationale	Users may not have a script or may want to quickly generate a transcript for their video content
Business Rule (if required)	The automatic transcription must be accurate and of sufficient quality to represent the video content
Dependencies	N/A
Priority	High

3.4.4.14 FR-4.3.3:Save Script

Table 3.4.104 represents the tabular description of the Save Script functional requirement.

Table 3.4.104: Save Script

Identifier	FR-4.3.3
Title	Save Script
Requirement	The app shall allow users to save their script or transcript within the app
Source	Student
Rationale	Users want to be able to access their script or transcript for future use or editing
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.20 FR-4.4.4:Save Filtered Video

Table 3.4.105 represents the tabular description of the Save Filtered Video functional requirement.

Table 3.4.105: Save Filtered Video

Identifier	FR-4.4.4
Title	Save Filtered Video
Requirement	The app shall allow users to save the filtered video content
Source	Student
Rationale	Users want to be able to access and share their filtered video content
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.22 FR-4.5.1:Caption Entry

Table 3.4.106 represents the tabular description of the Caption Entry functional requirement.

Table 3.4.106: Caption Entry

Identifier	FR-4.5.1
Title	Caption Entry
Requirement	The app shall provide a text entry field for users to enter captions for their videos
Source	Student
Rationale	Users want to be able to provide context or information about their video content
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.23 FR-4.5.2:Caption Customization

Table 3.4.107 represents the tabular description of the Caption Customization functional requirement.

Table 3.4.107: Caption Customization

Identifier	FR-4.5.2
Title	Caption Customization
Requirement	The app shall allow users to customize the font, size, color, and position of their captions
Source	Student
Rationale	Users may want to customize the appearance of their captions to match their video content
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.24 FR-4.5.3:Caption Preview

Table 3.4.108 represents the tabular description of the Caption Preview functional requirement.

Table 3.4.108: Caption Preview

Identifier	FR-4.5.3
Title	Caption Preview
Requirement	The app shall display a preview of the caption on the video content
Source	Student
Rationale	Users want to be able to preview the appearance of their caption on their video content before finalizing it
Business Rule (if required)	The preview must accurately represent the appearance of the caption on the video content
Dependencies	N/A
Priority	High

3.4.4.25 FR-4.5.4:Caption Placement

Table 3.4.109 represents the tabular description of the Caption Placement functional requirement.

Table 3.4.109: Caption Placement

Identifier	FR-4.5.4
Title	Caption Placement
Requirement	The app shall allow users to position their caption anywhere on the video content
Source	Student
Rationale	Users may want to position their caption in a specific location to avoid covering important parts of the video content
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.26 FR-4.6.1: Location Permission

Table 3.4.110 represents the tabular description of the Location Permission functional requirement.

Table 3.4.110: Location Permission

Identifier	FR-4.6.1
Title	Location Permission
Requirement	The app shall request permission from the user to access their device's location data
Source	Student
Rationale	The app needs permission to access the user's location data in order to attach location data to their video content
Business Rule (if required)	The app must provide clear and concise language explaining why location data is needed and how it will be used.
Dependencies	N/A
Priority	High

3.4.4.27 FR-4.6.2: Location Accuracy

Table 3.4.111 represents the tabular description of the location Accuracy functional requirement.

Table 3.4.111: Location Accuracy

Identifier	FR-4.6.2
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Title	Location Accuracy
Requirement	The app shall provide accurate location data to attach to the user's video content
Source	Student
Rationale	Users want their location data to be accurate and reflect their actual location when creating video content
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.28 FR-4.6.3: Location Display

Table 3.4.112 represents the tabular description of the Location Display functional requirement.

Table 3.4.112: Location Display

Identifier	FR-4.6.3
Title	Location Display
Requirement	The app shall display the user's location data on their video content
Source	Student
Rationale	Users want to be able to see their location data attached to their video content
Business Rule (if required)	The location data display must be clear and unobtrusive so as not to interfere with the video content
Dependencies	N/A
Priority	High

3.4.4.29 FR-4.6.4: Location Privacy

Table 3.4.113 represents the tabular description of the Location Privacy functional requirement.

Table 3.4.113: Location Privacy

Identifier	FR-4.6.4
Title	Location Privacy
Requirement	The app shall provide privacy settings to allow users to control who can see their location data

Source	Student
Rationale	Users may want to limit who can see their location data for privacy or security reasons
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.4.30 FR-4.6.5: Location Data Storage

Table 3.4.114 represents the tabular description of the Location Data Storage functional requirement.

Table 3.4.114: Location Data Storage

Identifier	FR-4.6.5
Title	Location Data Storage
Requirement	The app shall store the user's location data securely and only for the duration necessary to attach it to the user's video content
Source	Student
Rationale	The app must protect the user's location data from unauthorized access or misuse
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5 Functional Requirement for Content Privacy

Below are the Functional Requirements for Content Privacy module.

3.4.5.1 FR-5.1.1: Enter Email

Table 3.4.115 represents the tabular description of the Image Selection functional requirement.

Table 3.4.115: Image Selection

Identifier	FR-5.1.1
Title	Image Selection

Requirement	The user must be able to select an image to use as their watermark
Source	Student
Rationale	Allowing the user to select an image is necessary for creating a personalized watermark that reflects their ownership.
Business Rule (if required)	The app must support common image formats (e.g. JPEG, PNG, TIFF) and limit the size of the image that can be used as a watermark.
Dependencies	N/A
Priority	High

3.4.5.2 FR-5.1.2: Watermark Placement

Table 3.4.116 represents the tabular description of the Watermark Placement functional requirement.

Table 3.4.116: Watermark Placement

Identifier	FR-5.1.2
Title	Watermark Placement
Requirement	The user must be able to choose the location of the watermark on their image.
Source	Student
Rationale	The user needs control over the placement of the watermark to ensure it doesn't interfere with the image's main subject.
Business Rule (if required)	The app must limit the placement of the watermark to within the bounds of the image and provide guidelines or snap-to features for more precise placement.
Dependencies	FR-5.1.1
Priority	High

3.4.5.3 FR-5.1.3: Watermark Opacity

Table 3.4.117 represents the tabular description of the Watermark Opacity functional requirement.

Table 3.4.117: Watermark Opacity

Identifier	FR-5.1.3
Title	Watermark Opacity

Requirement	The user must be able to adjust the opacity of the watermark.
Source	Student
Rationale	Adjusting the watermark's opacity can help balance the visibility of the watermark with the visibility of the image.
Business Rule (if required)	N/A
Dependencies	FR-5.1.1
Priority	High

3.4.5.4 FR-5.1.4: Watermark Removal

Table 3.4.118 represents the tabular description of the Watermark Removal functional requirement.

Table 3.4.118: Watermark Removal

Identifier	FR-5.1.4
Title	Watermark Removal
Requirement	The app must provide the user with the ability to remove the watermark from the image.
Source	Student
Rationale	Giving the user the ability to remove the watermark allows for flexibility in case they change their mind or no longer need the watermark.
Business Rule (if required)	The app must limit the ability to remove the watermark to only the user who added it and ensure that removing the watermark does not degrade the image quality.
Dependencies	FR-5.1.1
Priority	Medium

3.4.5.5 FR-5.1.5: Text Watermark Customization

Table 3.4.119 represents the tabular description of the Text Watermark Customization functional requirement.

Table 3.4.119:Text Watermark Customization

Identifier	FR-5.1.5
Title	Text Watermark Customization

Requirement	The user must be able to choose the font and color of any text included in the watermark.
Source	Student
Rationale	The user needs to be able to customize text-based watermarks to match their brand or personal style.
Business Rule (if required)	The app must provide a range of legible fonts and limit the color choices to those that contrast well with the image.
Dependencies	N/A
Priority	High

3.4.5.6 FR-5.2.1: Data Transparency

Table 3.4.120 represents the tabular description of the Data Transparency functional requirement.

Table 3.4.120: Data Transparency

Identifier	FR-5.2.1
Title	Data Transparency
Requirement	The app must provide users with clear and easily accessible information about how their personal data is collected, used, and shared.
Source	Student
Rationale	Providing users with clear and transparent information about their personal data builds trust and empowers them to make informed decisions about their privacy.
Business Rule (if required)	The app must use plain language and avoid technical jargon to ensure that users can easily understand the information
Dependencies	N/A
Priority	High

3.4.5.7 FR-5.2.2: Informed Consent

Table 3.4.121 represents the tabular description of the Informed Consent functional requirement.

Table 3.4.121: Informed Consent

Identifier	FR-5.2.2
Title	Informed Consent

Requirement	The app must obtain users' consent before collecting, using, or sharing their personal data.
Source	Student
Rationale	Obtaining users' informed consent is essential to respect their privacy and ensure that they are aware of how their personal data is being used.
Business Rule (if required)	The app must provide clear and concise information about the purposes of personal data collection, use, and sharing and give users the option to opt-in or opt-out of each.
Dependencies	N/A
Priority	High

3.4.5.8 FR-5.2.3: Purpose Limitation

Table 3.4.122 represents the tabular description of the Purpose Limitation functional requirement.

Table 3.4.122: Purpose Limitation

Identifier	FR-5.2.3
Title	Watermark Opacity
Requirement	The app must only collect and use users' personal data for specified and legitimate purposes.
Source	Student
Rationale	Limiting personal data collection and use to specified and legitimate purposes is essential to respect users' privacy and avoid unnecessary data processing.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.9 FR-5.2.4: Data Security

Table 3.4.123 represents the tabular description of the Data Security functional requirement.

Table 3.4.123: Data Security

Identifier	FR-5.2.4
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Title	Data Security
Requirement	The app must implement appropriate technical and organizational measures to protect users' personal data against unauthorized or unlawful processing, accidental loss, destruction, or damage.
Source	Student
Rationale	Implementing appropriate technical and organizational measures to protect users' personal data is essential to prevent data breaches and maintain user trust.
Business Rule (if required)	The app must regularly assess and update its security measures to ensure ongoing effectiveness and take appropriate action in the event of a data breach.
Dependencies	N/A
Priority	High

3.4.5.10 FR-5.2.5: Data Subject Rights

Table 3.4.124 represents the tabular description of the Data Subject Rights functional requirement.

Table 3.4.124: Data Subject Rights

Identifier	FR-5.2.5
Title	Data Subject Rights
Requirement	The app must allow users to access, modify, or delete their personal data at any time.
Source	Student
Rationale	Allowing users to access, modify, or delete their personal data at any time is essential to respect their privacy and give them control over their data.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.11 FR-5.3.1: Secure File Sharing

Table 3.4.125 represents the tabular description of the Secure File Sharing functional requirement.

Table 3.4.125: Secure File Sharing

Identifier	FR-5.3.1
Title	Secure File Sharing
Requirement	The app must allow users to securely share files with others.
Source	Student
Rationale	Secure file sharing is essential to protect users' sensitive information and maintain their trust in the app.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.12 FR-5.3.2: Access Control

Table 3.4.126 represents the tabular description of the Access Control functional requirement.

Table 3.4.126: Access Control

Identifier	FR-5.3.2
Title	Access Control
Requirement	The app must allow users to control access to their shared files.
Source	Student
Rationale	Giving users control over who can access their shared files is essential to protect their privacy and ensure that sensitive information is only shared with authorized parties.
Business Rule (if required)	The app must provide access control options, such as password protection or access permissions, to enable users to control who can access their shared files.
Dependencies	N/A
Priority	High

3.4.5.13 FR-5.3.3: Access Revocation

Table 3.4.127 represents the tabular description of the Access Revocation functional requirement.

Table 3.4.127: Access Revocation

Identifier	FR-5.3.3
Title	Access Revocation
Requirement	The app must allow users to revoke access to their shared files at any time.
Source	Student
Rationale	Allowing users to revoke access to their shared files at any time is essential to maintain control over their sensitive information and protect their privacy.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.14 FR-5.3.4: Data Confidentiality

Table 3.4.128 represents the tabular description of the Data Confidentiality functional requirement.

Table 3.4.128: Data Confidentiality

Identifier	FR-5.3.4
Title	Data Confidentiality
Requirement	The app must ensure that shared files are not visible or accessible to unauthorized parties.
Source	Student
Rationale	Ensuring that shared files are only visible and accessible to authorized parties is essential to protect users' sensitive information and maintain their trust in the app.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.15 FR-5.3.5: Data Integrity

Table 3.4.129 represents the tabular description of the Data Integrity functional requirement

Table 3.4.129: Data Integrity

Identifier	FR-5.3.5
Title	Data Integrity
Requirement	The app must ensure that shared files are not altered or tampered with during transmission or storage.
Source	Student
Rationale	Ensuring that shared files are not altered or tampered with is essential to maintain the accuracy and integrity of users' sensitive information.
Business Rule (if required)	The app must implement measures such as digital signatures or checksums to ensure that shared files are not altered or tampered with during transmission or storage.
Dependencies	N/A
Priority	High

3.4.5.16 FR-5.4.1: Contact Verification

Table 3.4.130 represents the tabular description of the Contact Verification functional requirement.

Table 3.4.130: Contact Verification

Identifier	FR-5.4.1
Title	Contact Verification
Requirement	The app must allow users to verify the identity of their contacts.
Source	Student
Rationale	Allowing users to verify the identity of their contacts is essential to prevent impersonation and protect against malicious actors.
Business Rule (if required)	The app must provide a secure and reliable method for users to verify the identity of their contacts, such as through fingerprint or facial
Dependencies	N/A
Priority	High

3.4.5.17 FR-5.4.2: End-to-End Encryption

Table 3.4.131 represents the tabular description of the End-to-End Encryption functional requirement.

Table 3.4.131: End-to-End Encryption

Identifier	FR-5.4.2
Title	End-to-End Encryption
Requirement	The app must provide end-to-end encryption for all messages.
Source	Student
Rationale	End-to-end encryption is essential to protect the privacy and security of users' messages.
Business Rule (if required)	The app must implement strong encryption protocols and keys to ensure that messages can only be read by the intended recipient.
Dependencies	N/A
Priority	High

3.4.5.18 FR-5.4.3: Message Deletion

Table 3.4.132 represents the tabular description of the Message Deletion functional requirement.

Table 3.4.132: Message Deletion

Identifier	FR-5.4.3
Title	Message Deletion
Requirement	The app must allow users to delete messages from both their own device and the recipient's device.
Source	Student
Rationale	Allowing users to delete messages from both their own device and the recipient's device is essential to maintain control over their messages and protect their privacy.
Business Rule (if required)	The app must provide a user-friendly interface for deleting messages and ensure that messages are deleted from both devices.
Dependencies	N/A
Priority	High

3.4.5.19 FR-5.4.4: Message Storage

Table 3.4.133 represents the tabular description of the Message Storage functional requirement.

Table 3.4.133: Message Storage

Identifier	FR-5.4.4
Title	Message Storage
Requirement	The app must not store any messages on its servers after they have been delivered.
Source	Student
Rationale	Not storing any messages on its servers after they have been delivered is essential to prevent unauthorized access to users' messages and protect their privacy.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.20 FR-5.4.5: User Feedback

Table 3.4.134 represents the tabular description of the User Feedback functional requirement.

Table 3.4.134: User Feedback

Identifier	FR-5.4.5
Title	User Feedback
Requirement	The app must allow users to report any concerns or complaints related to secure messaging.
Source	Student
Rationale	Providing users with a way to report concerns or complaints related to secure messaging can help the app identify and address privacy issues quickly.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.21 FR-5.5.1: Account Access Restrictions

Table 3.4.135 represents the tabular description of the Account Access Restrictions functional requirement.

Table 3.4.135: Account Access Restrictions

Identifier	FR-5.5.1
Title	Account Access Restrictions
Requirement	The app must allow users to set access restrictions on their account.
Source	Student
Rationale	Allowing users to set access restrictions on their account is essential to prevent unauthorized access and protect their privacy.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.22 FR-5.5.2: User Access Levels

Table 3.4.136 represents the tabular description of the User Access Levels functional requirement.

Table 3.4.136: User Access Levels

Identifier	FR-5.5.2
Title	User Access Levels
Requirement	The app must provide different levels of access for different types of users.
Source	Student
Rationale	Providing different levels of access for different types of users is essential to ensure that users only have access to the information and features that they need.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.23 FR-5.5.3: Data Access Restrictions

Table 3.4.137 represents the tabular description of the Data Access Restrictions functional requirement.

Table 3.4.137: Data Access Restrictions

Identifier	FR-5.5.3
Title	Data Access Restrictions
Requirement	The app must allow users to set access restrictions on their personal data.
Source	Student
Rationale	Allowing users to set access restrictions on their personal data is essential to protect their privacy and prevent unauthorized access.
Business Rule (if required)	The app must provide a user-friendly interface for setting data access restrictions, such as restricting access to certain files or folders.
Dependencies	N/A
Priority	High

3.4.5.24 FR-5.5.4: Access History

Table 3.4.138 represents the tabular description of the Access History functional requirement.

Table 3.4.138: Access History

Identifier	FR-5.5.4
Title	Access History
Requirement	The app must provide a way for users to view their access history.
Source	Student
Rationale	Providing users with a way to view their access history can help them identify any unauthorized access to their account or personal data.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.5.25 FR-5.5.5: User Access Monitoring

Table 3.4.139 represents the tabular description of the User Access Monitoring functional requirement.

Table 3.4.139: User Access Monitoring

Identifier	FR-5.5.5
Title	User Access Monitoring
Requirement	The app must allow System to monitor and control user access.
Source	Student
Rationale	Allowing System to monitor and control user access is essential to prevent unauthorized access and protect sensitive information
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6 Functional Requirement for Journalist Hiring

Below are the Functional Requirements for Journalist Hiring module.

3.4.6.1 FR-6.1.1: Job Posting Creation

Table 3.4.140 represents the tabular description of the Job Posting Creation functional requirement.

Table 3.4.140: Job Posting Creation

Identifier	FR-6.1.1
Title	Job Posting Creation
Requirement	Hiring Manager must be able to create a new job posting
Source	Student
Rationale	This FR is essential for the Hiring Manager to create a new job posting and advertise job vacancies.
Business Rule (if required)	N/A
Dependencies	N/A

Priority	High
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3.4.6.2 FR-6.1.2: Enter Job Title

Table 3.4.141 represents the tabular description of the Enter Job Title functional requirement.

Table 3.4.141: Enter job title

Identifier	FR-6.1.2
Title	Enter Job Title
Requirement	Hiring Manager must be able to specify job title.
Source	Student
Rationale	This FR is essential for providing the necessary information about the job posting.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.3 FR-6.1.3: Job Requirements

Table 3.4.142 represents the tabular description of the Job Requirements functional requirement.

Table 3.4.142: Job Requirements

Identifier	FR-6.1.3
Title	Job Requirements
Requirement	Hiring Manager must be able to specify job requirements
Source	Student
Rationale	This FR is essential for providing the job seekers with an understanding of the requirements.
Business Rule (if required)	N/A
Dependencies	FR-6.1.1
Priority	High

3.4.6.4 FR-6.1.4: Application Deadline

Table 3.4.143 represents the tabular description of the Application Deadline functional requirement.

Table 3.4.143: Application Deadline

Identifier	FR-6.1.4
Title	Application Deadline
Requirement	Hiring Manager must be able to set the application deadline for the job posting
Source	Student
Rationale	Setting the application deadline ensures that job seekers apply before the deadline.
Business Rule (if required)	Deadlines must be set in a reasonable amount of time to allow job seekers to prepare and apply
Dependencies	FR-6.1.1
Priority	Medium

3.4.6.5 FR-6.1.5: Job Posting Viewing

Table 3.4.144 represents the tabular description of the Job Posting Viewing functional requirement.

Table 3.4.144: Job Posting Viewing

Identifier	FR-6.1.5
Title	Job Posting Viewing
Requirement	Journalist must be able to view the job posting and its details
Source	Student
Rationale	Journalist would be able to view the job posting and its details, including job requirements, qualifications, and application instructions.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.6 FR-6.1.6: Enter Job Title

Table 3.4.145 represents the tabular description of the Enter Job Title functional requirement.

Table 3.4.145: Enter Job Title

Identifier	FR-6.1.6
Title	Select Job
Requirement	Hiring team would be able to enter the job title.
Source	Student
Rationale	Job title would be posted.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.7 FR-6.1.7: Job Instruction

Table 3.4.146 represents the tabular description of the Job Instruction functional requirement.

Table 3.4.146: Job instruction

Identifier	FR-6.1.7
Title	Job instruction
Requirement	Hiring team would be able to write the job instructions.
Source	Student
Rationale	Job instructions would be described.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.8 FR-6.1.8: Select Target

Table 3.4.147 represents the tabular description of the Select Target functional requirement.

Table 3.4.147: Select Target

Identifier	FR-6.1.8
Title	Select target
Requirement	User will be able to select group as target for marketing.
Source	Supervisor
Rationale	This requirement will facilitate the users to filter the target from the wide scope.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.9 FR-6.2.1: Enter Full Name

Table 3.4.148 represents the tabular description of the Enter Full Name functional requirement.

Table 3.4.48: Enter Full Name

Identifier	FR-6.2.1
Title	Enter Full Name
Requirement	User have to give its full name for the application
Source	Student
Rationale	Write full name for the recognition.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.10 FR-6.2.2: Enter Email Address

Table 3.4.149 represents the tabular description of the Enter Email Address functional requirement.

Table 3.4.149: Enter Email Address

Identifier	FR-6.2.2
Title	Enter Email Address

Requirement	User have to enter its email address.
Source	Student
Rationale	Enter email address to receive the response of application
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.11 FR-6.2.3: Enter Phone Number

Table 3.4.150 represents the tabular description of the Enter Phone Number functional requirement.

Table 3.4.150: Enter Phone number

Identifier	FR-6.2.3
Title	Enter Phone number
Requirement	User will have to enter the phone number
Source	Student
Rationale	Phone number is given to get contact from the channels if required for further details.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.14 FR-6.2.6: Submit Button

Table 3.4.151 represents the tabular description of the Submit Button functional requirement.

Table 3.4.151: Submit Button

Identifier	FR-6.2.6
Title	Submit Button
Requirement	User will have to click on submit button to apply for the job.
Source	Student

Rationale	Click on submit button would send the response to the hiring team.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.15 FR-6.3.1: Applicant Evaluation Access

Table 3.4.152 represents the tabular description of the Applicant Evaluation Access functional requirement.

Table 3.4.152: Applicant Evaluation Access

Identifier	FR-6.3.1
Title	Applicant Evaluation Access
Requirement	The system shall provide authorized personnel with access to view and evaluate job applicants' submitted applications.
Source	Student
Rationale	Authorized personnel need access to view and evaluate job applicants' submitted applications to make informed hiring decisions.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.16 FR-6.3.2: Applicant Rating

Table 3.4.153 represents the tabular description of the Applicant Rating functional requirement.

Table 3.4.153: Applicant Rating

Identifier	FR-6.3.2
Title	Applicant Rating
Requirement	The system shall allow authorized personnel to rate job applicants based on predetermined evaluation criteria.
Source	Student

Rationale	Rating job applicants based on predetermined evaluation criteria helps ensure that hiring decisions are based on objective criteria.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.17 FR-6.3.3: Evaluation Comments

Table 3.4.154 represents the tabular description of the Evaluation Comments functional requirement.

Table 3.4.154: Evaluation Comments

Identifier	FR-6.3.3
Title	Evaluation Comments
Requirement	The system shall allow authorized personnel to record comments or notes about each job applicant's evaluation.
Source	Student
Rationale	Recording comments or notes about each job applicant's evaluation provides a way for authorized personnel to track and remember important details about job applicants.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.18 FR-6.3.4:Applicant Comparison

Table 3.4.155 represents the tabular description of the Applicant Compaison functional requirement.

Table 3.4.155: Applicant Comparison

Identifier	FR-6.3.4
Title	Applicant Comparison
Requirement	The system shall allow authorized personnel to compare and contrast job applicants based on their evaluations.
Source	Student

Rationale	Comparing and contrasting job applicants based on their evaluations helps authorized personnel identify the most qualified job applicants.
Business Rule (if required)	Comparison should be based on objective evaluation criteria.
Dependencies	N/A
Priority	High

3.4.6.19 FR-6.4.1: Job Posting Display

Table 3.4.156 represents the tabular description of the Job Posting Display functional requirement.

Table 3.4.156: Job Posting Display

Identifier	FR-6.4.1
Title	Job Posting Display
Requirement	The system shall display job postings on the company's website or job boards.
Source	Student
Rationale	Displaying job postings on the company's website or job boards is an important step in attracting potential candidates to apply for the job.
Business Rule (if required)	Job postings should accurately reflect the job requirements and responsibilities.
Dependencies	N/A
Priority	High

3.4.6.20 FR-6.3.2: Applicant Rating

Table 3.4.157 represents the tabular description of the Applicant Rating functional requirement.

Table 3.4.157: Applicant Rating

Identifier	FR-6.3.2
Title	Applicant Rating
Requirement	The system shall allow authorized personnel to rate job applicants based on predetermined evaluation criteria.

Source	Student
Rationale	Rating job applicants based on predetermined evaluation criteria helps ensure that hiring decisions are based on objective criteria.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.21 FR-6.3.3: Evaluation Comments

Table 3.4.158 represents the tabular description of the Evaluation Comments functional requirement.

Table 3.4.158: Evaluation Comments

Identifier	FR-6.3.3
Title	Evaluation Comments
Requirement	The system shall allow authorized personnel to record comments or notes about each job applicant's evaluation.
Source	Student
Rationale	Recording comments or notes about each job applicant's evaluation provides a way for authorized personnel to track and remember important details about job applicants.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.22 FR-6.3.4: Applicant Comparison

Table 3.4.159 represents the tabular description of the Applicant Comparison functional requirement.

Table 3.4.159: Applicant Comparison

Identifier	FR-6.3.4
Title	Applicant Comparison

Requirement	The system shall allow authorized personnel to compare and contrast job applicants based on their evaluations.
Source	Student
Rationale	Comparing and contrasting job applicants based on their evaluations helps authorized personnel identify the most qualified job applicants.
Business Rule (if required)	Comparison should be based on objective evaluation criteria.
Dependencies	N/A
Priority	High

3.4.6.23 FR-6.4.1: Job Posting Display

Table 3.4.160 represents the tabular description of the Job Posting Display functional requirement.

Table 3.4.160: Job Posting Display

Identifier	FR-6.4.1
Title	Job Posting Display
Requirement	The system shall display job postings on the company's website or job boards.
Source	Student
Rationale	Displaying job postings on the company's website or job boards is an important step in attracting potential candidates to apply for the job.
Business Rule (if required)	Job postings should accurately reflect the job requirements and responsibilities.
Dependencies	N/A
Priority	High

3.4.6.24 FR-6.4.2: Applicant Screening Access

Table 3.4.161 represents the tabular description of the Applicant Screening Access functional requirement.

Table 3.4.161: Applicant Screening Access

Identifier	FR-6.4.2
Title	Applicant Screening Access
Requirement	The system shall provide authorized personnel with access to view and screen job applicants' submitted applications.
Source	Student
Rationale	Authorized personnel need access to view and screen job applicants' submitted applications to determine which candidates meet the minimum qualifications for the job.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.25 FR-6.4.3: Applicant Scoring

Table 3.4.162 represents the tabular description of the Applicant Scoring functional requirement.

Table 3.4.162: Applicant Scoring

Identifier	FR-6.4.3
Title	Applicant Scoring
Requirement	The system shall allow authorized personnel to score job applicants based on their qualifications.
Source	Student
Rationale	Scoring job applicants based on their qualifications helps authorized personnel identify the most qualified job applicants.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.26 FR-6.4.4: Applicant Ranking

Table 3.4.163 represents the tabular description of the Applicant Ranking functional requirement.

Table 3.4.163: Applicant Ranking

Identifier	FR-6.4.4
Title	Applicant Ranking
Requirement	The system shall allow authorized personnel to rank job applicants based on their score.
Source	Student
Rationale	Ranking job applicants based on their Score helps authorized personnel identify the most qualified job applicants.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.27 FR-6.4.5: Shortlisting

Table 3.4.164 represents the tabular description of the Shortlisting functional requirement.

Table 3.4.164:Shortlisting

Identifier	FR-6.4.5
Title	Shortlisting
Requirement	The system shall allow authorized personnel to shortlist and advance qualified job applicants to the interview stage.
Source	Student
Rationale	Shortlisting qualified job applicants to the interview stage helps ensure that the most qualified job applicants are considered for the job.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.28 FR-6.4.6: Applicant Rejection Notification

Table 3.4.165 represents the tabular description of the Applicant Rejection Notification functional requirement.

Table 3.4.165: Applicant Rejection Notification

Identifier	FR-6.4.6
Title	Applicant Rejection Notification
Requirement	The system shall allow authorized personnel to notify job applicants who are not selected for the job.
Source	Student
Rationale	Notifying job applicants who are not selected for the job is an important step in maintaining a positive employer brand and reputation
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.29 FR-6.5.1: Real Time Chat

Table 3.4.166 represents the tabular description of the Real Time Chat functional requirement.

Table 3.4.166: Real-Time Chat

Identifier	FR-6.5.1
Title	Real-Time Chat
Requirement	The system shall provide real-time chat functionality for users to communicate with each other.
Source	Student
Rationale	Real-time chat functionality allows users to have immediate conversations and resolve issues quickly.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.30 FR-6.5.2: Message Archive

Table 3.4.167 represents the tabular description of the Message Archive functional requirement.

Table 3.4.167: Message Archive

Identifier	FR-6.5.2
Title	Message Archive
Requirement	The system shall archive chat messages for future reference and auditing purposes.
Source	Student
Rationale	Message archiving allows for the retrieval of important chat conversations and can be used for auditing purposes.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.6.31 FR-6.5.3: Security Measures

Table 3.4.168 represents the tabular description of the Security Measures functional requirement.

Table 3.4.168: Security Measures

Identifier	FR-6.5.3
Title	Security Measures
Requirement	The system shall implement security measures to protect user information and prevent unauthorized access.
Source	Student
Rationale	Implementing security measures helps to protect user information and maintain the integrity of the chat service.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7 Functional Requirement for Multimedia Enhancement

Below are the Functional Requirements for Multimedia Enhancement module.

3.4.7.1 FR-7.1.1: Sharpen Image

Table 3.4.169 represents the tabular description of the Sharpen Image functional requirement.

Table 3.4.169: Sharpen Image

Identifier	FR-7.1.1
Title	Sharpen Image
Requirement	The system must be able to enhance the sharpness of an image without reducing its quality or resolution.
Source	Student
Rationale	The system must be able to enhance the sharpness of an image without reducing its quality or resolution.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.2 FR-7.1.2: Reduce Image Noise

Table 3.4.170 represents the tabular description of the Reduce Image Noise functional requirement.

Table 3.4.170: Reduce Image Noise

Identifier	FR-7.1.2
Title	Reduce Image Noise
Requirement	The system must be able to reduce image noise or graininess without losing image details or reducing its resolution.
Source	Student
Rationale	Reducing image noise or graininess will improve the visual quality of the image and make it easier to identify important details.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.3 FR-7.1.3: Adjust Brightness

Table 3.4.171 represents the tabular description of the Adjust Brightness functional requirement.

Table 3.4.171: Adjust Brightness

Identifier	FR-7.1.3
Title	Adjust Brightness
Requirement	The system must be able to adjust the brightness of an image without affecting its color balance or saturation.
Source	Student
Rationale	Adjusting the brightness will make the image easier to see and reveal details that might not have been visible before.
Business Rule (if required)	N/A
Dependencies	FR-2.1.2, FR-2.1.3
Priority	High

3.4.7.4 FR-7.1.5: Automatic Intervention

Table 3.4.172 represents the tabular description of the Automatic Intervention functional requirement.

Table 3.4.172: Automatic Intervention

Identifier	FR-7.1.5
Title	Automatic Intervention
Requirement	The system must be able to perform these image enhancements automatically or with minimal user intervention.
Source	Student
Rationale	Automating the image enhancement process will save time and effort for the user and ensure consistency across multiple images.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.5 FR-7.2.2: Synchronize Zoom

Table 3.4.173 represents the tabular description of the Synchronize Zoom functional requirement.

Table 3.4.173: Synchronize Zoom

Identifier	FR-7.2.2
Title	Synchronize Zoom
Requirement	The system must be able to synchronize the zoom and pan of the images being compared.
Source	Student
Rationale	Synchronizing the zoom and pan will make it easier to compare the images at the same level of detail and location.
Business Rule (if required)	The system must not desynchronize the images during the comparison process.
Dependencies	N/A
Priority	High

3.4.7.6 FR-7.2.3: Quantify Differences

Table 3.4.174 represents the tabular description of the Quantify Differences functional requirement.

Table 3.4.174: Quantify Differences

Identifier	FR-7.2.4
Title	Quantify Differences
Requirement	The system must be able to measure and quantify the differences between the images being compared.
Source	Student
Rationale	Measuring and quantifying the differences will allow the user to compare the images objectively and numerically.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.7 FR-7.2.4: Save Results

Table 3.4.175 represents the tabular description of the Save Results functional requirement.

Table 3.4.175: Save Results

Identifier	FR-7.2.5
Title	Save Results
Requirement	The system must be able to save the comparison results, including the highlighted differences and measurements.
Source	Student
Rationale	Saving the comparison results will allow the user to share and document the results for future reference.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.8 FR-7.2.5: Share Button

Table 3.4.176 represents the tabular description of the Share Button functional requirement.

Table 3.4.176: Share Button

Identifier	FR-7.2.6
Title	Share Button
Requirement	User will have to click on Export button to export the result in order to share the result.
Source	Student
Rationale	Click on Share button would let user to share the result
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.9 FR-7.3.1: Keyboard Navigation

Table 3.4.177 represents the tabular description of the Keyboard Navigation functional requirement.

Table 3.4.177: Keyboard Navigation

Identifier	FR-7.3.1
Title	Keyboard Navigation
Requirement	The system must support keyboard navigation for all features and functions
Source	Student
Rationale	Keyboard navigation will allow users who cannot use a mouse or touch screen to access all aspects of the system.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.10 FR-7.3.2: Screen Reader

Table 3.4.178 represents the tabular description of the Screen Reader functional requirement.

Table 3.4.178: Screen Reader

Identifier	FR-7.3.2
Title	Screen Reader
Requirement	The system must support screen readers and other assistive technologies.
Source	Student
Rationale	Screen readers and other assistive technologies will allow users with disabilities to access and interact with the system.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.11 FR-7.3.3: Text Descriptions

Table 3.4.179 represents the tabular description of the Text Descriptions functional requirement.

Table 3.4.179: Text Descriptions

Identifier	FR-7.3.3
Title	Evaluation Comments
Requirement	The system must provide alternative text descriptions for all images and visual elements.
Source	Student
Rationale	Alternative text descriptions will allow users who cannot see or process visual information to understand the content and context of the images and visual elements.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.12 FR-7.3.5: High Color Contrast

Table 3.4.180 represents the tabular description of the High Color Contrast functional requirement.

Table 3.4.180: High Color Contrast

Identifier	FR-7.3.5
Title	High Color Contrast
Requirement	The system must have high color contrast between text and background.
Source	Student
Rationale	High color contrast will allow users with visual impairments to read the text more easily.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.13 FR-7.4.1: High-Resolution encoding

Table 3.4.181 represents the tabular description of the High-Resolution encoding functional requirement.

Table 3.4.181: High-Resolution encoding

Identifier	FR-7.4.1
Title	High-Resolution
Requirement	The system must support video encoding with high resolution and bitrates.
Source	Student
Rationale	High-resolution and bitrate encoding will ensure that the resulting video has high quality and is suitable for playback on large screens.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.14 FR-7.4.2: Automatic Video Enhancement

Table 3.4.182 represents the tabular description of the Automatic Video Enhancement functional requirement.

Table 3.4.182: Automatic Video Enhancement

Identifier	FR-7.4.2
Title	Automatic Video Enhancement
Requirement	The system must provide automatic video enhancement, such as noise reduction and color correction.
Source	Student
Rationale	Automatic enhancement tools will improve the visual quality of the video and make it more appealing to viewers.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.15 FR-7.5.1: Text Formatting

Table 3.4.183 represents the tabular description of the Text Formatting functional requirement.

Table 3.4.183: Text Formatting

Identifier	FR-7.5.1
Title	Text Formatting
Requirement	The system must support text editing with basic formatting options, such as bold, italic, and underline.
Source	Student
Rationale	Basic formatting options will allow users to create visually appealing and easy-to-read content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.16 FR-7.5.2: Update text

Table 3.4.184 represents the tabular description of the Update text functional requirement.

Table 3.4.184: Update text

Identifier	FR-7.5.2
Title	Update text
Requirement	The system shall allow the user to update text of already uploaded content.
Source	Student
Rationale	Updating text will provide option for the user to change the unwanted text or to upgrade it.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.17 FR-7.5.3: Delete file

Table 3.4.185 represents the tabular description of the Delete filefunctional requirement.

Table 3.4.185: Delete file

Identifier	FR-7.5.3
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Title	Delete file
Requirement	The system shall allow users to delete any content uploaded by them.
Source	Student
Rationale	Deleting content will allow users to delete the unwanted file content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.18 FR-7.5.4: Change privacy

Table 3.4.186 represents the tabular description of the Change privacy functional requirement.

Table 3.4.186: Change privacy

Identifier	FR-7.5.4
Title	Change Privacy
Requirement	The system shall allow users to change the privacy of the content.
Source	Student
Rationale	Changing privacy will allow the users to give limited access the viewers that can see their content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.19 FR-7.5.5: Change caption

Table 3.4.187 represents the tabular description of the Change caption functional requirement.

Table 3.4.187: Change caption

Identifier	FR-7.5.5
Title	Change caption

Requirement	The app must allow user to change the caption of the content depending on the need.
Source	Student
Rationale	Changing caption will help the user to get desired results.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.20 FR-7.6.1: Select audio

Table 3.4.188 represents the tabular description of the Select audio functional requirement.

Table 3.4.188: Select audio

Identifier	FR-7.6.1
Title	Select Audio
Requirement	The system must allow user to select the audio to be uploaded.
Source	Student
Rationale	Select the desired audio to be uploaded
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.7.21 FR-7.6.3: Upload Audio

Table 3.4.189 represents the tabular description of the Upload Audio functional requirement.

Table 3.4.189: Upload Audio

Identifier	FR-7.6.3
Title	Upload audio
Requirement	The system must allow users to upload the audio.
Source	Student

Rationale	Audio is uploaded to be used in background of video
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8 Functional Requirements for Payment and Bidding

Below are the Functional Requirements for Payment and Bidding module.

3.4.8.1 FR-8.1.1: Enter Bidder name

Table 3.4.190 represents the tabular description of the Enter Bidder name functional requirement.

Table 190: Enter Bidder name

Identifier	FR-8.1.1
Title	Enter Bidder name
Requirement	The system shall allow the bidder to enter its name.
Source	Student
Rationale	This FR is essential for recognizing the bidder offering the bid.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.2 FR-8.1.2: Enter bidding amount

Table 3.4.191 represents the tabular description of the Enter bidding amount functional requirement.

Table 3.4.191: Enter bidding amount

Identifier	FR-8.1.2
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Title	Enter bidding amount
Requirement	The Bidder must enter an appropriate bidding amount..
Source	Student
Rationale	This FR is essential for getting the bidding amount to propose an offer for the content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.3 FR-8.1.3: Enter Email

Table 3.4.192 represents the tabular description of the Enter Email functional requirement.

Table 3.4.192: Register button

Identifier	FR-8.1.3
Title	Register button
Requirement	The system shall allow bidders to register for an account.
Source	Student
Rationale	This FR is essential for providing access to the bidding option to the users.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1
Priority	High

3.4.8.4 FR-8.1.4: Content Selection

Table 3.4.193 represents the tabular description of the Content Selection functional requirement.

Table 3.4.193: Content Selection

Identifier	FR-8.1.4
Title	Content Selection
Requirement	The system shall allow users to select one or more pieces of content to bid on.

Source	Student
Rationale	To allow users to express interest in specific content.
Business Rule (if required)	Users must be able to see all available content and select one or more pieces to bid on.
Dependencies	FR-8.1.1 , FR-8.1.2
Priority	Medium

3.4.8.5 FR-8.1.5: Upload Bid

Table 3.4.194 represents the tabular description of the Upload Bid functional requirement.

Table 3.4.194: Upload Bid

Identifier	FR-8.1.5
Title	Upload Bid
Requirement	The system shall allow users to publish the bid.
Source	Student
Rationale	This FR is essential for providing access to publish their bid to reach to the desired person.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.6 FR-8.2.1: User Authentication

Table 3.4.195 represents the tabular description of the User Authentication functional requirement.

Table 3.4.195: User Authentication

Identifier	FR-6.2.1
Title	User Authentication
Requirement	The system shall require users to authenticate before adding a payment method.

Source	Student
Rationale	To ensure that only authorized users can add or modify payment methods.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.7 FR-8.2.2: Select Payment Method

Table 3.4.196 represents the tabular description of the Select Payment Method functional requirement.

Table 3.4.196: Select Payment Method

Identifier	FR-8.2.2
Title	Select Payment Method
Requirement	The system shall allow users to select their preferred payment method when making a purchase.
Source	Student
Rationale	To allow users to choose the most convenient and suitable payment method for each transaction.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.8 FR-8.2.3: Payment Method Validation

Table 3.4.197 represents the tabular description of the Payment Method Validation functional requirement.

Table 3.4.197: Payment Method Validation

Identifier	FR-82.2.3
Title	Payment Method Validation
Requirement	The system shall validate the user's payment information before storing it.
Source	Student

Rationale	To prevent users from entering incorrect or invalid payment information.
Business Rule (if required)	The system should perform basic validation checks on the payment information, such as verifying the credit card number and expiration date.
Dependencies	N/A
Priority	High

3.4.8.9 FR-8.2.4: Payment Method Deletion

Table 3.4.198 represents the tabular description of the Payment Method Deletion functional requirement.

Table 3.4.198: Payment Method Deletion

Identifier	FR-8.2.4
Title	Payment Method Deletion
Requirement	The system shall allow users to delete their payment information.
Source	Student
Rationale	To give users control over their payment data and comply with data protection regulations.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.10 FR-8.2.5: Payment Confirmation

Table 3.4.199 represents the tabular description of the Payment Confirmation functional requirement.

Table 3.4.199: Payment Confirmation

Identifier	FR-8.2.5
Title	Payment Confirmation
Requirement	The system shall provide users with a confirmation of their payment.
Source	Student

Rationale	To inform users that their payment was successful and provide them with a receipt or proof of purchase.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.11 FR-8.2.6: Payment Refusal

Table 3.4.200 represents the tabular description of the Payment Refusal functional requirement.

Table 3.4.200: Payment Refusal

Identifier	FR-8.2.6
Title	Payment Refusal
Requirement	System will refuse the payment if there is any error in the system or the input data is not correct.
Source	Student
Rationale	Refusing invalid payment due to some wrong data entered or error in the system.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.12 FR-8.3.1: Display History

Table 3.4.201 represents the tabular description of the Display History functional requirement.

Table 3.4.201: Display History

Identifier	FR-8.3.1
Title	Display History
Requirement	The system shall display a user's payment history on their account page.
Source	Student
Rationale	To allow users to view their payment history and keep track of their transactions.

Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.13 FR-8.3.2: Payment History Filtering

Table 3.4.202 represents the tabular description of the Payment History Filtering functional requirement.

Table 3.4.202: Payment History Filtering

Identifier	FR-8.3.2
Title	Payment History Filtering
Requirement	The system shall allow users to filter their payment history by date, transaction type, and payment method.
Source	Student
Rationale	To help users find specific transactions and analyze their payment history.
Business Rule (if required)	Users should be able to apply filters to their payment history through a simple and intuitive interface.
Dependencies	N/A
Priority	High

3.4.8.14 FR-8.3.3: Payment History Details

Table 3.4.203 represents the tabular description of the Payment History Details functional requirement.

Table 3.4.203: Payment History Details

Identifier	FR-8.3.3
Title	Payment History Details
Requirement	The system shall provide users with detailed information about each transaction in their payment history, including transaction ID, payment method, transaction date, and transaction amount.
Source	Student

Rationale	To allow users to view the specifics of each payment transaction and reconcile their payment history with their own records.
Business Rule (if required)	Users should be able to access transaction details through a secure and easy-to-use interface.
Dependencies	N/A
Priority	High

3.4.8.15 FR-8.3.4: Payment History Export

Table 3.4.204 represents the tabular description of the Payment History Export functional requirement.

Table 3.4.204: Payment History Export

Identifier	FR-8.3.4
Title	Payment History Export
Requirement	The system shall allow users to export their payment history as a CSV file.
Source	Student
Rationale	To allow users to analyze and manage their payment history in other applications or programs
Business Rule (if required)	Users should be able to export their payment history through a simple and intuitive interface.
Dependencies	N/A
Priority	High

3.4.8.16 FR-8.3.5: Payment History Privacy

Table 3.4.205 represents the tabular description of the Payment History Privacy functional requirement.

Table 3.4.205: Payment History Privacy

Identifier	FR-8.3.5
Title	Payment History Privacy
Requirement	The system shall protect user privacy by not displaying sensitive payment information, such as credit card numbers, in the payment history.

Source	Student
Rationale	To prevent unauthorized access to sensitive payment data and comply with data protection regulations.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.17 FR-8.4.1: Payment Status Alerts

Table 3.4.206 represents the tabular description of the Payment Status Alerts functional requirement.

Table 3.4.206: Payment Status Alerts

Identifier	FR-8.4.1
Title	Payment Status Alerts
Requirement	The system shall provide real-time alerts to users when a payment status changes from "Pending" to "Successful" or "Failed".
Source	Student
Rationale	To notify users of important payment updates and ensure timely and accurate communication.
Business Rule (if required)	Users should be able to receive alerts through their preferred communication channels, such as email or push notifications.
Dependencies	N/A
Priority	High

3.4.8.18 FR-8.4.2: Custom Alert Settings

Table 3.4.207 represents the tabular description of the Custom Alert Settings functional requirement.

Table 3.4.207: Custom Alert Settings

Identifier	FR-8.4.2
Title	Custom Alert Settings

Requirement	The system shall allow users to customize their alert settings, such as frequency and notification preferences.
Source	Student
Rationale	To give users control over their alert settings and optimize their user experience.
Business Rule (if required)	Users should be able to adjust their alert settings through a simple and intuitive interface.
Dependencies	N/A
Priority	High

3.4.8.19 FR-8.4.3: Get Details

Table 3.4. 208 represents the tabular description of the Get Details functional requirement.

Table 3.4.208: Get Details

Identifier	FR-8.4.3
Title	Get Details
Requirement	The system shall provide users with detailed information about each payment status update, including transaction ID, payment method, status change date, and new status.
Source	Student
Rationale	To allow users to stay informed about their payment status and take appropriate action if necessary.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.20 FR-8.4.4: Payment Status Analysis

Table 3.4.209 represents the tabular description of the Payment Status Analysis functional requirement.

Table 3.4.209: Payment Status Analysis

Identifier	FR-8.4.4
Title	Payment Status Analysis

Requirement	The system shall provide users with tools for analyzing their payment status history, such as charts and graphs.
Source	Student
Rationale	To help users identify trends and patterns in their payment history and make data-driven decisions.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.21 FR-8.4.5: Payment Status History

Table 3.4.210 represents the tabular description of the Payment Status History functional requirement.

Table 3.4.210: Payment Status History

Identifier	FR-8.4.5
Title	Payment Status History
Requirement	The system shall maintain a history of payment status updates for each transaction, accessible to both users and customer support representatives.
Source	Student
Rationale	To ensure transparency and accountability in payment processing and facilitate issue resolution.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.22 FR-8.4.6: Payment Status Support

Table 3.4.211 represents the tabular description of the Payment Status Support functional requirement.

Table 3.4.211: Payment Status Support

Identifier	FR-8.4.6
Title	Payment Status Support

Requirement	The system shall provide users with access to customer support for resolving payment status issues and answering questions.
Source	Student
Rationale	To ensure a positive user experience and prompt issue resolution.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.23 FR-8.5.1: Real-Time Bidding Updates

Table 3.4.212 represents the tabular description of the Real-Time Bidding Updates functional requirement.

Table 3.4.212: Real-Time Bidding Updates

Identifier	FR-8.5.1
Title	Real-Time Bidding Updates
Requirement	The system shall provide real-time updates to users when a bid is submitted or updated on a project they are following.
Source	Student
Rationale	To notify users of important bid updates and ensure timely and accurate communication.
Business Rule (if required)	Users should be able to receive updates through their preferred communication channels, such as email or push notifications.
Dependencies	N/A
Priority	High

3.4.8.24 FR-8.5.2: Bid History

Table 3.4. 213 represents the tabular description of the Bid History functional requirement.

Table 3.4.213: Bid History

Identifier	FR-8.5.2
Title	Bid History

Requirement	The system shall maintain a history of bid updates for each project, accessible to both users and project managers.
Source	Student
Rationale	To ensure transparency and accountability in bidding and facilitate project management.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.25 FR-8.5.3: Check Approval

Table 3.4.214 represents the tabular description of the Check Approval functional requirement.

Table 3.4.214: Check Approval

Identifier	FR-8.5.3
Title	Check Approval
Requirement	The system shall allow users to check for the acceptance of bid.
Source	Student
Rationale	User will be able to check the response on the bid.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.26 FR-8.5.4: Bidding Analytics

Table 3.4.215 represents the tabular description of the Bidding Analytics functional requirement.

Table 3.4.215: Bidding Analytics

Identifier	FR-8.5.4
Title	Bidding Analytics
Requirement	The system shall provide users with tools for analyzing their bidding activity, such as charts and graphs.

Source	Student
Rationale	To help users identify trends and patterns in their bidding history and make data-driven decisions.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.8.27 FR-8.5.5: Notification update

Table 3.4.216 represents the tabular description of the Notification update functional requirement.

Table 3.4.216: Notification update

Identifier	FR-8.5.5
Title	Notification update
Requirement	The app will send an auto notification for any update on the bidding.
Source	Student
Rationale	Updating by notification will ease the user to check for new update.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.9 Functional Requirement for Notification and Recommendation

Below are the Functional Requirements for Notification and Recommendation module.

3.4.9.1 FR-9.1.2: Display push notification

Table 3.4.217 represents the tabular description of the Display push notification functional requirement.

Table 3.4.217: Display push notification

Identifier	FR-9.1.2
Title	Display push notification

Requirement	System will display application push notifications.
Source	Student
Rationale	This requirement will be used, for providing facility to user to view the application push notifications.
Business Rule (if required)	N/A
Dependencies	FR-9.1.1
Priority	High

3.4.9.2 FR-9.2.1: Event Selection

Table 3.4.218 represents the tabular description of the Event Selection functional requirement.

Table 3.4.218: Event Selection

Identifier	FR-9.2.1
Title	Event Selection
Requirement	Users can select specific events to receive notifications for.
Source	Student
Rationale	Allow users to customize their notification preferences based on the events they are interested in.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.9.3 FR-9.2.2: Notification Channels

Table 3.4.219 represents the tabular description of the Notification Channels functional requirement.

Table 3.4.219: Notification Channels

Identifier	FR-9.2.2
Title	Notification Channels
Requirement	Users can choose to receive notifications via email, SMS, or in-app push notifications.

Source	Student
Rationale	Allow users to receive notifications in a way that is convenient and relevant to them.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.9.4 FR-9.2.3: Notification Frequency

Table 3.4.220 represents the tabular description of the Notification Frequency functional requirement.

Table 3.4.220: Notification Frequency

Identifier	FR-9.2.3
Title	Notification Frequency
Requirement	Users can set the frequency of their notifications (e.g., immediate, daily, weekly).
Source	Student
Rationale	Allow users to customize the frequency of their notifications based on their preferences and needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.9.5 FR-9.2.4: Timeliness of Notifications

Table 3.4.221 represents the tabular description of the Timeliness of Notifications functional requirement.

Table 3.4.221: Timeliness of Notifications

Identifier	FR-9.2.4
Title	Timeliness of Notifications
Requirement	Notifications are sent in real-time or near real-time for timely and relevant updates.
Source	Student

Rationale	Ensure that users receive notifications in a timely manner for maximum usefulness.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.9.6 FR-9.2.5: Personalized Notifications

Table 3.4.222 represents the tabular description of the Personalized Notifications functional requirement.

Table 3.4.222: Personalized Notifications

Identifier	FR-9.2.5
Title	Personalized Notifications
Requirement	Notifications are personalized to the user's preferences and location (if relevant).
Source	Student
Rationale	Improve the relevance and usefulness of notifications by tailoring them to the user's preferences and needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.9.7 FR-9.3.1: Search function

Table 3.4.223 represents the tabular description of the Search function functional requirement.

Table 3.4.223: Search function

Identifier	FR-9.3.1
Title	Search function
Requirement	The FAQ module shall provide a search function to allow users to search for specific questions or keywords.
Source	Student

Rationale	Allow users to quickly find specific questions or topics of interest
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.9.8 FR-9.3.2: Select Category

Table 3.4.224 represents the tabular description of the Select Category functional requirement.

Table 3.4.224: Select Category

Identifier	FR-9.3.2
Title	Select Category
Requirement	Users will be able to select a category from the dropdown.
Source	Student
Rationale	This requirement will facilitate the users into selecting a specific category related to the system that they want to report about.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.9.9 FR-9.3.3: Submitting additional questions

Table 3.4.225 represents the tabular description of the Submitting additional questions functional requirement.

Table 3.4.225: Submitting additional questions

Identifier	FR-9.3.3
Title	Submitting additional questions
Requirement	The FAQ module shall allow users to submit additional questions that are not currently listed.
Source	Student

Rationale	Allow users to submit additional questions not listed in the FAQ
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.9.10 FR-9.3.4: Analytics

Table 3.4.226 represents the tabular description of the Analytics functional requirement.

Table 3.4.226: Analytics

Identifier	FR-9.3.4
Title	Analytics
Requirement	The FAQ module shall allow User to view analytics on the most frequently viewed or searched questions.
Source	Student
Rationale	Allow User to view analytics on frequently viewed or searched questions
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.9.11 FR-9.3.5: Rating

Table 3.4.227 represents the tabular description of the Rating functional requirement.

Table 3.4.227: Rating

Identifier	FR-9.3.5
Title	Rating
Requirement	The FAQ module shall allow users to rate the usefulness of an answer.
Source	Student
Rationale	Allow users to rate the usefulness of an answer

Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

3.4.9.12 FR-9.4.1: Select Category

Table 3.4.228 represents the tabular description of the Select Category functional requirement.

Table 3.4.228: Select Category

Identifier	FR-9.4.1
Title	Select Category
Requirement	Users will be able to select a category from the dropdown.
Source	Student
Rationale	This requirement will facilitate the users into selecting a specific category related to the system that they want to report about.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.4.9.13 FR-9.4.2: Write Subject

Table 3.4.229 represents the tabular description of the Write Subject functional requirement.

Table 3.4.229: Write Subject

Identifier	FR-9.4.2
Title	Write Subject
Requirement	Users will be able to write a Subject of their report.
Source	Student
Rationale	This requirement will facilitate the users into selecting a subject for their report.
Business Rule (if required)	N/A

Dependencies	N/A
Priority	Medium

3.4.9.14 FR-9.4.3: Write Description

Table 3.4.230 represents the tabular description of the Write Description functional requirement.

Table 3.4.230: Write Description

Identifier	FR-9.4.3
Title	Write Description
Requirement	Users will be able to write a Description of their report.
Source	Student
Rationale	This requirement will facilitate the users into selecting a description for their report.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

3.5 Non-Functional Requirements

Following are the non Functional Requirements of our System.

3.5.1 NFR- 01: Reliability

The application shall be made to be highly reliable with only a slight chance of failure. The only time the failure shall happen is due to the limitation of hardware it will run on or due to unavailability of the internet connection.

3.5.2 NFR- 02: Usability

The Non-Functional Requirements related to usability are enlisted below.

USE-1: By using concepts of Human Computer Interaction like Norman Design Principle, “Color Combination” will be considered while designing UI.

USE-2: Different services will be divided into separate logical groups so learning time can be reduced.

USE-3: A short on-screen summary form will be taken from the user so user and system can understand what the user wants to do.

USE-4: The system should be designed to provide fast response times to user interactions, ensuring that users do not experience any lag or delay while using the system.

3.5.3 NFR- 03: Performance

The Non-Functional Requirements related to performance are enlisted below.

PER-1: News Wave will be a very responsive system having minimum time response of 1 sec.

PER-2: News Wave can handle at least 100 concurrent requests per second.

3.5.4 NFR- 04: Maintainability

The Non-functional requirements related to maintainability are enlisted below.

MAI-1: The minor errors fix will take maximum of 3 days.

MAI-2: The major errors fix will take maximum of 07 days.

3.5.5 NFR- 05: Security

The Non-functional requirements related to Security are enlisted below

SEC-1: The system shall be designed to protect against unauthorized access, tampering, and destruction of data.

SEC-2: The system shall be designed to minimize the risk of data breaches, such as by encrypting sensitive data and limiting access to authorized users only.

SEC-3: The system shall be designed to ensure that all data transfers between the system and external parties are encrypted

3.5.6 NFR- 06: Supportability

The Non-Functional Requirements related to supportability are enlisted below.

SUP-1: The web application will be compatible with Google Chrome v89.0.4389.72., Microsoft Edge Version 88.0.705.81, Mozilla Firefox 86, Opera Version:74.0.3911.160 and other latest browsers.

SUP-2: The android application will be compatible with android version 6.0, OERO and higher.

3.6 External Interface Requirements

3.6.1 User Interfaces Requirements

The application will interact with the user using Graphical user interface. The system will be developed in such a way that user finds it easy to use. Application would be developed using proper color combinations.

- UI-1:** A clean, simple home screen with easy navigation to all other areas of the system.
- UI-2:** Fonts shall be legible and easy to read, with a size that is appropriate for the device being used.
- UI-3:** The color scheme shall be visually appealing and easy to read.
- UI-4:** Standard buttons, such as Save and Cancel, and navigation links, such as Home and Help, shall be used consistently throughout the system.
- UI-5:** Font that shall be used for Android Application is Roboto and for iOS it should be San Francisco.
- UI-6:** The default font size of android design shall be 16px and secondary size shall be 14px
- UI-7:** The default font size for iOS shall be 17px and secondary size shall be 15px.

3.6.2 Software interfaces

- SI-1:** The backend of application operates on Node JS server
- SI-2:** This node server communicates with Mongo DB database for handling data.
- SI-3:** The application will use Python bots to scrape the targeted users from the social media and python bots will also be used for communicating with the scraped users.
- SI-4:** The application will also incorporate Stripe JS for payment handling.
- SI-5:** ReactNative shall be used as the framework for the application

3.6.3 Communications interfaces

- CI-1:** Application will use the HTTP protocol to communicate with the node server.
- CI-2:** When a user wants to change their password a recovery link shall be sent to the user's email address.

4 Design and Architecture

Below are the parts of Software Design Description (SDD) report in this chapter.

4.1 Architectural Design

MVC Architecture design will be used in News Wave.

A MVC Architecture is a well-designed software program that organizes applications into three logical and physical computer components: a launch phase, or an easy-to-use interface; application phase, in which data is processed; and the data section, where the data associated with the application is stored and managed. The great advantage of three-phase design is that because each phase operates on its own infrastructure, each phase can be developed simultaneously by a separate development team and can be updated or modified as needed without compromising other components. The main advantages of a MVC architecture design are rapid development, advanced scaling, reliability, and safety.

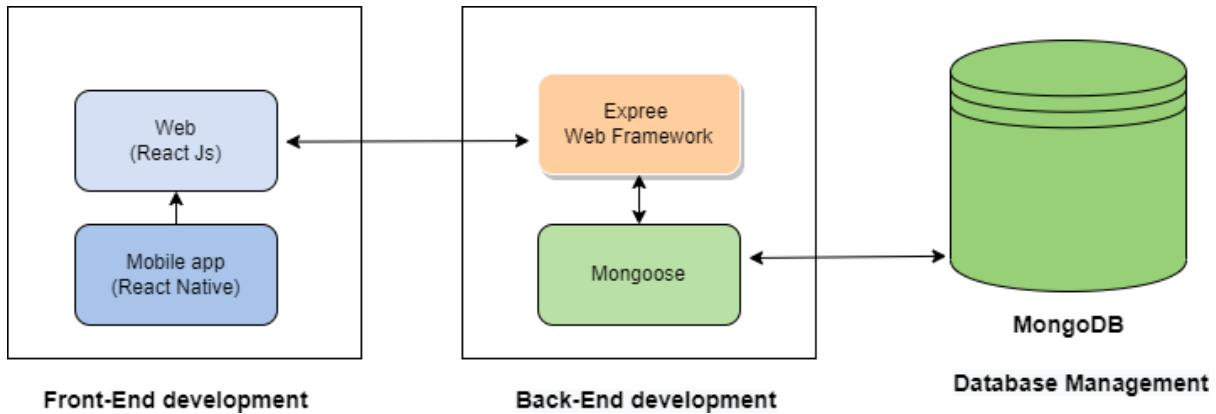


Figure 4.1 Architecture design diagram

4.2 Design Models

This section gives the design models for **Procedural Approach** that we have applied our system.

4.2.1 AD-01: User Sign Up

Figure 4.2 is the Activity Diagram of the User Sign up. It shows us the process of user signup taking place in our application.

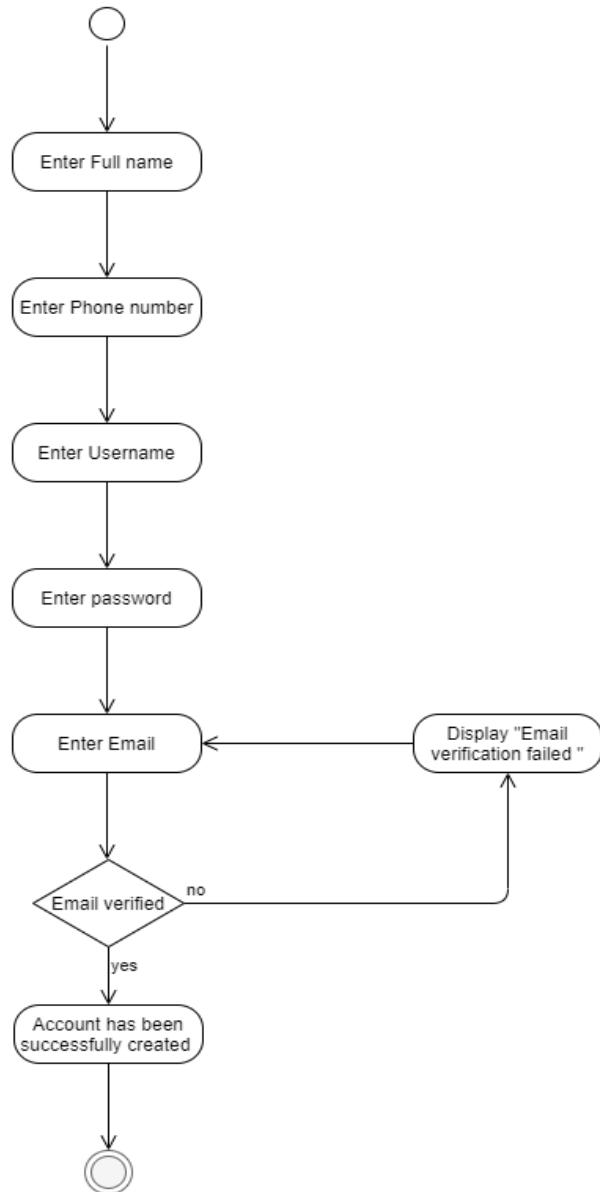


Figure 4.2 Activity diagram for User Signup

4.2.2 AD-02: Login

Figure 4.3 is the Activity Diagram of the User Login. It shows us the process of user Login taking place in our application.

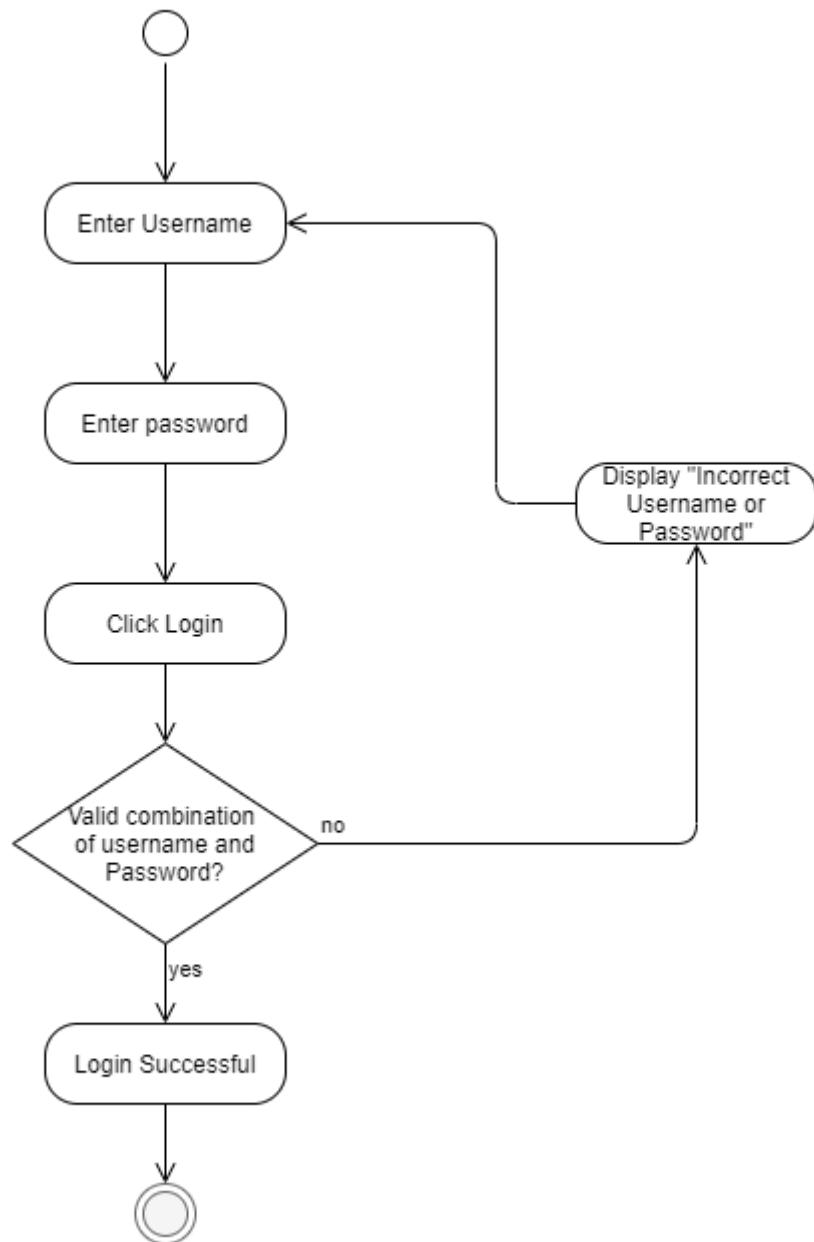


Figure 4.3 Activity diagram for User Login

4.2.3 AD-03: Content Upload

Figure 4.4 is the Activity Diagram of the Content Upload. It shows us the flow of application through User and shows the steps a user will perform while uploading content.

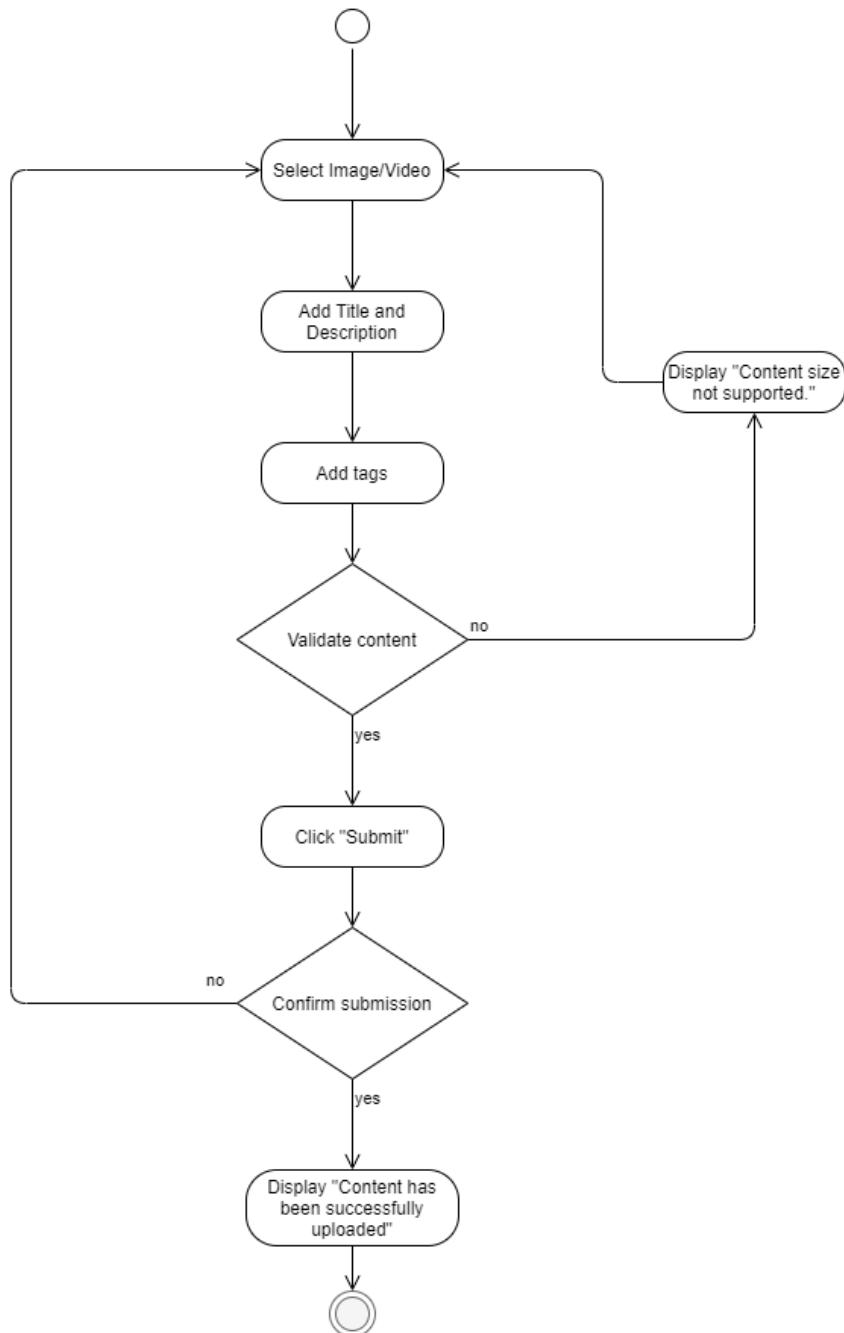


Figure 4.4 Activity diagram for Content Upload

4.2.4 AD-04: Update Content

Figure 4.5 is the Activity Diagram of the update content. It shows us the flow of application through user, along-with depicting the actions that the user can perform while updating content.

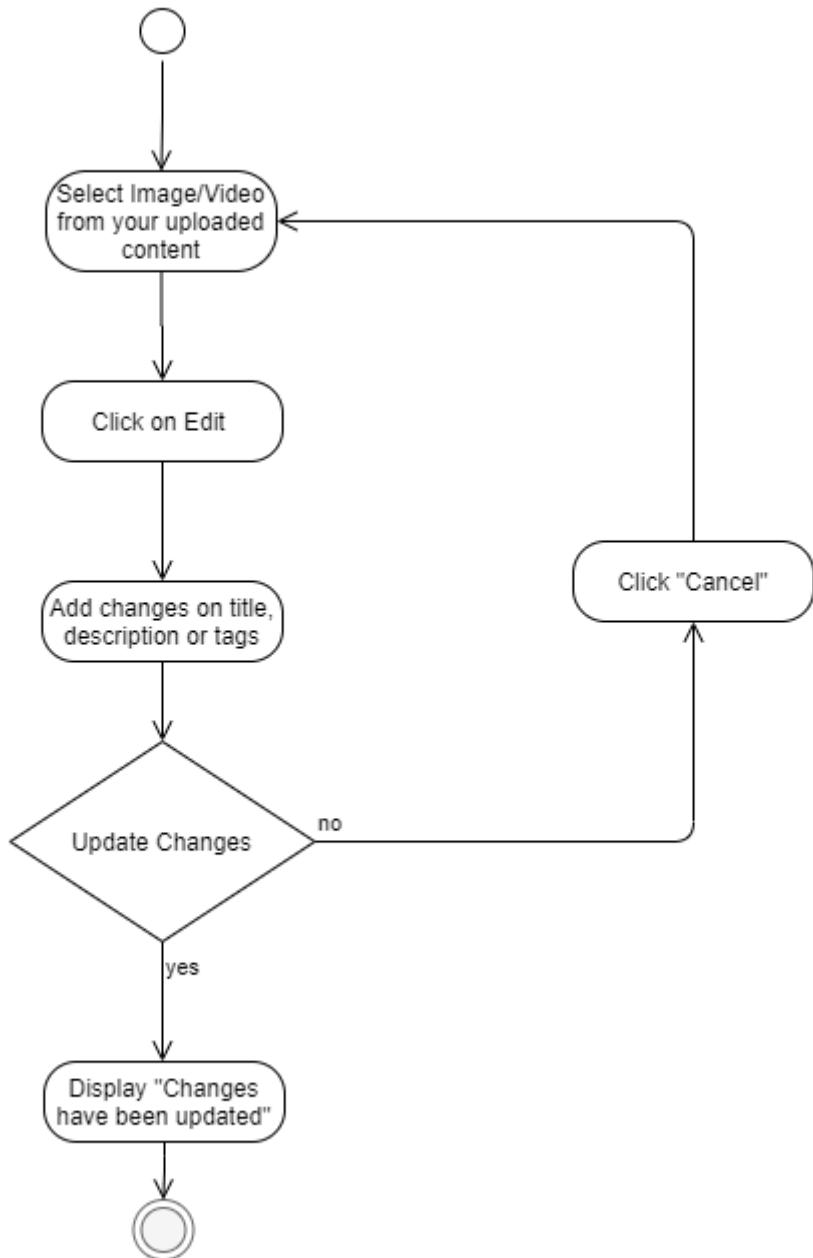


Figure 4.5 Activity diagram for Update Content

4.2.5 AD-05: Content Moderation

Figure 4.6 is the Activity Diagram of the content Moderation. It shows us the flow of application when scanning content for any misinformation or inappropriate content.

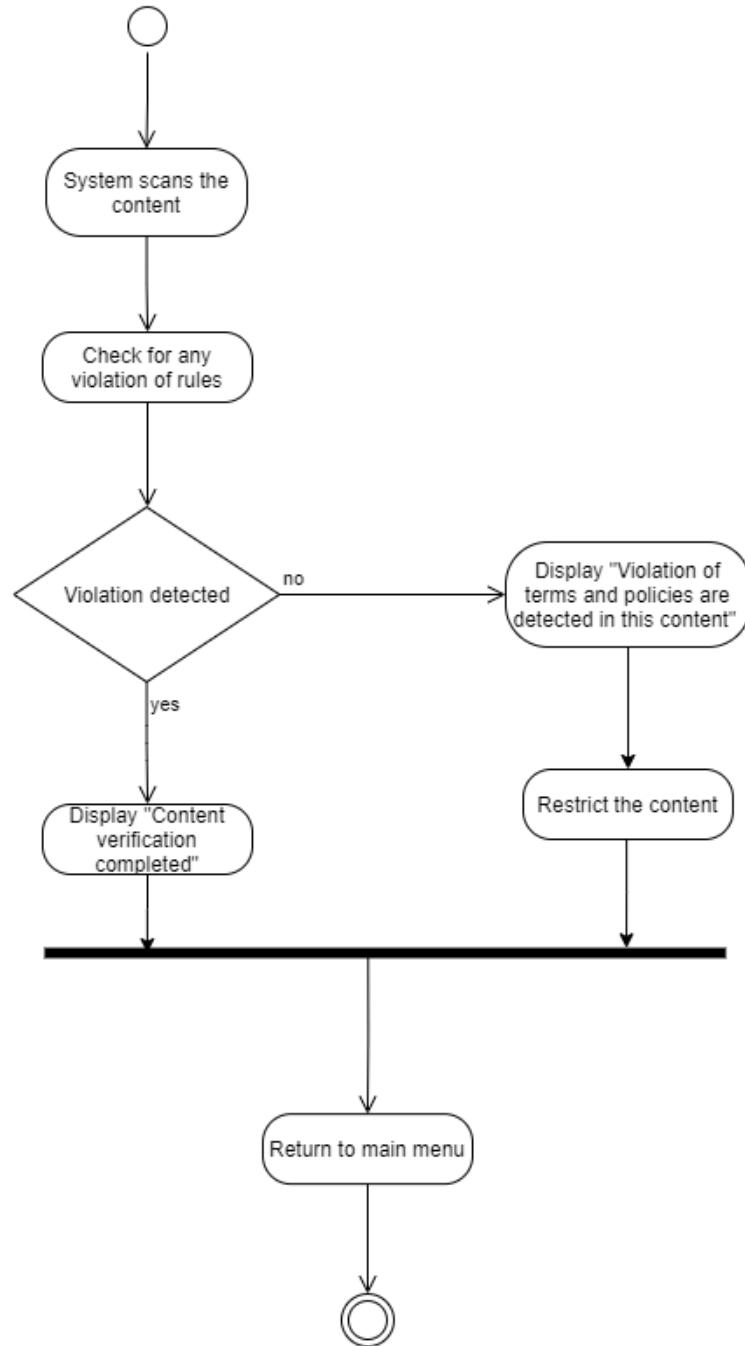


Figure 4.6 Activity diagram for Content Moderation

4.2.6 AD-06: Video recording

Figure 4.7 is the Activity Diagram of the Video Recording. It shows us the flow of application through user when he is recording a video.

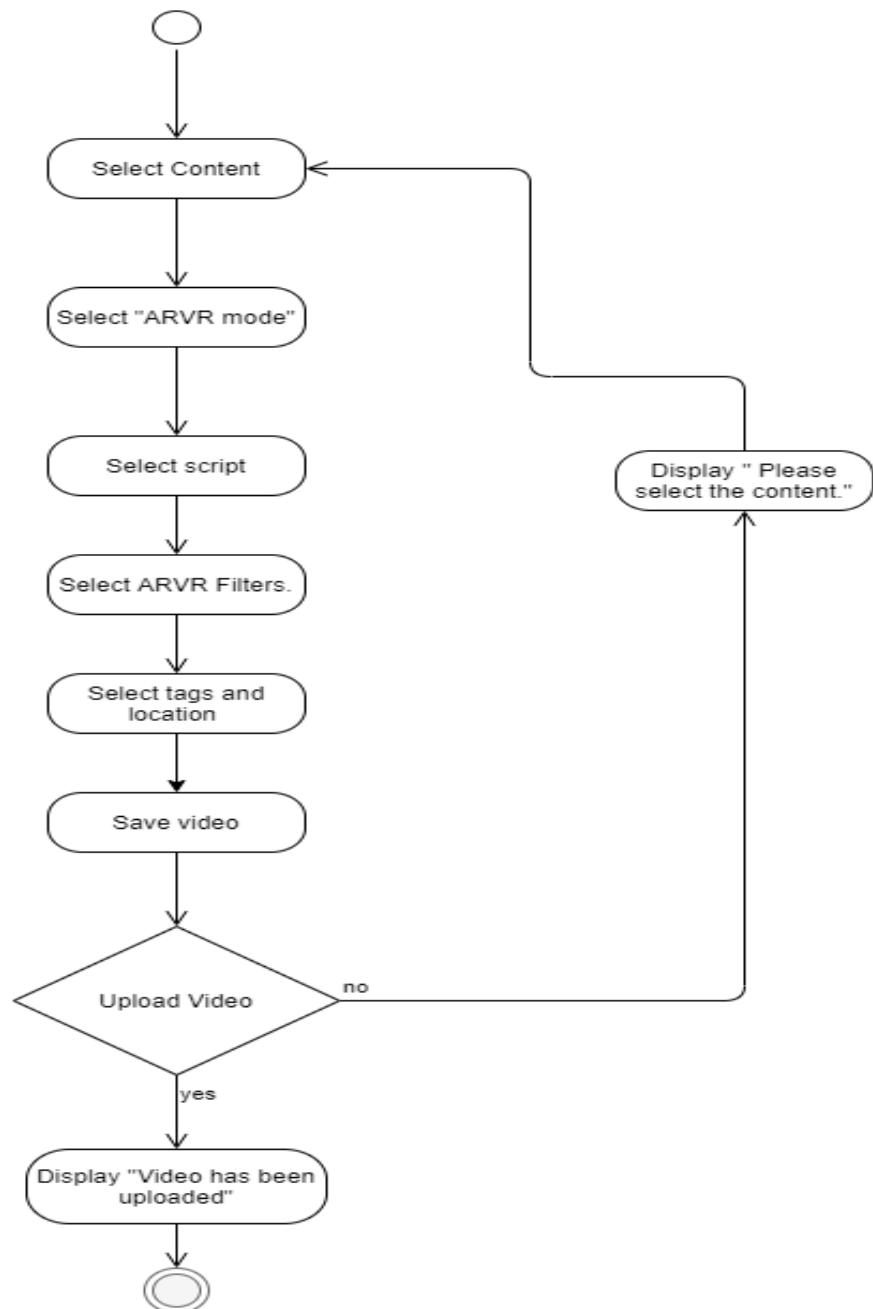


Figure 4.7 Activity diagram for Video Recording

4.2.7 AD-07: Content Privacy

Figure 4.8 is the Activity Diagram of the content privacy. It shows us the actions user can take to protect the privacy of his content.

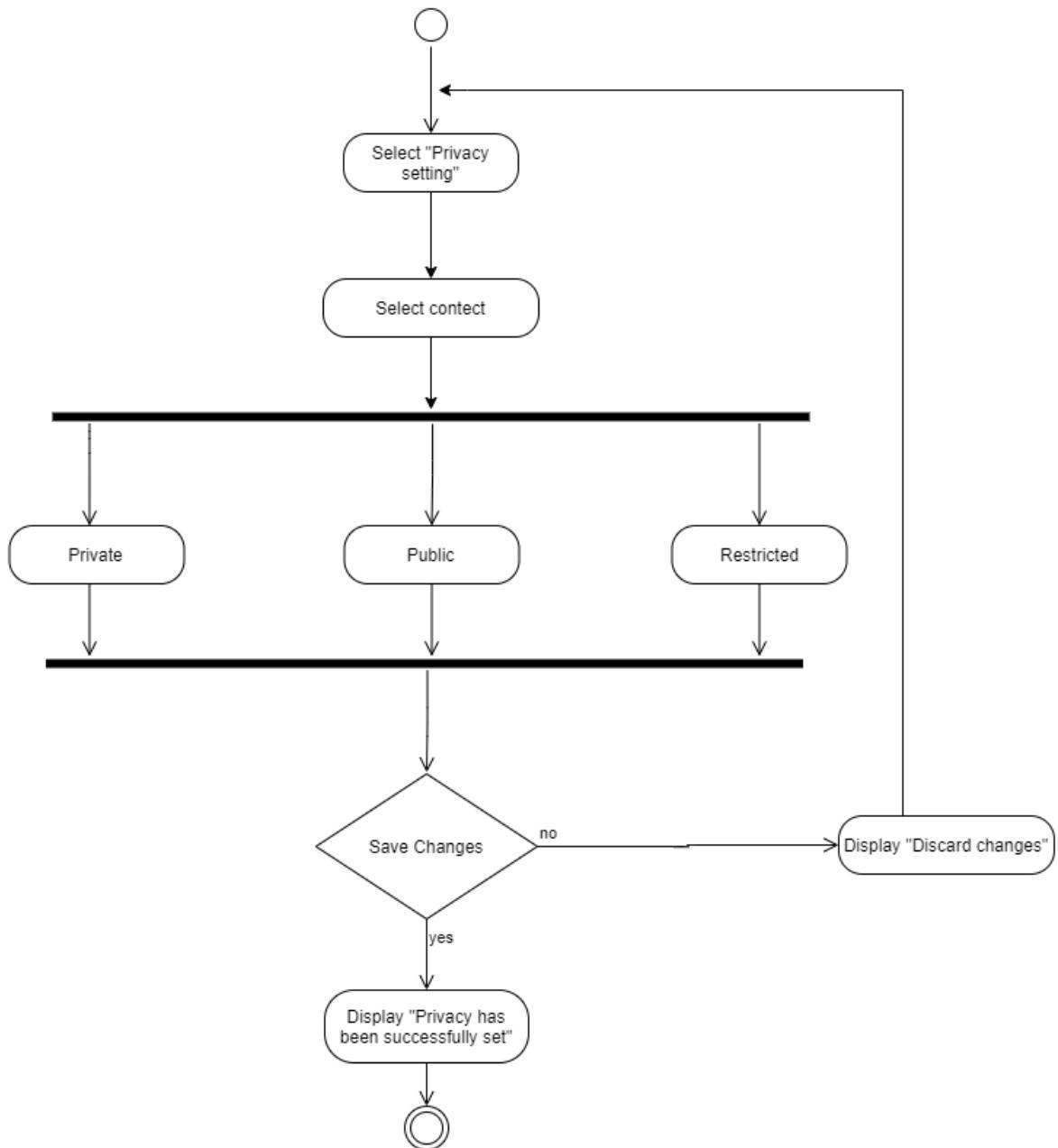


Figure 4.8 Activity diagram for Content Privacy

4.2.8 AD-08: Enhance Content

Figure 4.9 is the Activity Diagram of the content enhancement. It shows us the flow of application through user, how he can enhance his recorded content by applying different features available in our application.

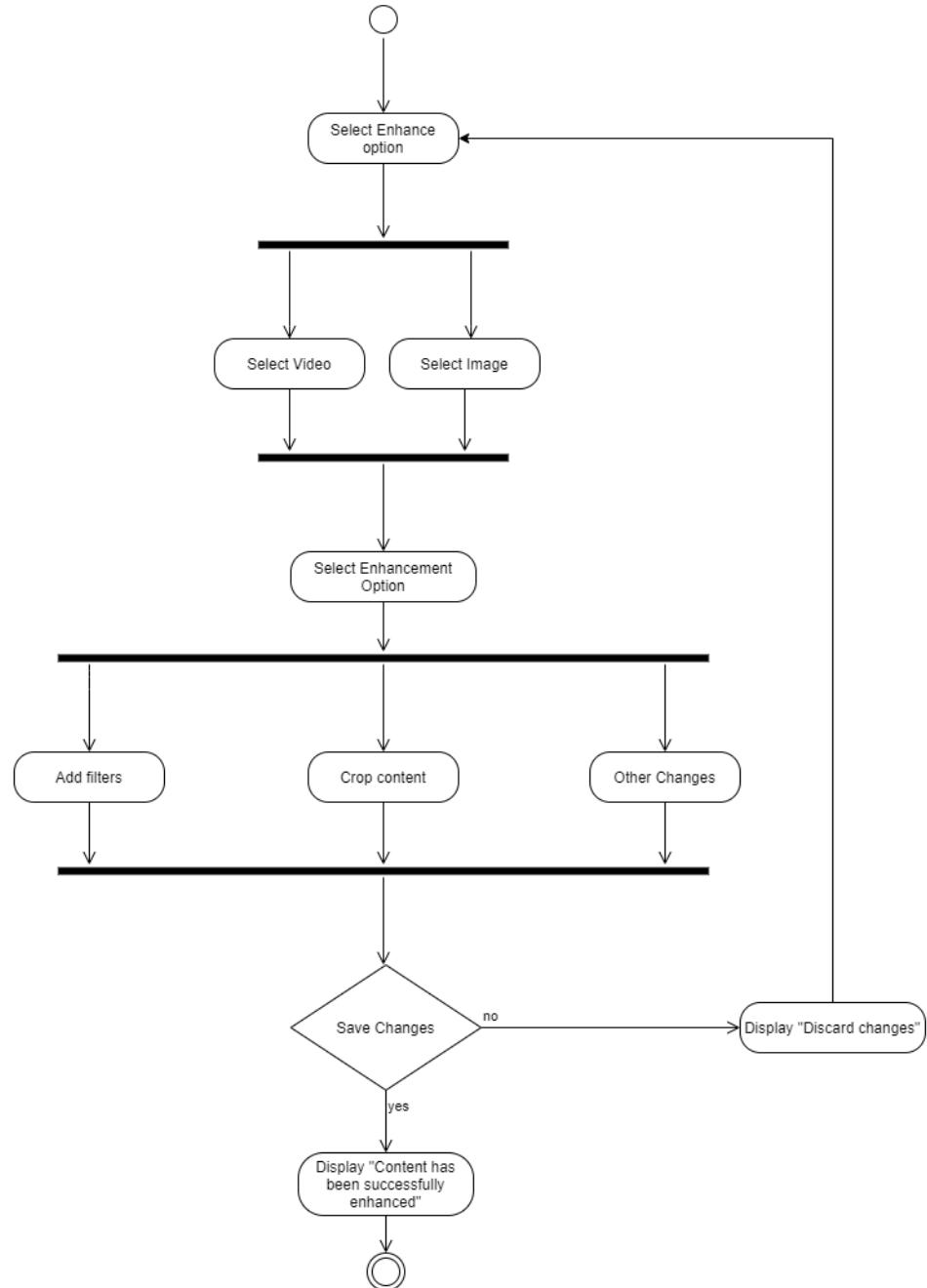


Figure 4.9 Activity diagram for Enhance Content

4.2.9 AD-09: Job Posting

Figure 4.10 is the Activity Diagram of the Job posting. It shows us how News channels and other users can manage job posting process and provide their jobs to broader audience.

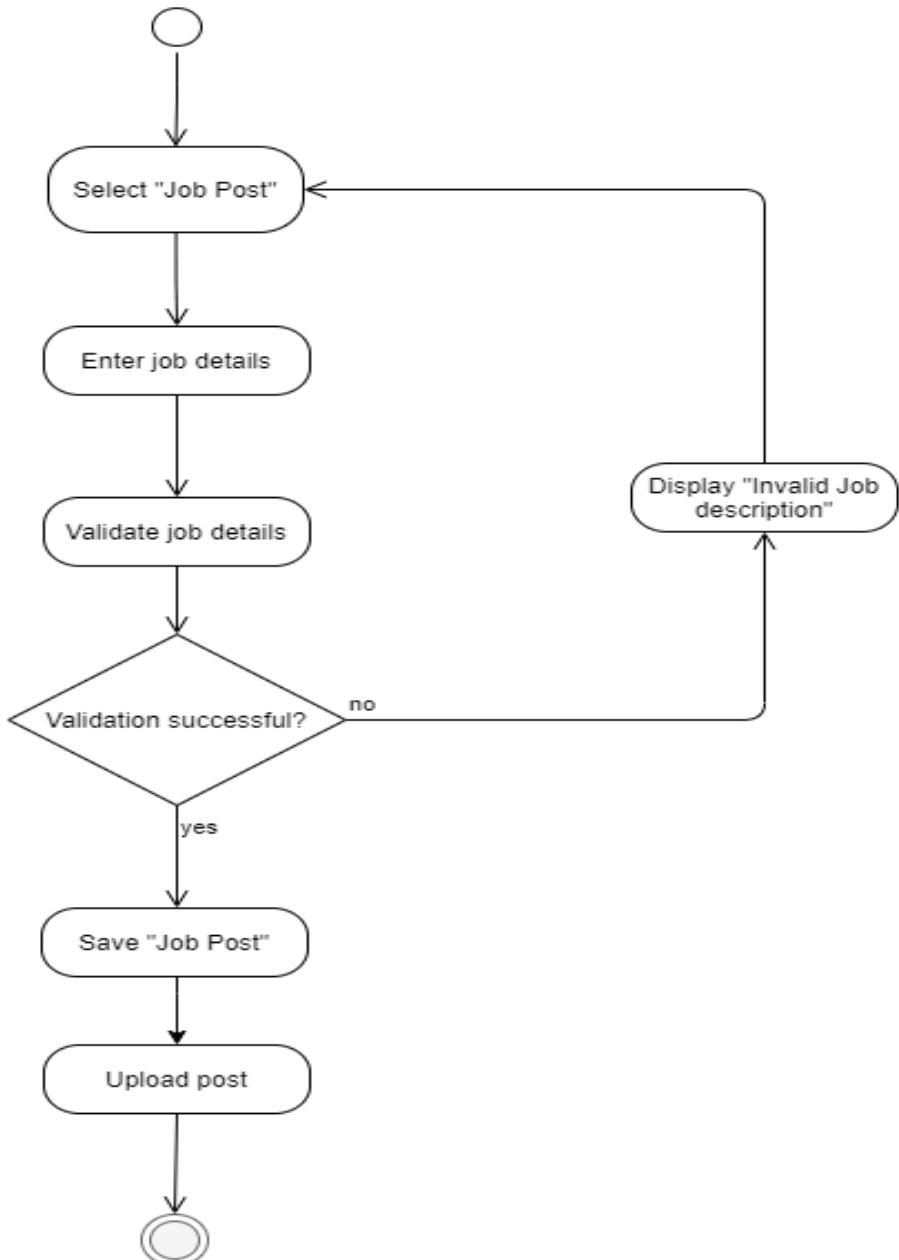


Figure 4.10 Activity diagram for Job Posting

4.2.10 AD-10: Payment And Billing

Figure 4.11 is the Activity Diagram of the payment and billing. It shows us the steps the user can take while buying or selling of content.

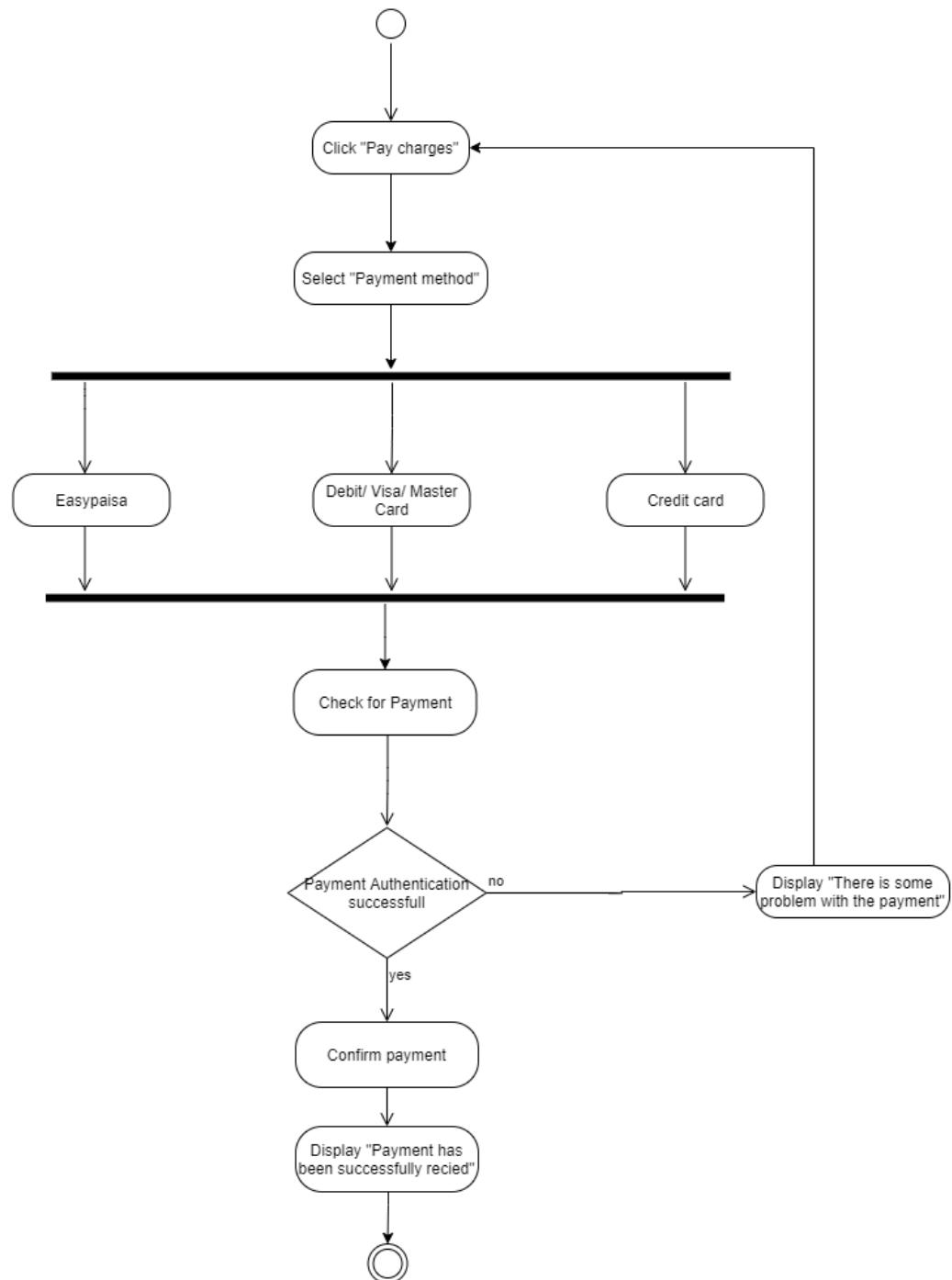


Figure 4.11 Activity diagram for Payment and Billing

4.3 Data Flow Diagram

Following are the data flow diagrams of News Wave.

4.3.1 DFD-01: Data Flow Diagram Level 0

Figure 4.12 is the Data Flow Diagram Level 0 of our system. It shows us the flow of data and actions between the two types of applications users (News Channels and Citizen Journalists).

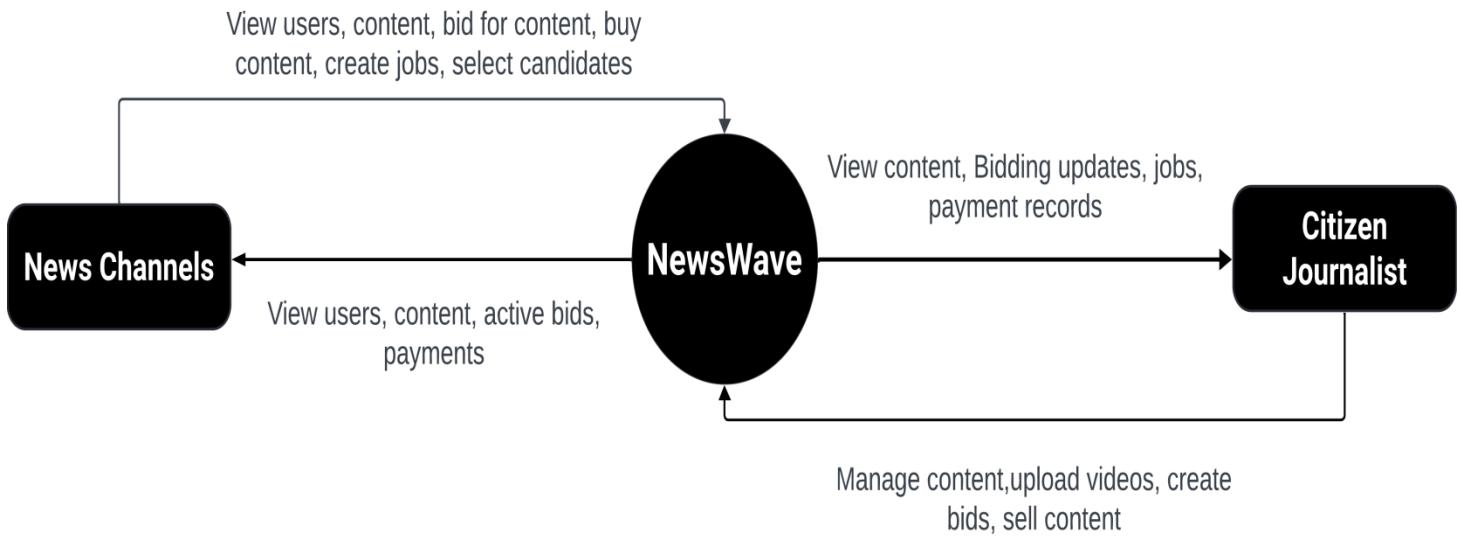


Figure 4.12 Data Flow Diagram Level 0

4.3.2 DFD-02: `Data Flow Diagram Level 1

Figure 4.13 is the Data Flow Diagram Level 1. It depicts a detailed view of actions being performed and flow of data within the application.

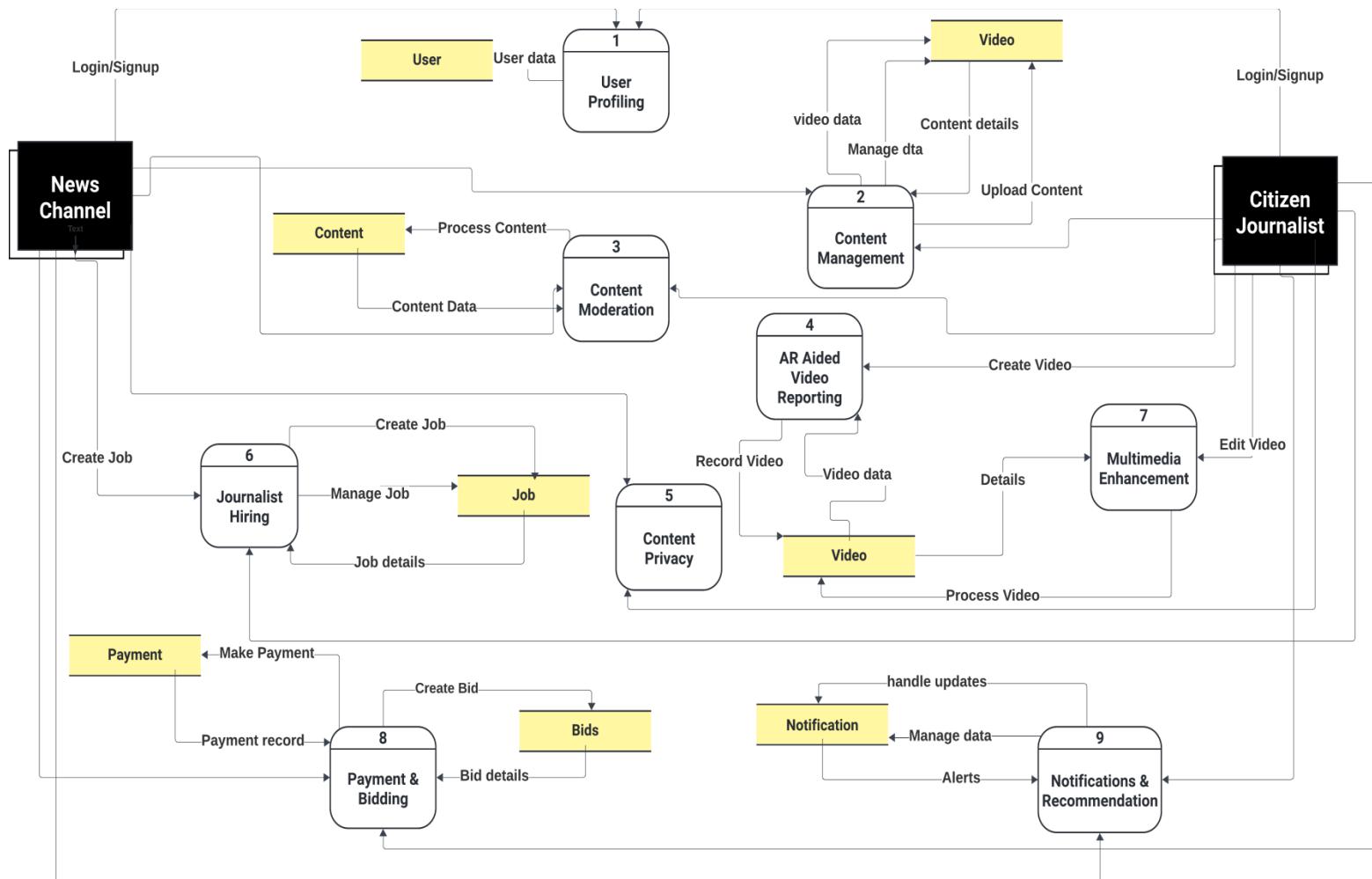


Figure 4.13 Data Flow diagram Level 1

4.3.3 DFD-03: Data Flow Diagram Level 2

This Section shows the Data flow diagram level 2 of our system.

4.3.3.1 DFD-3.1: Data Flow Diagram for User Profile Management

Figure 4.14 is the data flow diagram level 2 of user profile management.

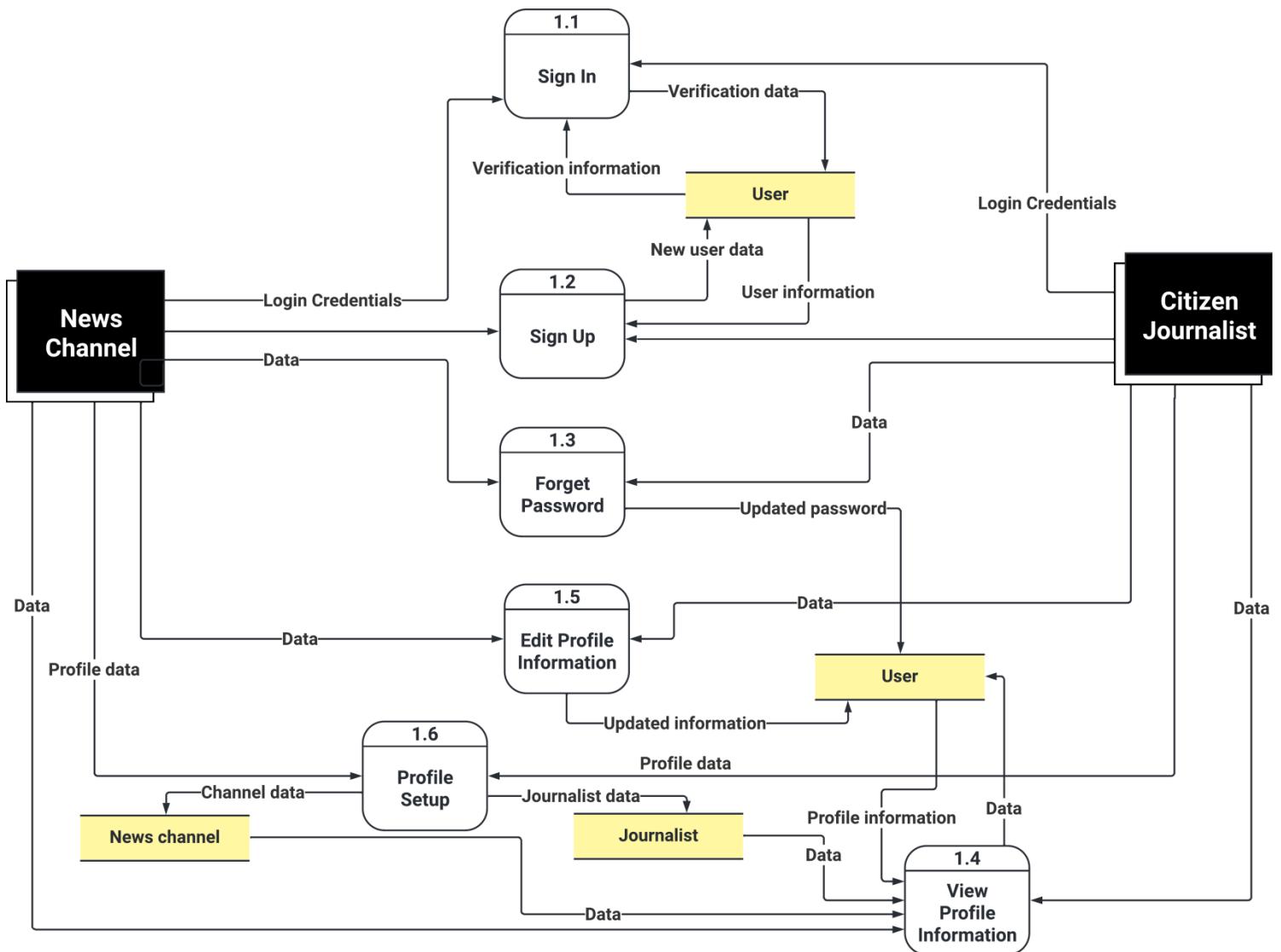


Figure 4.14 Sequence diagram for Upload Content

4.3.3.2 DFD-3.2: Data Flow Diagram for Content Management

Figure 4.15 is the data flow diagram level 2 of Content Management.

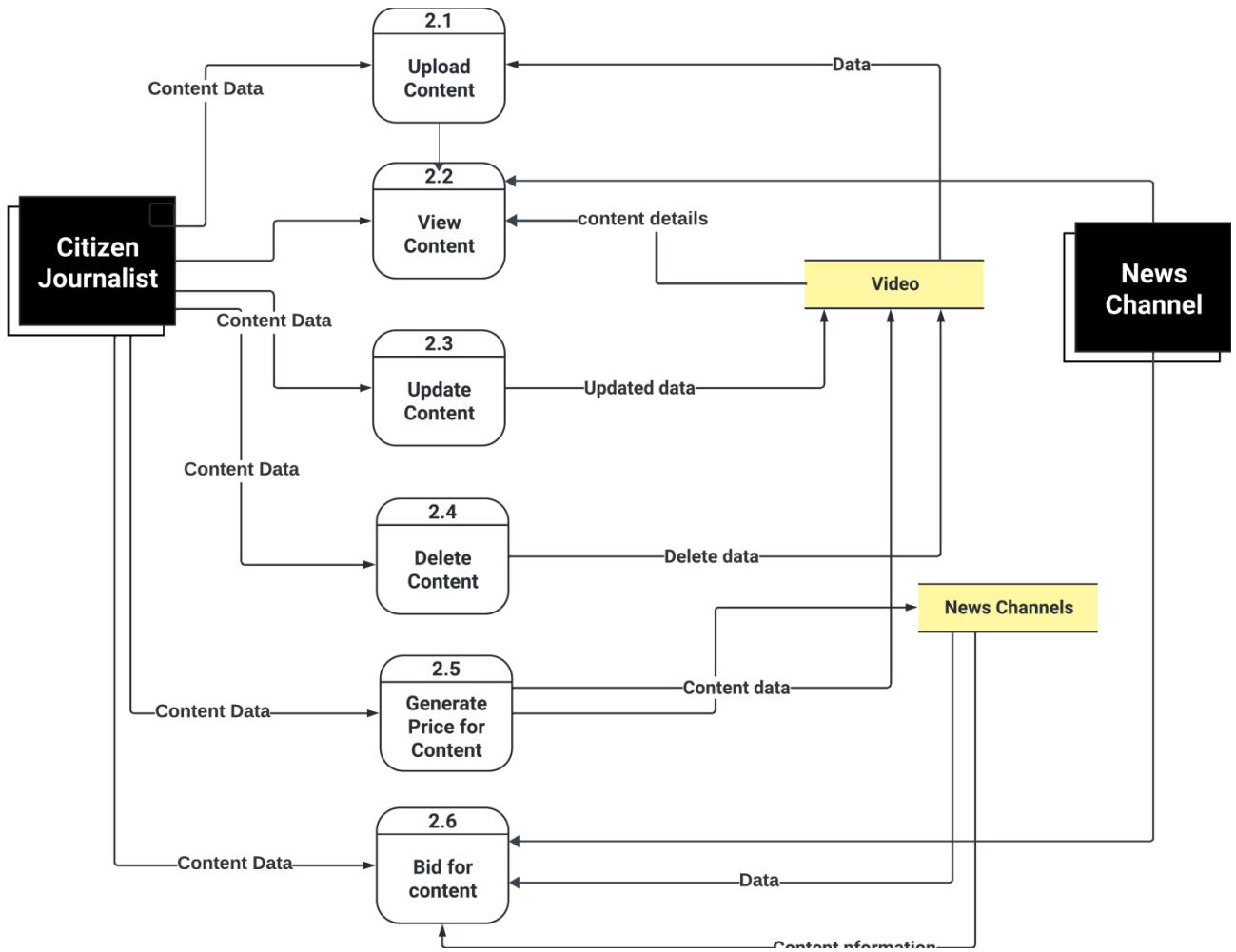


Figure 4.15 Data Flow Diagram level 2 Content Management

4.3.3.3 DFD-3.3: Data Flow Diagram for Content Moderation

Figure 4.16 is the data flow diagram level 2 of Content Moderation.

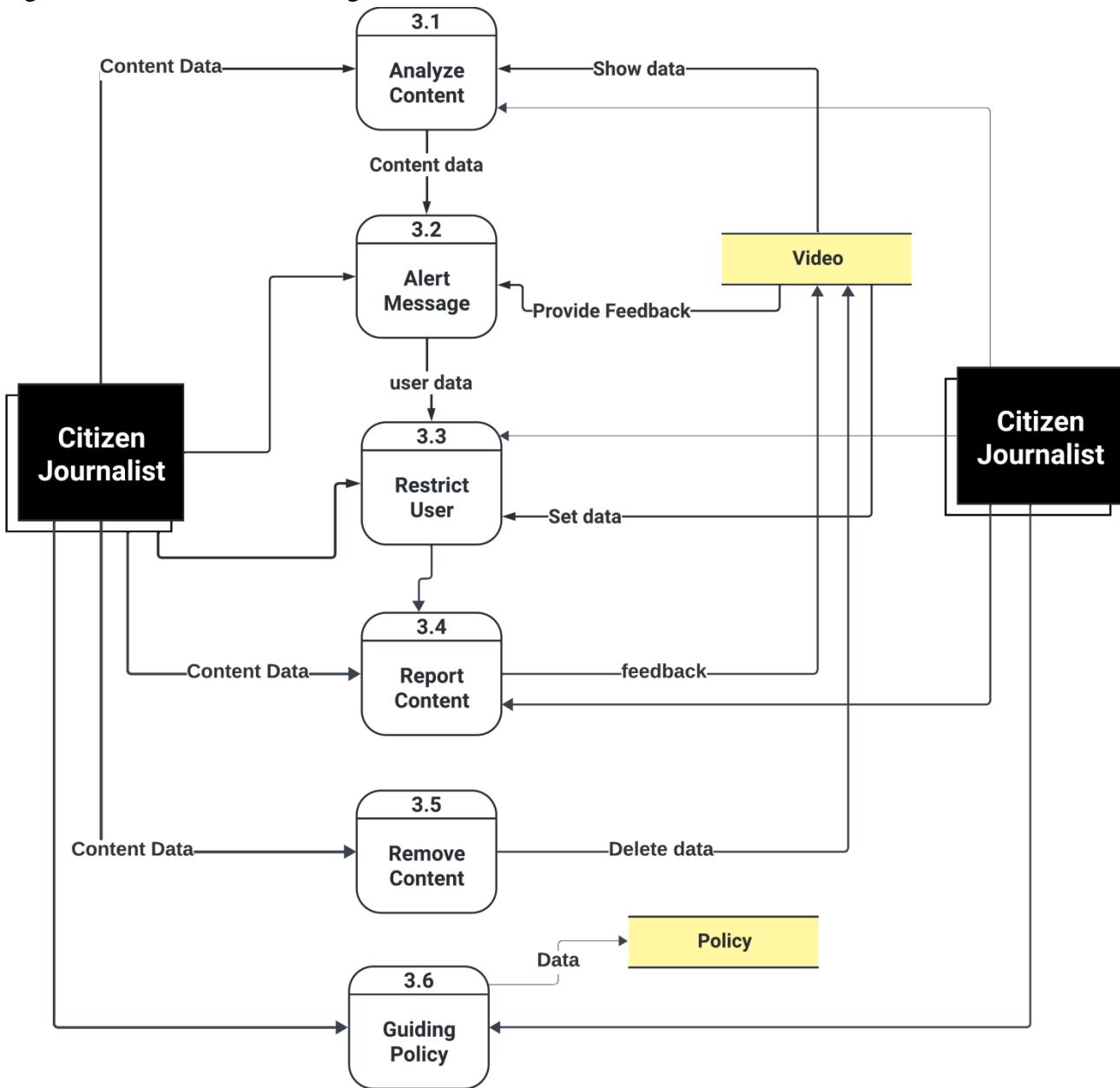


Figure 4.16 Data Flow Diagram level 2 Content Moderation

4.3.3.4 DFD-3.4: Data Flow Diagram for AR Aided video reporting

Figure 4.17 is the data flow diagram level 2 of AR Aided Video Reporting.

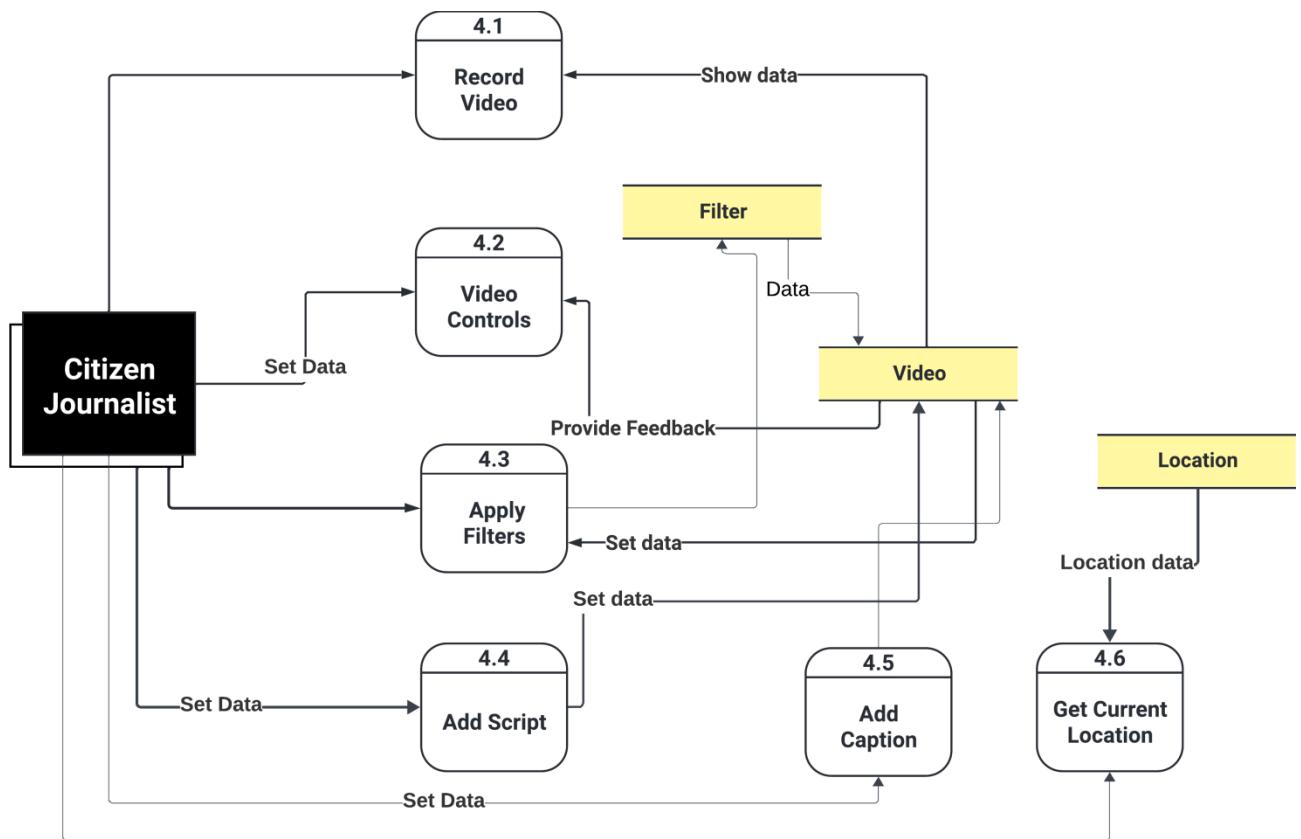


Figure 4.17 Data Flow Diagram level 2 AR aided video reporting

4.3.3.5 DFD-3.5: Data Flow Diagram for Content Privacy

Figure 4.18 is the data flow diagram level 2 of Content Privacy.

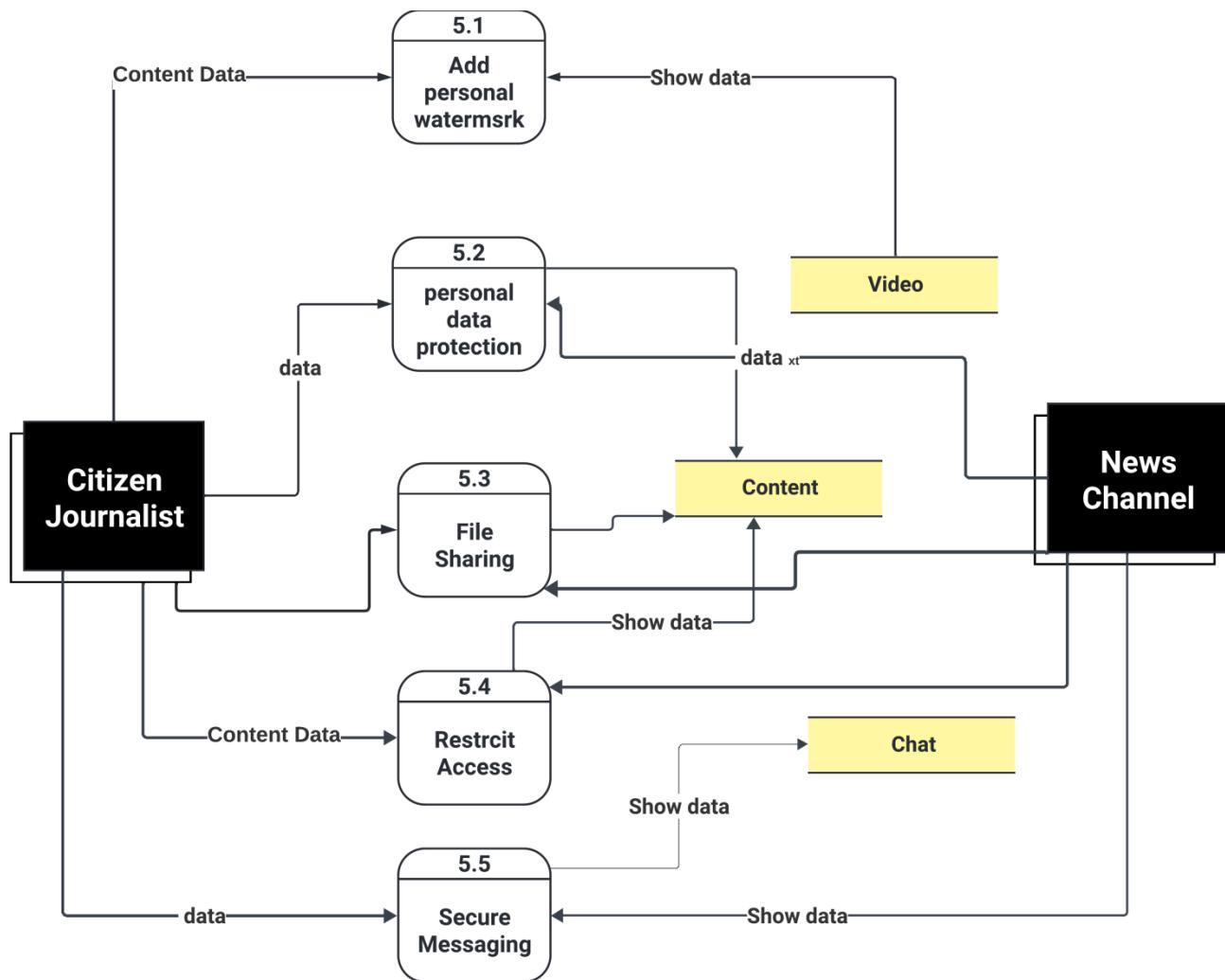


Figure 4.18 Data Flow Diagram level 2 Content Privacy

4.3.3.6 DFD-3.6: Data Flow Diagram for Journalist Hiring

Figure 4.19 is the data flow diagram level 2 of Journalist Hiring.

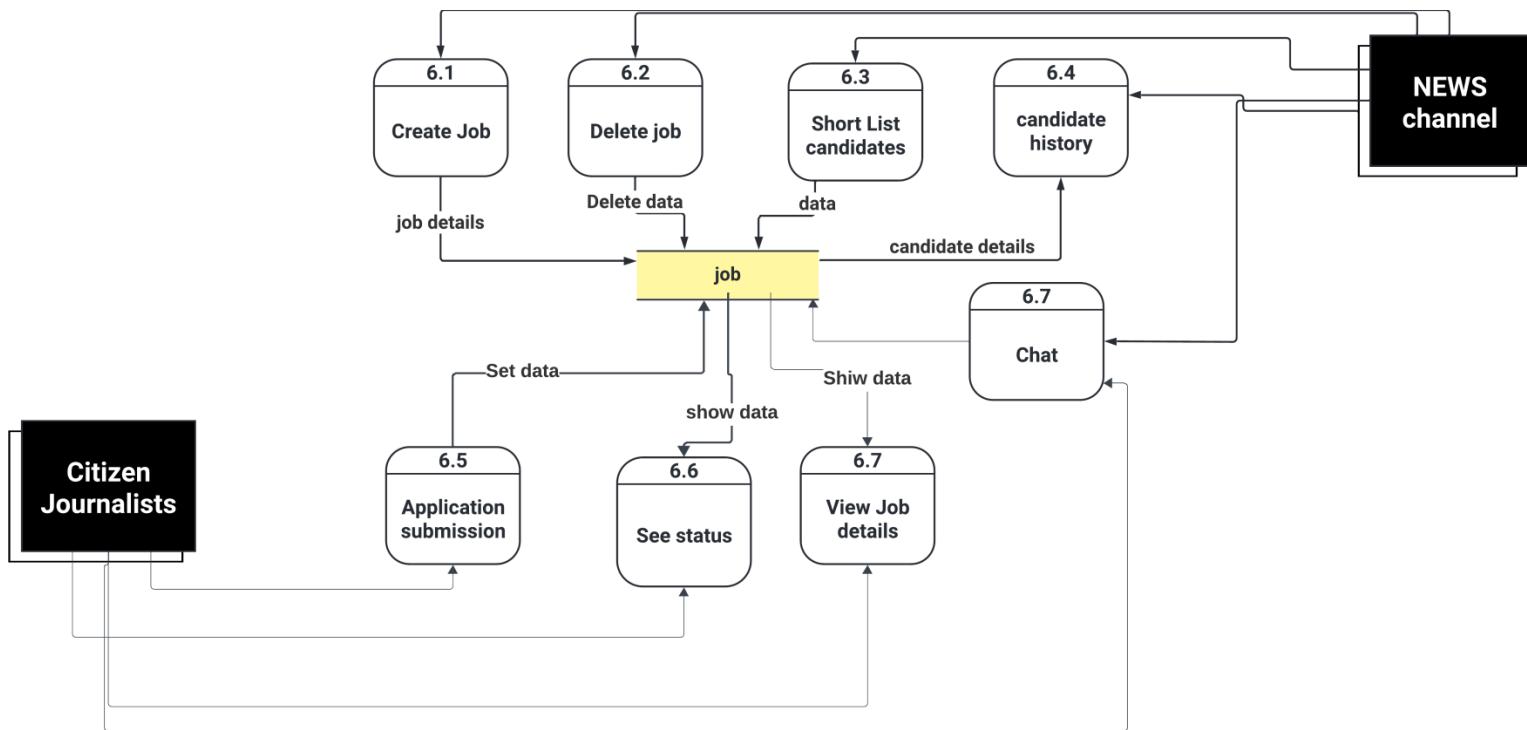


Figure 4.19 Data Flow Diagram level 2 journalist Hiring

4.3.3.7 DFD-3.7: Data Flow Diagram for Multimedia Enhancement

Figure 4.20 is the data flow diagram level 2 of Multimedia Enhancement.

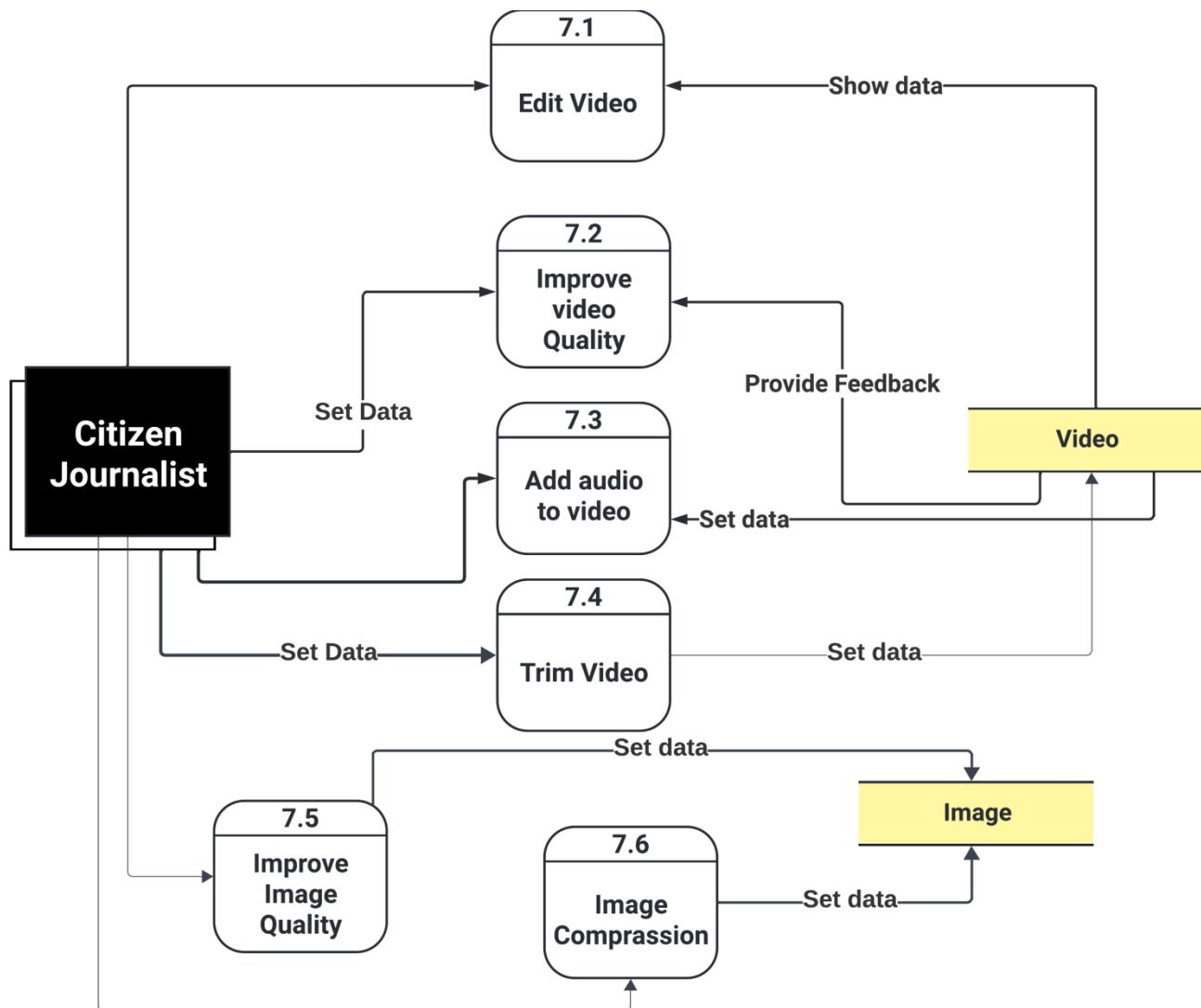


Figure 4.20 Data Flow Diagram level 2 Multimedia Enhancement

4.3.3.8 DFD-3.8: Data Flow Diagram for Payment and Bidding

Figure 4.21 is the data flow diagram level 2 of Payment and bidding.

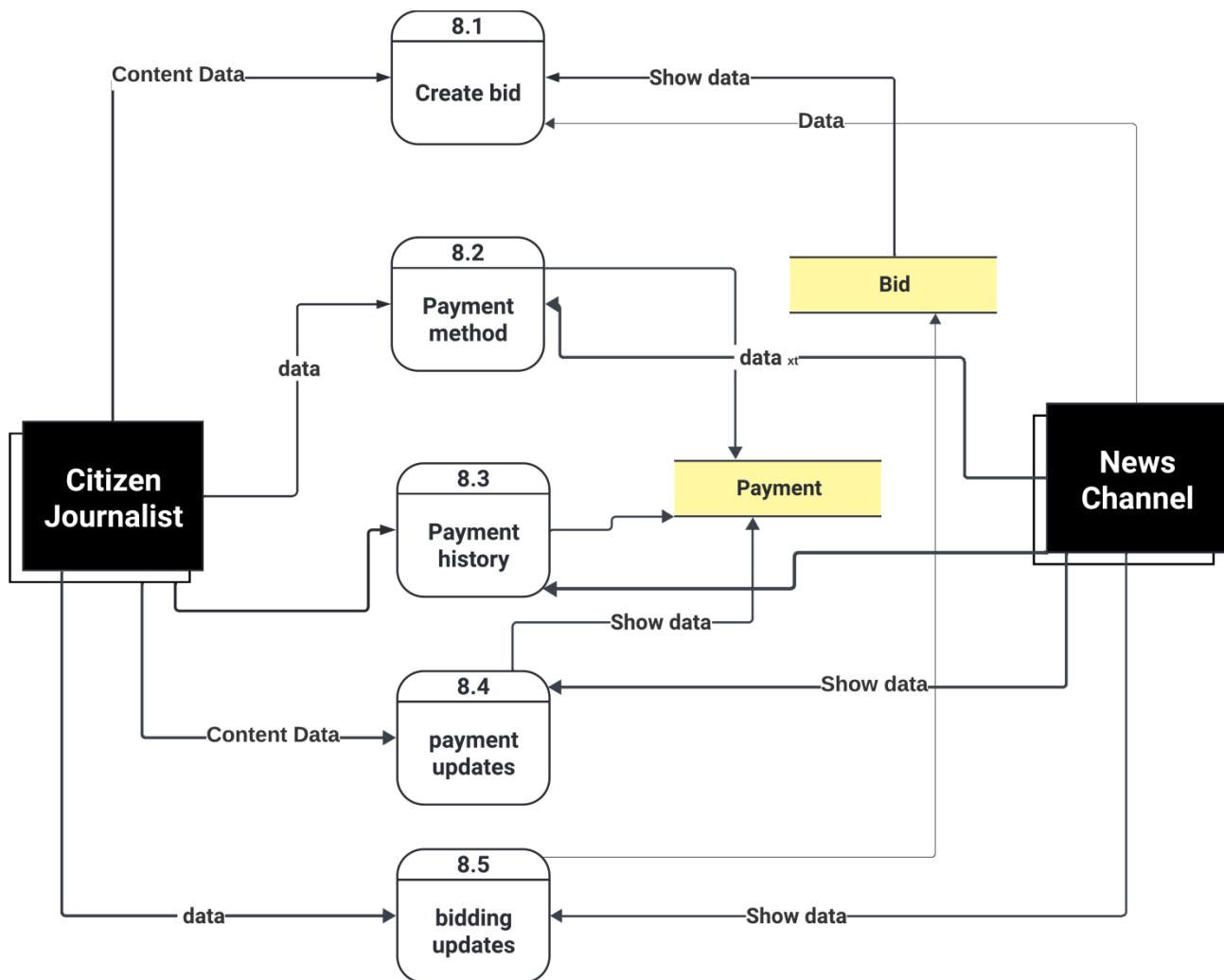


Figure 4.21 Data Flow Diagram level 2 Payment and bidding

4.3.3.9 DFD-3.9: Data Flow Diagram for Notification and recommendations

Figure 4.22 is the data flow diagram level 2 of Notifications and Recommendations.

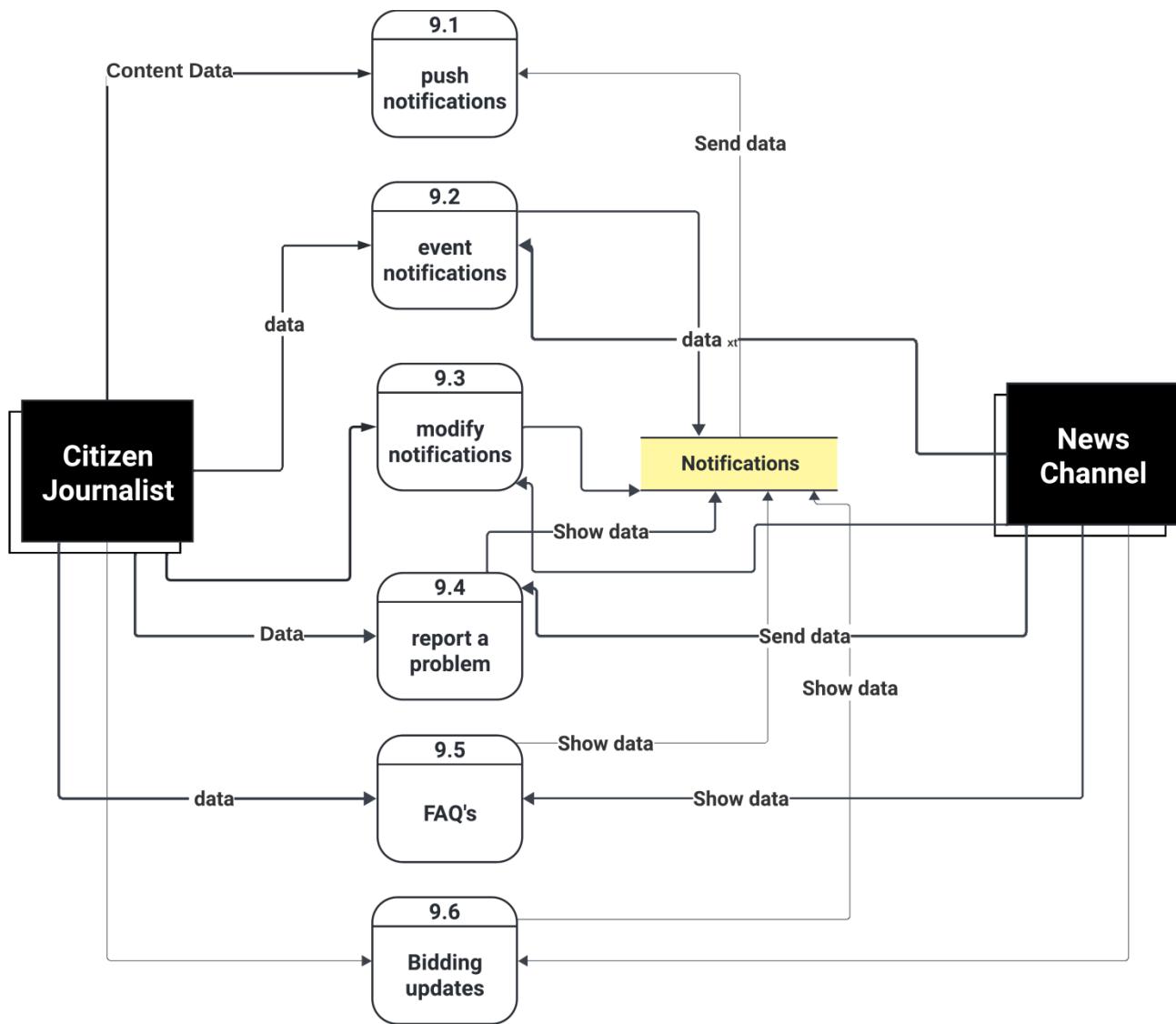


Figure 4.22 Data Flow Diagram level 2 Notification and recommendations

4.4 Data Design

Data Design for News Wave is given below.

4.4.1 Data Dictionary

Below is the data Dictionary of News Wave

Table 4.1 Data Dictionary details of News Wave

Type	Member	Data Type	Function
User	Username	String	Name of User
	userId	String	Id of User
	userEmail	String	Email of User
	userPassword	String	Password for authentication
	userPhoneNumber	String	Phone number of user
	Buyer	Boolean	User Buyer or not
	Fcm	String	User's fcm
	User'sPicture	Buffer	User Profile Picture
News Channel	NewsChannel Name	String	Name of NewsChannel
	NewschannelId	Number	Id of NewsChannel
	NewsChannelEmail	String	Email of NewsChannel
	NewsChannelPassowrd	String	Password for authentication
	NewsChannelPhoneNumber	String	Phone number of NewsChannel
Video	Likes	String	Likes on Content
	Owner	mongoose.Types.ObjectId (Ref: User)	Owner of Content
	Path	Buffer	Path of Content
	Thumbnail	Number	Thumbnail of Content
	Bought	String	Content Bought
	Created_on	String	Created on
	Description	String	Description of Content
Hiring	User	mongoose.Types.ObjectId (Ref: User)	Id of the User
	Hirer	mongoose.Types.ObjectId (Ref: User)	ID of the hirer
	Start date	String	Start date of job
	End date	Number	End date of job

	DateCreated	String	Date the job was created
Notification	User	mongoose.Types.ObjectId (Ref: User)	Id of the User
	Message	String	Message to the user
	Read	Boolean	Read true or not
	Time	String	Time of notification
	Notification Id	String	Id of the Notification
	Notification descp	String	Description Notification
	NotificationImp	String	Importance Level
Payment Method	userId	mongoose.Types.ObjectId (Ref: User)	Id of the user
	Cardtitle	String	Title of the card
	Card expirydate	String	Expiry date of the Card
	Card number	String	Number of the card
OTP	OTP Id	Number	Id of the OTP
	Token	Number	Token of the otp
	Email	Number	Email to which OT P will sent
	Time	Number	Time
	Date	String	Date
Payment	PaymentId	mongoose.Types.ObjectId (Ref: User)	Id of the User
	Price	String	Price of the Content
Review	userId	mongoose.Types.ObjectId (Ref: User)	Id of the user
	Review	String	Review written by the user
	reviewId	mongoose.Types.ObjectId (Ref: Video)	Video the user reviewed
Feedback	userId	mongoose.Types.ObjectId (Ref: User)	Id of the user
	Feedback	String	Feedback the user given

Category	CatId	Number	Category id
	CatName	String	Name of the Category
Message	MessageId	Number	Message Id
	UserId	mongoose.Types.ObjectId (Ref: User)	Id of the User
	Sent to	mongoose.Types.ObjectId (Ref: User)	Id of the User
Bought&SoldContent	BoughtCount	Number	Amount of Bought Content
	userId	mongoose.Types.ObjectId (Ref: User)	Id of the user who posted the Content
	SoldCount	Number	Amount of Sold Content

4.5 Schema

Schemas used in News Wave are shown below.

4.5.1 User Schema

Below is the user Schema of News Wave

```
var mongoose = require('mongoose');
var passportLocalMongoose = require('passport-local-mongoose');
var Schema = mongoose.Schema;

var User = new Schema({
  username: {
    type: String,
    default: '',
  },
  email: {
    type: String,
    default: '',
  },
  buyer: {
    type: Boolean,
    default: false,
```

```

    },
    fcm: {
      type: String,
      default: '',
    },
    picture: { type: String, default: null },
  });
User.plugin(passportLocalMongoose);

module.exports = mongoose.model('User', User);

```

4.5.2 Video Schema

Below is the Video Schema of our system

```

var mongoose = require('mongoose');
var Schema = mongoose.Schema;

var Video = new Schema({
  likes: {
    type: Number,
    default: 0,
  },
  owner: {
    type: mongoose.Types.ObjectId,
    ref: 'User',
  },
  path: {
    type: String,
    default: '',
  },
  thumbnail: {
    type: String,
    default: '',
  },
  bought: {
    type: Boolean,
    default: false,
  },
  created_on: {

```

```

        type: Date,
        default: Date.now(),
    },
    description: {
        type: String,
        default: '',
    },
    tags: [String],
);
};

module.exports = mongoose.model('Video', Video);

```

4.5.3 Hiring Schema

Below is the Hiring Schema of our system

```

var Hiring = new Schema(
{
    user: {
        type: mongoose.Types.ObjectId,
        ref: 'User',
    },
    start_date: {
        type: Date,
        default: Date.now(),
    },
    end_date: {
        type: Date,
        default: null,
    },
    hirer: {
        type: mongoose.Types.ObjectId,
        ref: 'User',
    },
    { timestamps: true }
);

module.exports = mongoose.model('Hiring', Hiring);

```

4.5.4 Notification Schema

Below is the Notification Schema of our system

```
var mongoose = require('mongoose');
var Schema = mongoose.Schema;

var NotificationCustomer = new Schema(
{
    user: {
        type: mongoose.Types.ObjectId,
        ref: 'User',
    },
    message: {
        type: 'String',
    },
    read: {
        type: Boolean,
        default: false,
    },
},
{ timestamps: true }
);

module.exports = mongoose.model('NotificationCustomer',
NotificationCustomer);
```

4.5.5 Payment method Schema

Below is the payment method schema of our system

```
var mongoose = require('mongoose');
var Schema = mongoose.Schema;

var Payment_Method = new Schema({
    card_title: {
        type: 'String',
    },
    card_number: { type: Number },
    cvc: { type: Number },
    expiry_date: {
```

```

        type: 'String',
    },
    user: {
        type: mongoose.Types.ObjectId,
        ref: 'User',
    },
});
module.exports = mongoose.model('Payment_Method', Payment_Method);

```

4.5.6 OTP Schema

Below is the OTP schema of News Wave

```

var mongoose = require('mongoose');
var Schema = mongoose.Schema;

var Otp = new Schema(
{
    token: { type: String },
    email: { type: String, default: '' },
},
{ timestamps: true }
);

Otp.index({ createdAt: 1 }, { expireAfterSeconds: 3600 });
module.exports = mongoose.model('Otp', Otp);

```

4.6 Human Interface Design

The human interface designs for Mobile Application of News Wave are as follow.

4.6.1 Screen Images

The Screen Images of News Wave are as follow.

4.6.1.1 Splash Screen

Figure 4.23 shows the splash screen where the user lands first when the application starts.



Figure 4.23 Splash Screen

4.6.1.2 Home Screen

Figure 4.24 shows the Home screen which is the opening screen of application and shows the posted content.

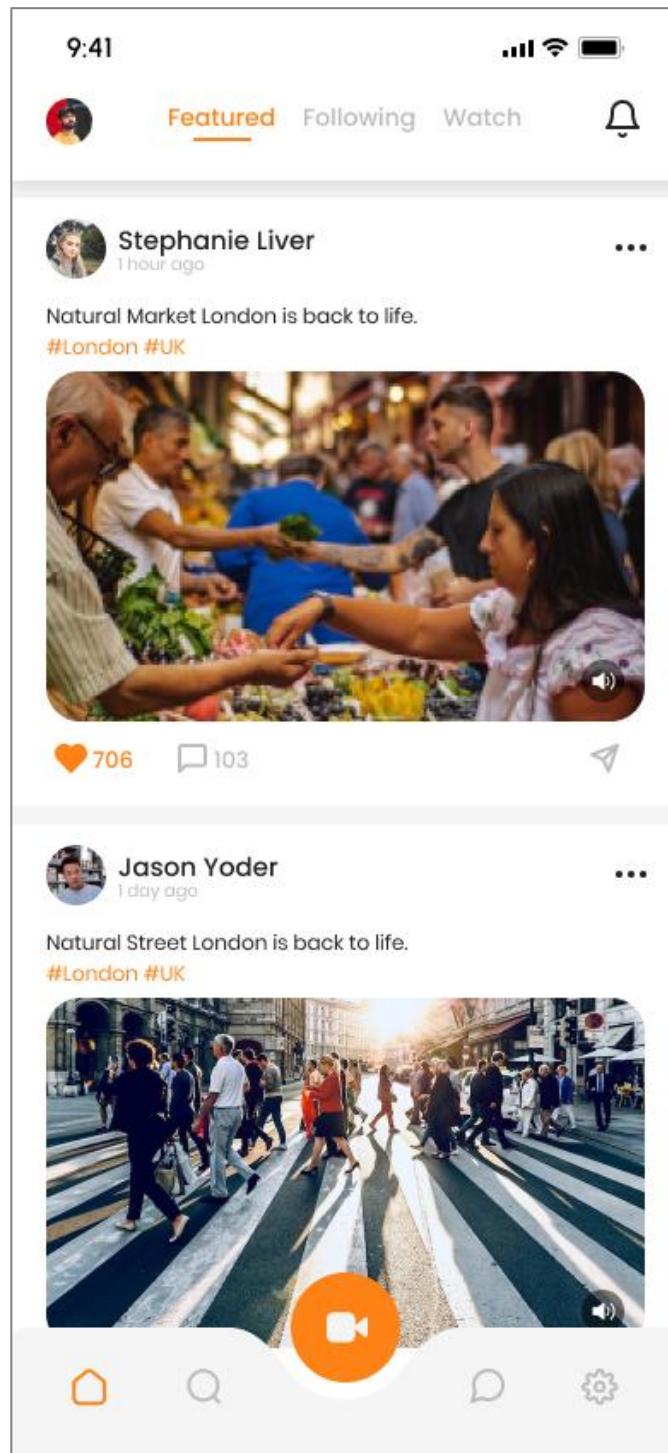


Figure 4.24 Home Screen

4.6.1.3 Search Screen

Figure 4.25 shows the Search screen where the user can Search for people and content posted around the world.

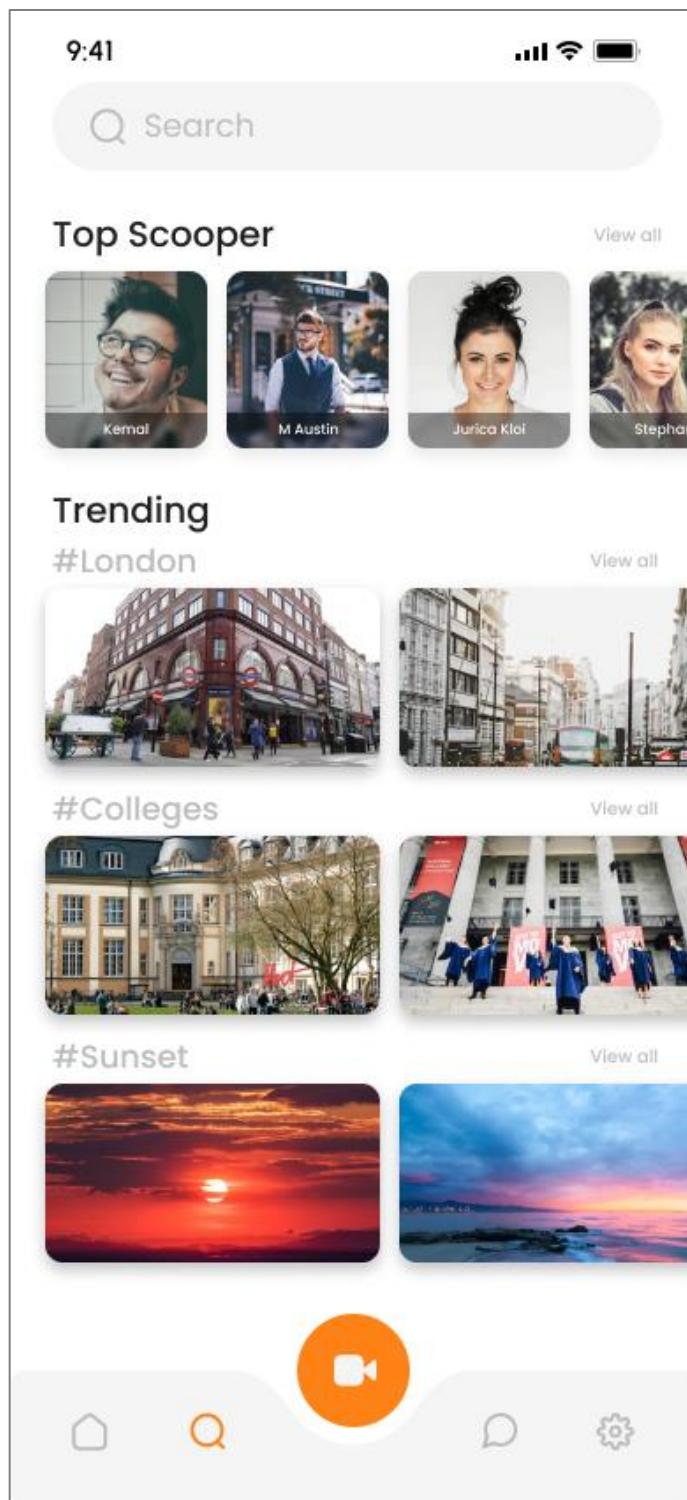


Figure 4.25 Search Screen

4.6.1.4 Profile Screen

Figure 4.26 shows the Profile screen where the user can see his posted content and the amount of following and followers they have.

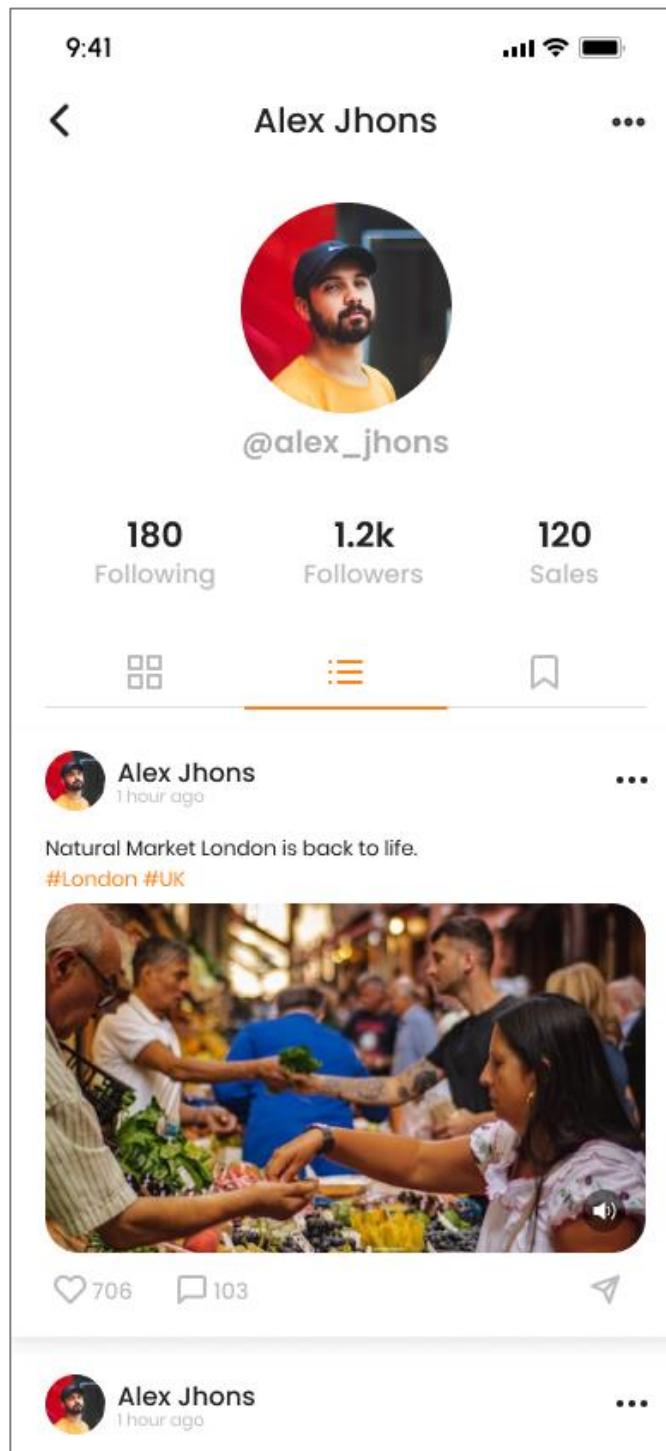


Figure 4.26 Profile Screen

4.6.1.5 Video Recording Screen

Figure 4.27 shows the video recording screen where the user can try on different features of teleprompter, filters and other stuff and record high quality videos.

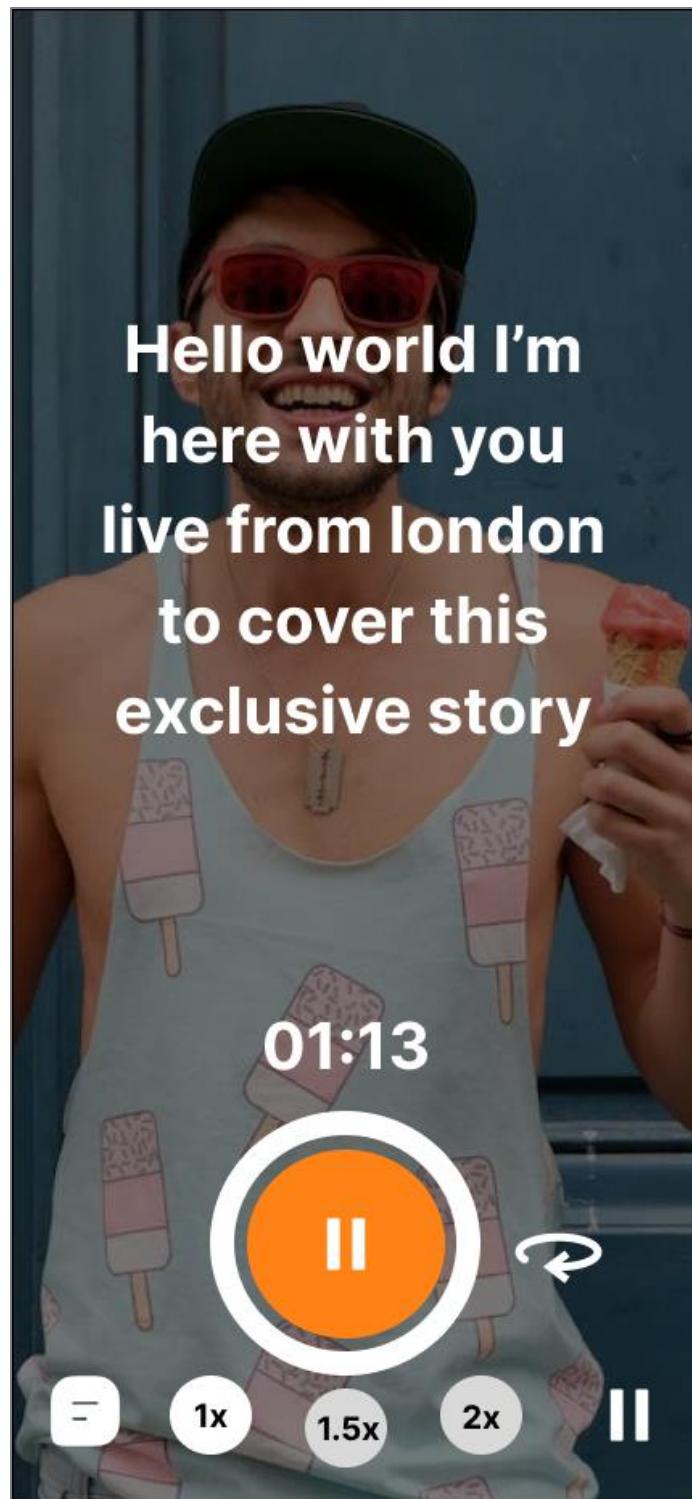


Figure 4.27 Video Recording Screen

4.6.1.6 Sign Up Screen

Figure 4.28 shows the Sign up screen where the user is able to give his credentials and sign up into their account.

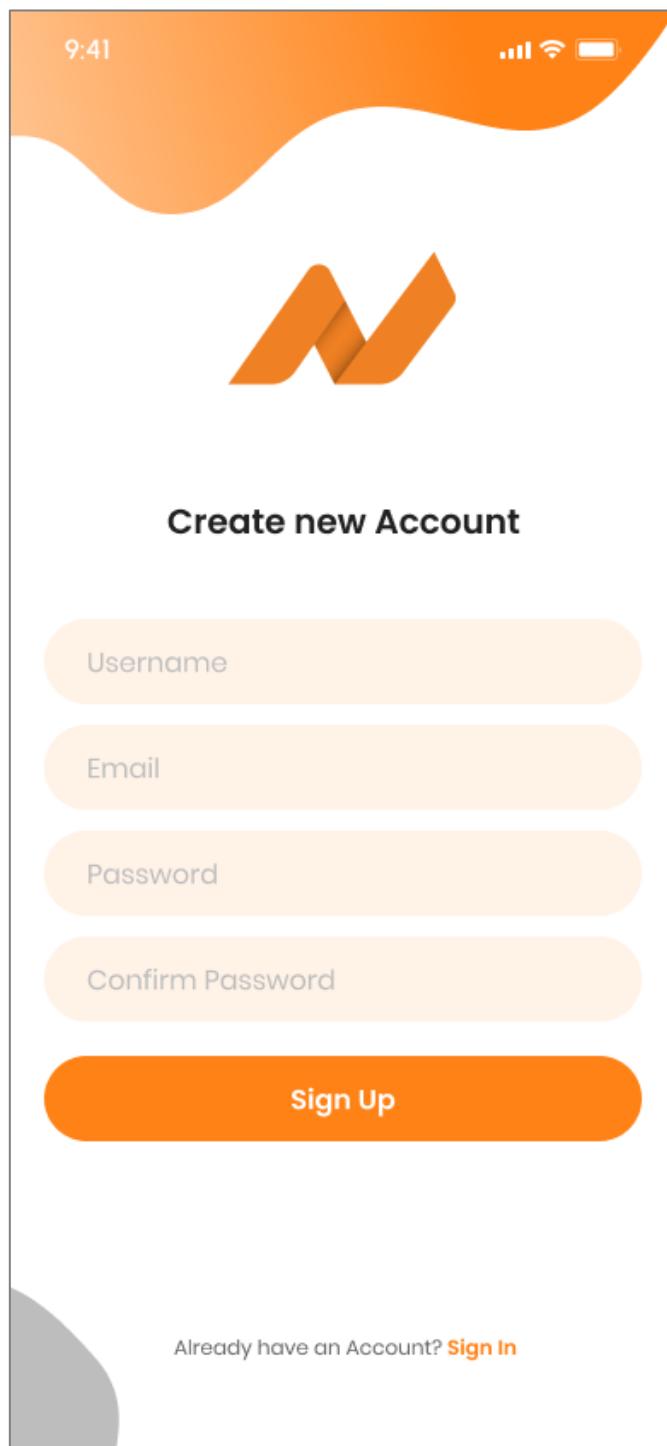


Figure 4.28 Sign Up Screen

4.6.1.7 Login Screen

Figure 4.29 shows the Login Screen where the user give email password and login to their account.

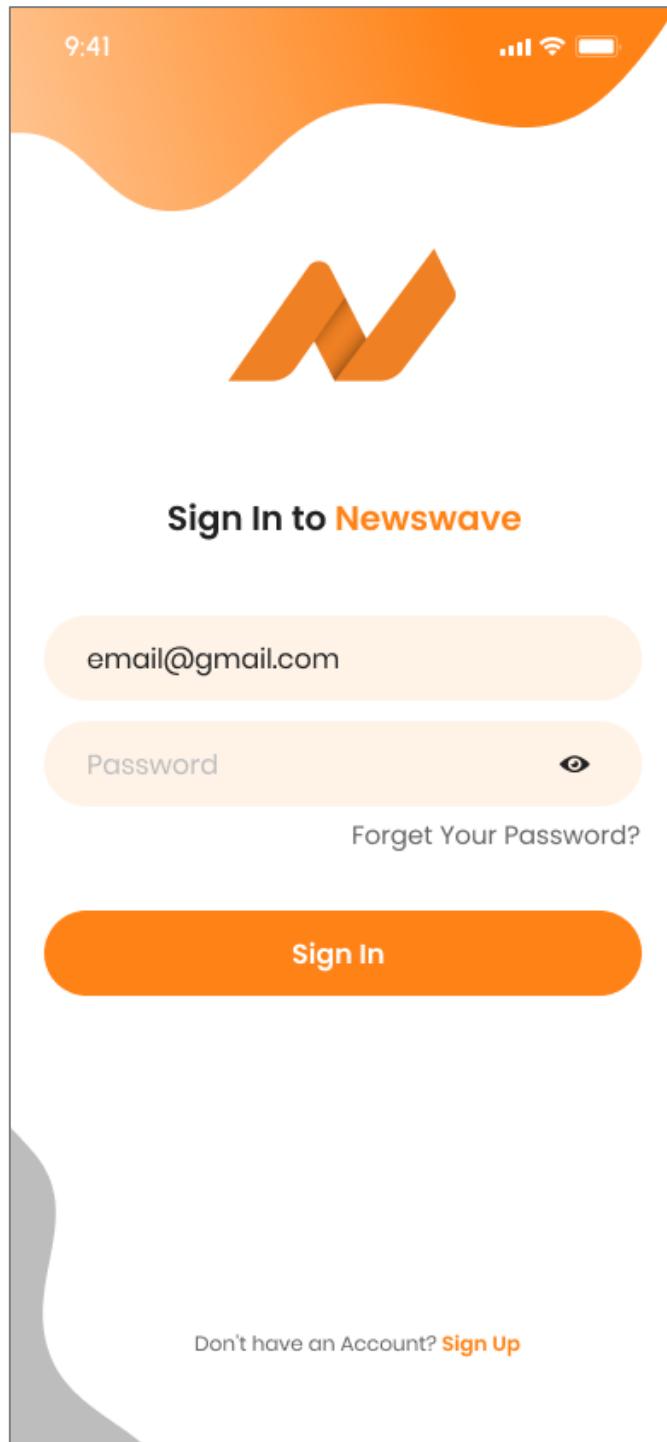


Figure 4.29 Login Screen

4.6.1.8 Upload Content Screen

Figure 4.30 shows the Upload Content screen where the user gives description about his Content price, privacy etc.

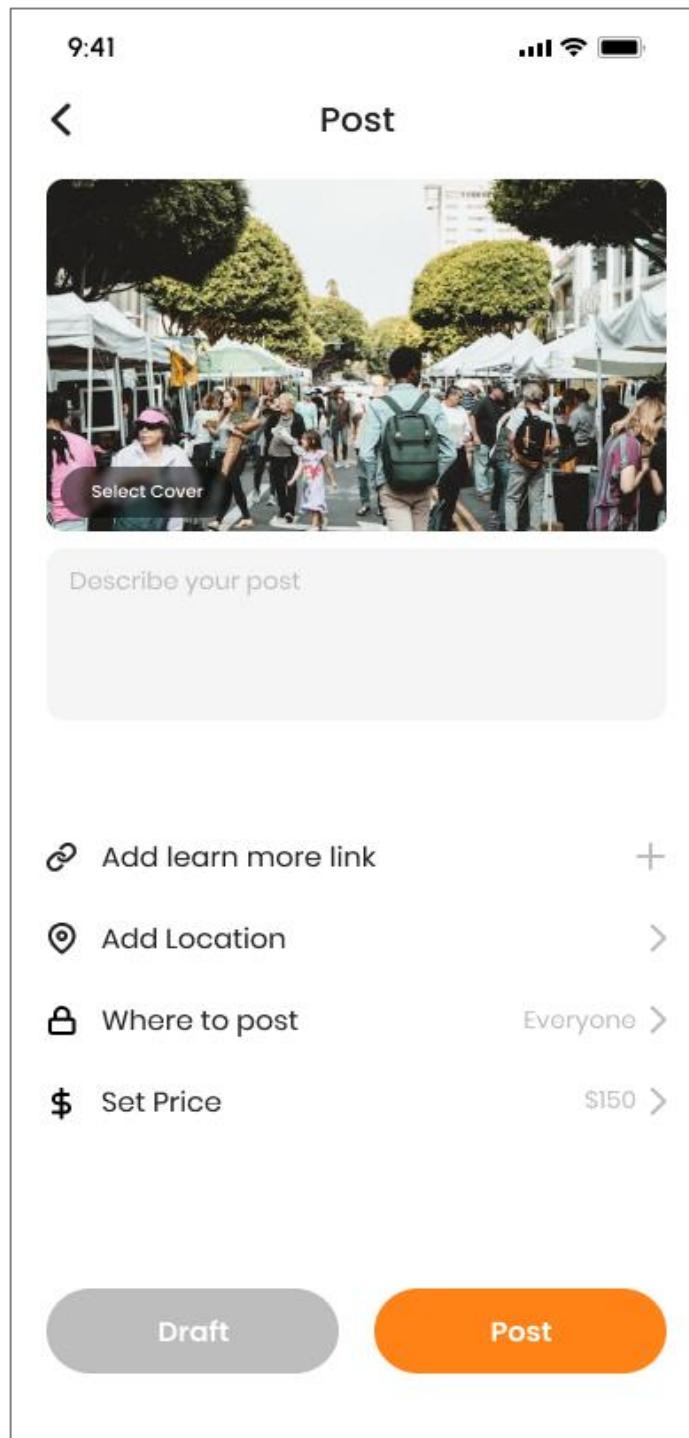


Figure 4.30 Upload Content Screen

4.6.1.9 Content Filter Screen

Figure 4.31 shows the Content Filter screen where the Application runs the content through Machine Learning Algorithm to look for any misinformation.

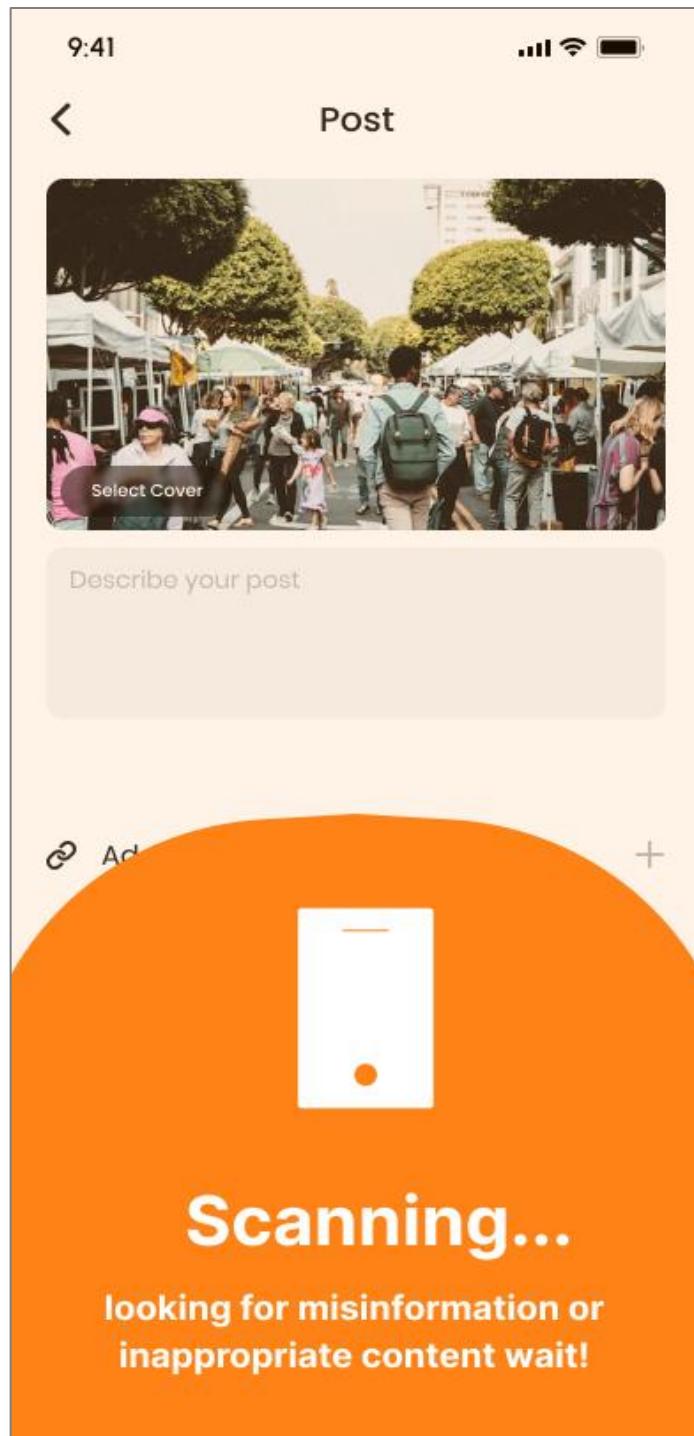


Figure 4.31 Filter Content Screen

4.6.1.10 Map Screen

Figure 4.32 shows the Map screen where the user is able to see other user sharing stories around him.

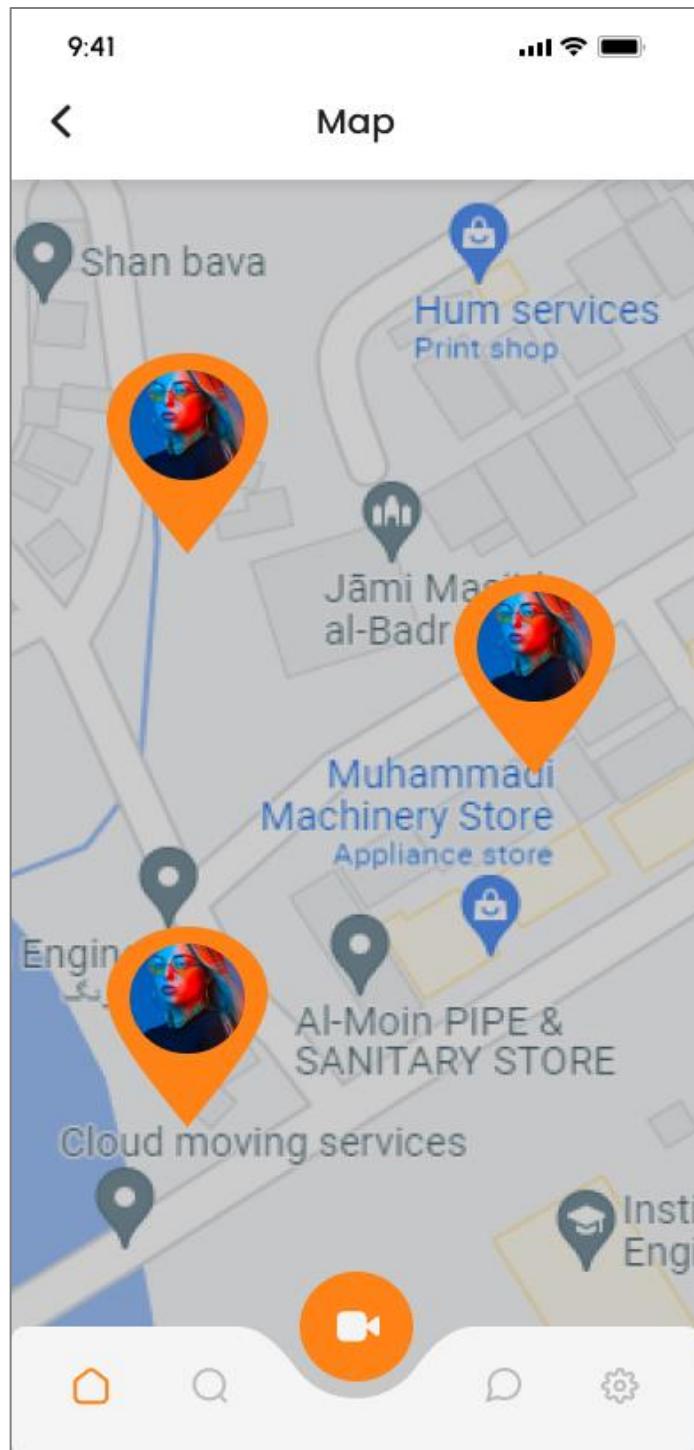


Figure 4.32 Map Screen

4.6.1.11 Notification Screen

Figure 4.33 shows the Notification Screen where the User gets notifications.

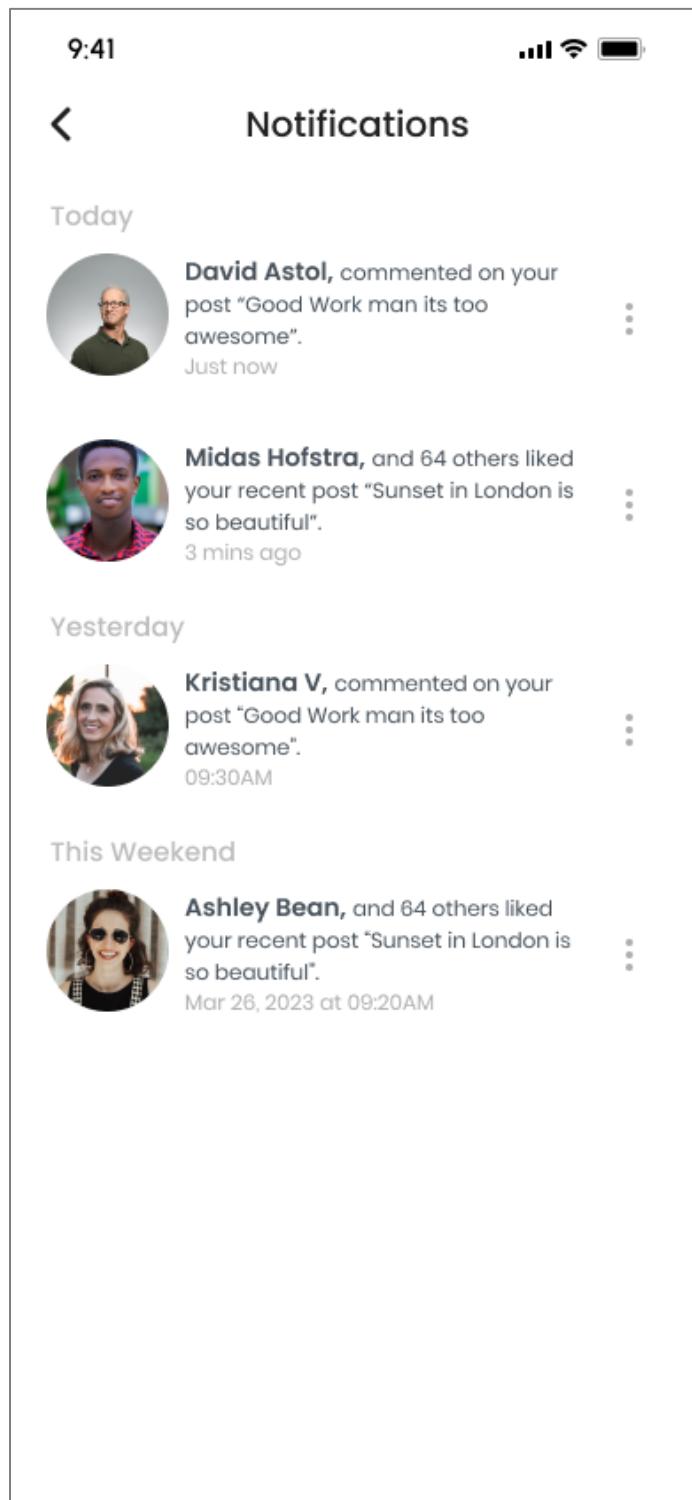


Figure 4.33 Notification Screen

4.6.1.12 Chat Screen

Figure 4.34 shows the Chat screen where the user can write messages to other users.

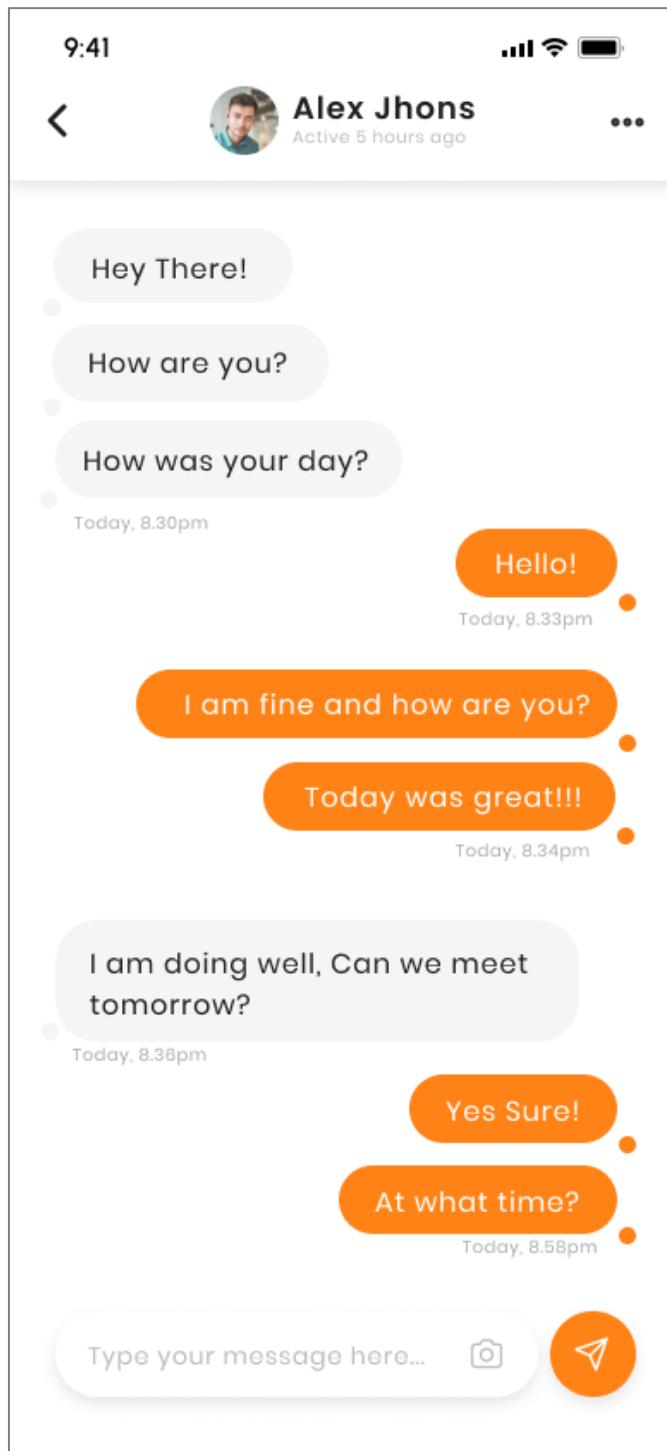


Figure 4.34 Chat Screen

4.6.1.13 Settings Screen

Figure 4.35 shows the Settings screen where the user is able to make changes to their account.

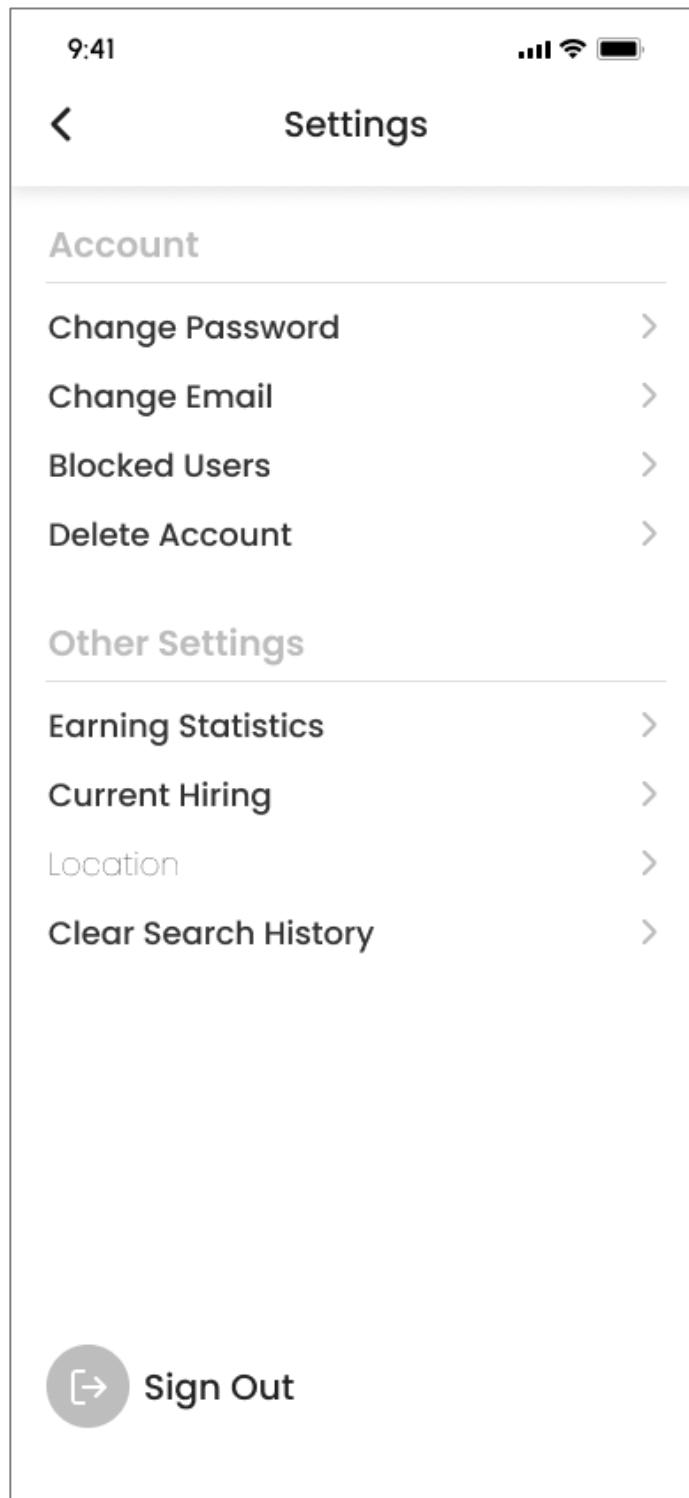


Figure 4.35 Settings Screen

4.6.1.14 Buy Content Screen

Figure 4.36 shows Buy Content screen where the user is able to view the price of content.

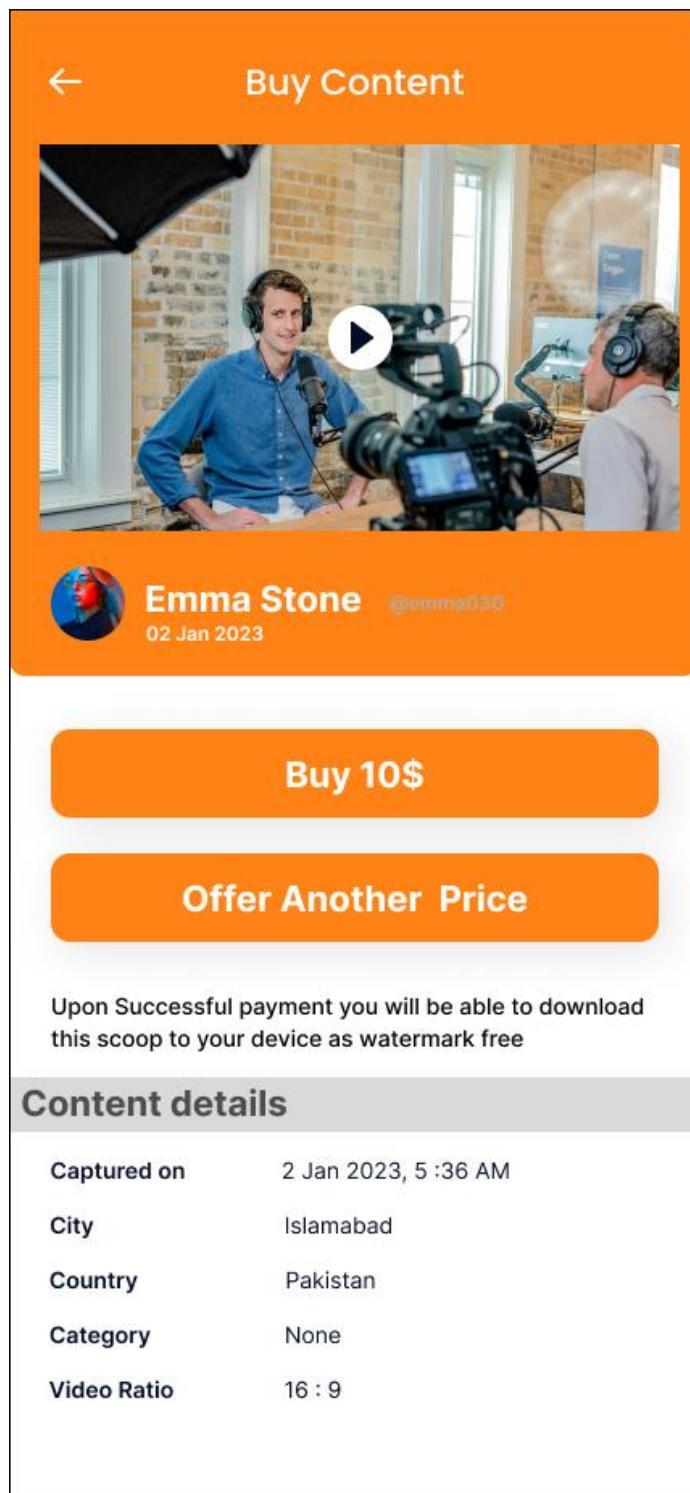


Figure 4.36 Buy Content Screen

4.6.1.15 Other Profile Screen

Figure 4.37 shows the other Profile Screen where user can view other user profile message them follow them, view their content.



Figure 4.37 Other Profile Screen

4.6.1.16 Set Password Screen

Figure 4.38 shows the set password screen where the user is able to reset their password.

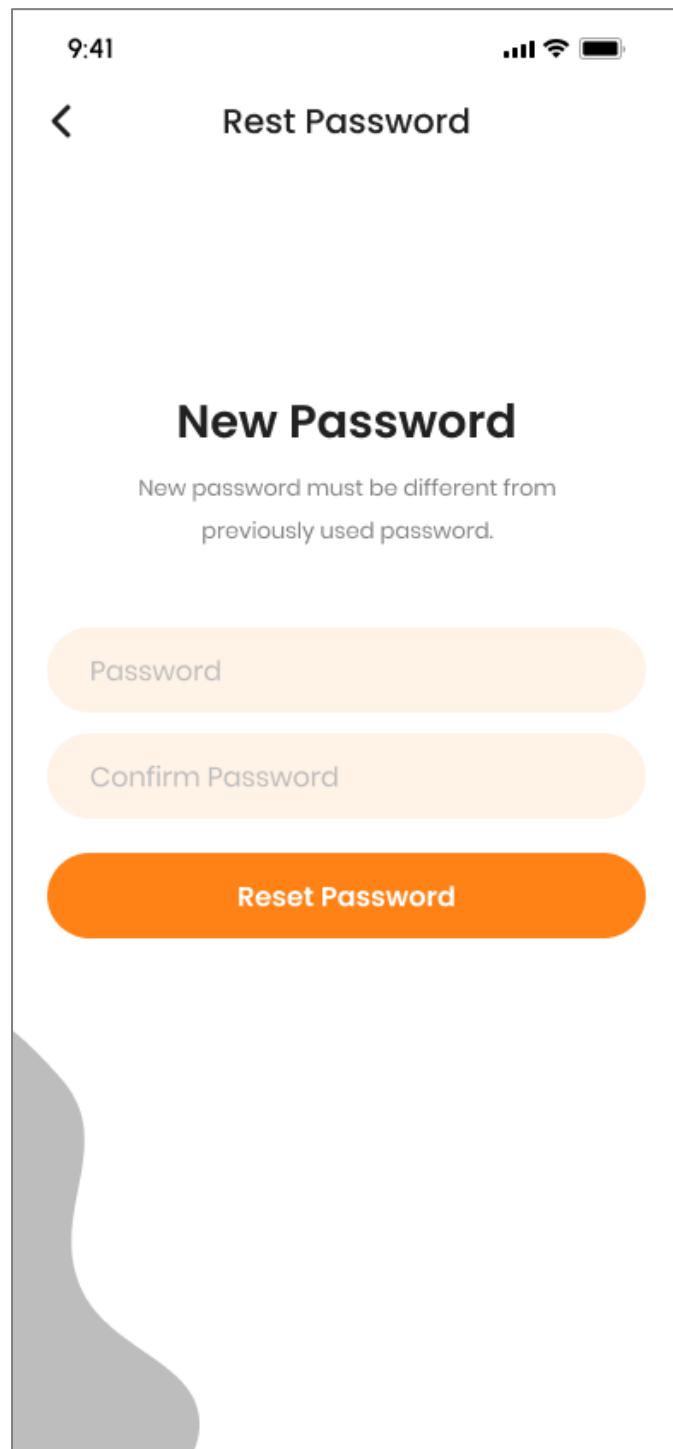


Figure 4.38 Set Password Screen

4.7 Screen Objects and Actions

Following are the Screen Objects that will have specific actions:

4.7.1 Login Button:

Login button is used to login the user to the application.

4.7.2 Video Recording Button:

The user will be able to pause and play recording the video

4.7.3 Teleprompter Button:

User will be able to navigate to the teleprompter screen where he can write the script save it and the script will appear on the camera screen

4.7.4 Upload button:

User will be able to upload content

4.7.5 Draft Button:

User will be able to save the Content in draft

4.7.6 Camera Switch Button:

User will be able to switch front and back camera

4.7.7 Filter button:

User will be able to see special filter list which he can choose from while recording the video

4.7.8 Three dots button:

User will be able to see the setting Screen

4.7.9 Bell Button:

User will be able to see his notifications

4.7.10 Chat Bubble Button:

User will be able to see the messages he's gotten from other users.

4.7.11 User Switch Button:

The user will be able to switch roles.

4.7.12 Side Pane Button:

The User will be able to open the side pane.

4.7.13 View Profile:

The user will be able to view their profile.

4.7.14 Settings:

The user will be able to do setting of app according to his/her own interest.

4.7.15 FAQ:

The user will get their queries solved by opening the FAQ menu using FAQbutton.

4.7.16 Send Feedback:

The user will be able to send feedback using feedback button. user will be able to pay the rent due using pay button after providing the payment credentials

4.7.17 Avatar Button:

User will be able to switch to the person's profile and be able to view their profile

4.7.18 Follow and Following Button:

User will be able to follow the user if he clicks the follow button and on clicking the following he will be able to see the list of users followed by him.

4.7.19 Message Button:

User will be able to direct message the profile he is visiting

4.7.20 Send Complaint:

The user will be able to send complaints.

4.7.21 Send:

The user will be able to send messages.

4.7.22 Notification Switch:

The user will be able to turn ON/OFF notifications.

4.7.23 Plus Button:

User will be able to write a new message.

4.7.24 Volume Scroll Pane:

The user will be able to change the volume intensity of notifications.

4.7.25 Vibration Scroll Pane:

The user will be able to change the vibration intensity of incoming notifications.

5 Implementation

The algorithms, SDKs and APIs used in the development of News wave are listed down and explained as follows:

5.1 Algorithm

The algorithms in News Wave are given below.

5.1.1 Video Recording

Following is the algorithm of video recording

```
function initializeVideoRecording():
    openCamera()
    setVideoParameters(resolution, frameRate, duration)
function startVideoRecording():
    displayRecordButton()
    onRecordButtonClicked:
        startCapture()
        startTimer()
function captureVideoFrames():
    while isRecording:
        frame = captureFrame()
        storeFrame(frame)
function monitorRecordingDurationAndStorage():
    while isRecording:
        if elapsedTime >= duration:
            stopRecording()

        if availableStorage < requiredStorage:
            stopRecording()
function providePauseAndStopOptions():
```

```

displayPauseButton()
displayStopButton()
onPauseButtonClicked:
    pauseRecording()
    displayResumeButton()
onStopButtonClicked:
    stopRecording()
    saveRecordedVideo()
function performPostRecordingActions():
    displayPreviewOptions()
    displayEditOptions()
    addMetadata()
    provideSharingOptions()
function cleanUpAndFinalize():
    closeCamera()
    releaseResources()

initializeVideoRecording()
startVideoRecording()
captureVideoFrames()
monitorRecordingDurationAndStorage()
providePauseAndStopOptions()
performPostRecordingActions()
cleanUpAndFinalize()

```

5.1.2 Upload Content

Following is the Algorithm for Upload Content

```

function uploadContent():
    content = captureContent()
    metadata = gatherMetadata()
    validateContent(content)

    if isContentValid(content):
        uploadToServer(content, metadata)
        displaySuccessMessage()
    else:
        displayErrorMessage()

```

```

function captureContent():
function gatherMetadata():
function validateContent(content):
function uploadToServer(content, metadata):
function displaySuccessMessage():
function displayErrorMessage():
uploadContent()

```

5.1.3 Job Posting

Following is the algorithm of job posting

```

function createJobPost():
    jobPost = {
        "title": jobTitle,
        "description": jobDescription,
        "requirements": jobRequirements,
        "location": jobLocation,
        "contact": jobContact
    }
    if validateJobPost(jobPost):
        saveJobPost(jobPost)
        displaySuccessMessage("")
    else:
        displayErrorMessage("")
function validateJobPost(jobPost):
    if jobPost["title"] is empty or jobPost["description"] is empty or
    jobPost["location"] is empty:
        return false
    else:
        return true
function saveJobPost(jobPost):
function displaySuccessMessage(message):
function displayErrorMessage(message):
function getUserInput(prompt):
createJobPost()

```

5.1.4 Change Notification Settings:

Following is the algorithm of Change Notification Settings

```
if(chatNotification)
```

```

DISPLAY chat notification settings
CHANGE settings
else if(AdsNotification)
DISPLAY Ads notification settings
CHANGE settings

if(setRingtone)
    SELECT ringtone
if(intensity)
    INPUT vibration intensity level
    SET new vibration level

```

5.1.5 Login

Following is the algorithm of Login

```

do
    INPUT email
    if	verifyEmail NOT EQUAL true)
        DISPLAY "Invalid Email"
    while (verifyEmail EQUAL false)

    if(account NOT found)
        DISPLAY "Invalid login credentials! Please try again!"
    else
        DISPLAY "Successfully logged in!"

```

5.2 External APIs/SDKs

Table 5.1 Details of APIs used in the News Wave

Name of API and version	Description of API	Purpose of usage	List down the API endpoint/function/class in which it is used
Stripe (version 2020-08-27)	Credit Card payment integration	Sandbox used for the orders payment	stripe.paymentMethods.create

5.3 User Interface

The user interface screens for our mobile application are as follows:

5.3.1 Splash Screen



Figure 5.1:Splash Screen

Figure 5.1 shows the splash screen where the user lands first when the application starts.

5.3.2 Home Screen

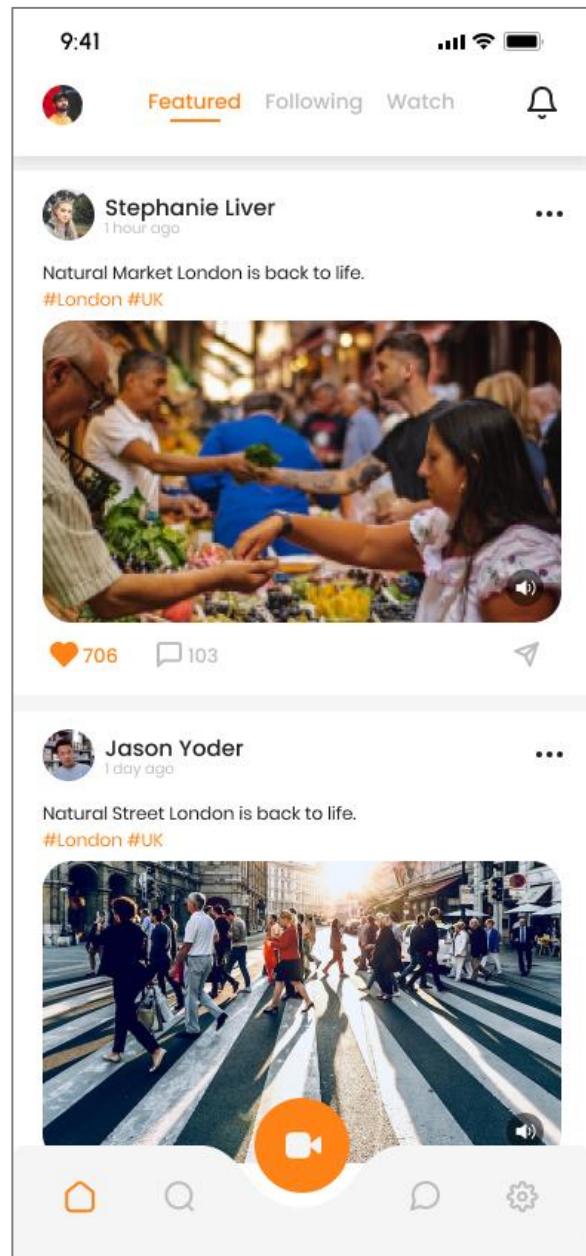


Figure 5.2:Home Screen

Figure 5.2 shows the Home screen which is the opening screen of application and shows the posted content.

5.3.3 Main Search Screen

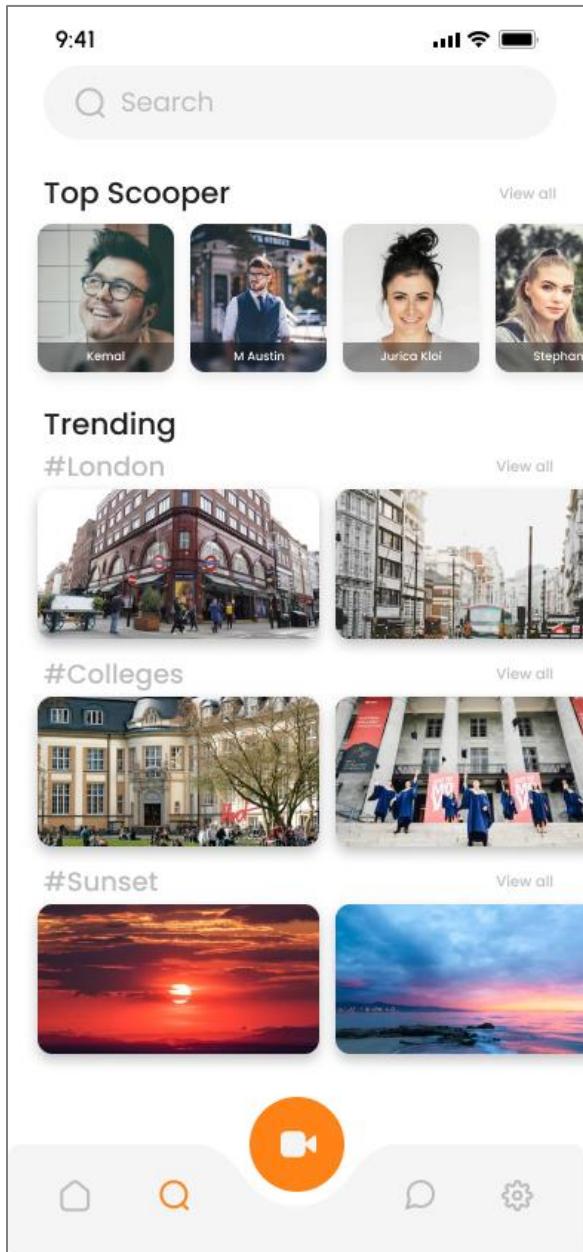


Figure 5.3:Main Search Screen

Figure 5.3 shows the Search screen where the user can Search for people and content posted around the world.

5.3.4 Search Screen



Figure 5.4:Search Screen

Figure 5.4 shows the Search screen where the user can Search for people and content posted around the world.

5.3.5 Profile Screen

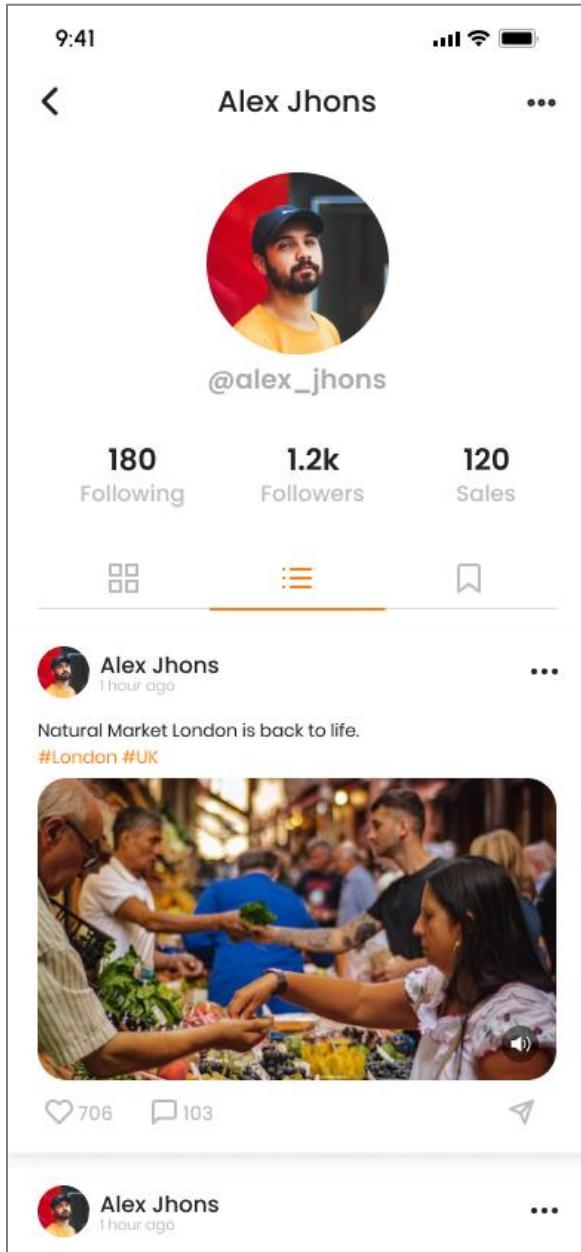


Figure 5.5:Profile Screen

Figure 5.5 shows the Profile screen where the user can see his posted content and the amount of following and followers they have.

5.3.6 Profile Screen 2



Figure 5.6:Profile Screen 2

Figure 5.6 shows the Profile screen where the user can see his posted content and the amount of following and followers they have.

5.3.7 Other Profile Screen



Figure 5.7:Other Profile Screen

Figure 5.7 shows the other Profile Screen where user can view other user profile message them follow them, view their content.

5.3.8 Video Recording Screen

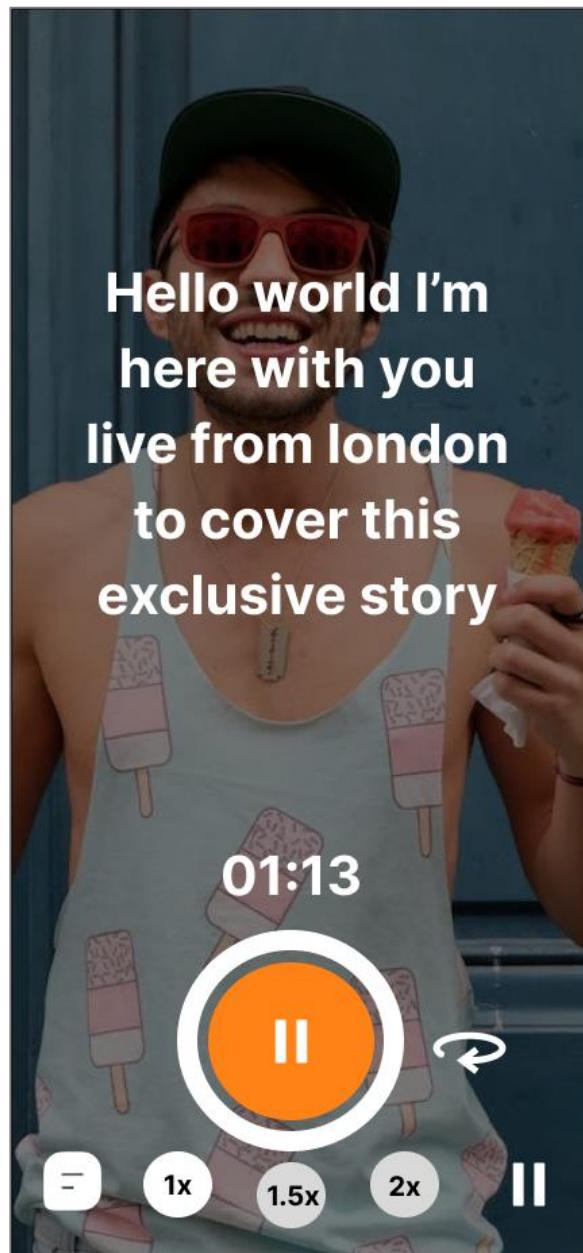


Figure 5.7:Video Recording Screen

Figure 5.8 shows the video recording screen where the user can try on different features of teleprompter, filters and other stuff and record high quality videos.

5.3.9 Sign Up Screen

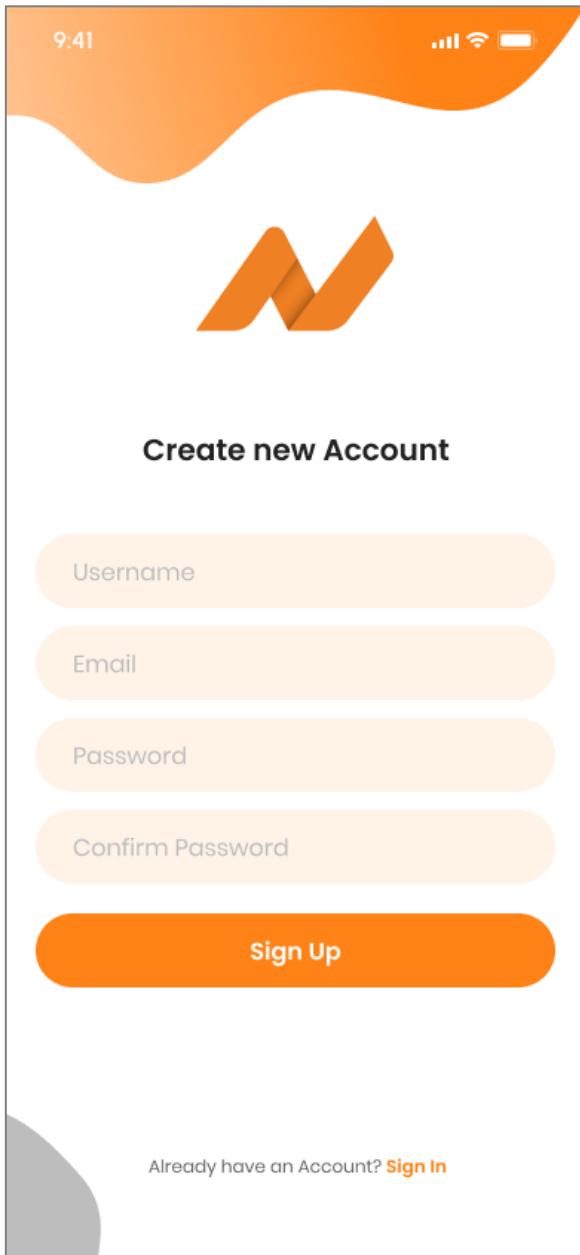


Figure 5.9:Sign up Screen

Figure 5.9 shows the Sign up screen where the user is able to give his credentials and sign up into their account.

5.3.10 Login Screen

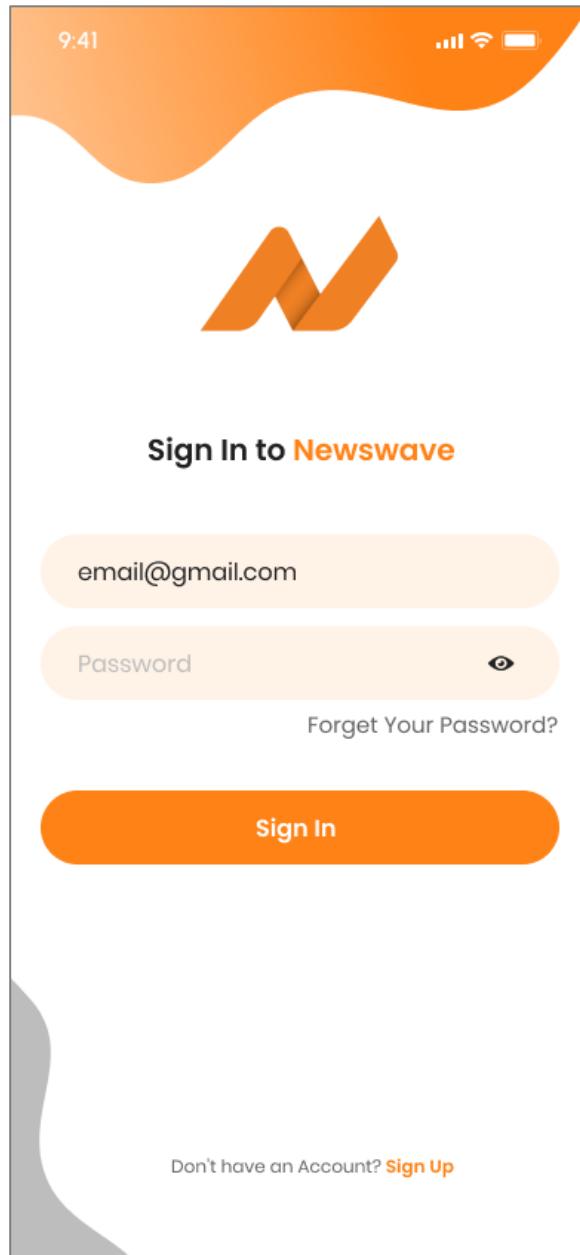


Figure 5.10:Login Screen

Figure 5.10 shows the Login Screen where the user give email password and login to their account.

5.3.11 Post Content Screen

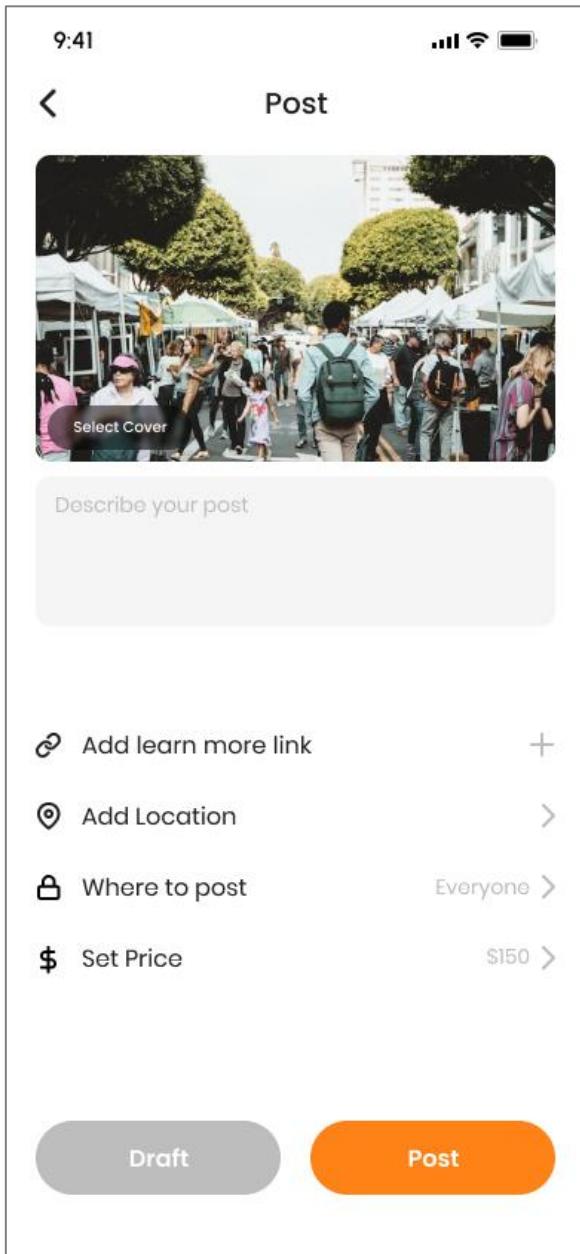


Figure 5.11:Post Content Screen

Figure 5.11 shows the Upload Content screen where the user gives description about his Content price, privacy etc.

5.3.12 Filter Post Screen

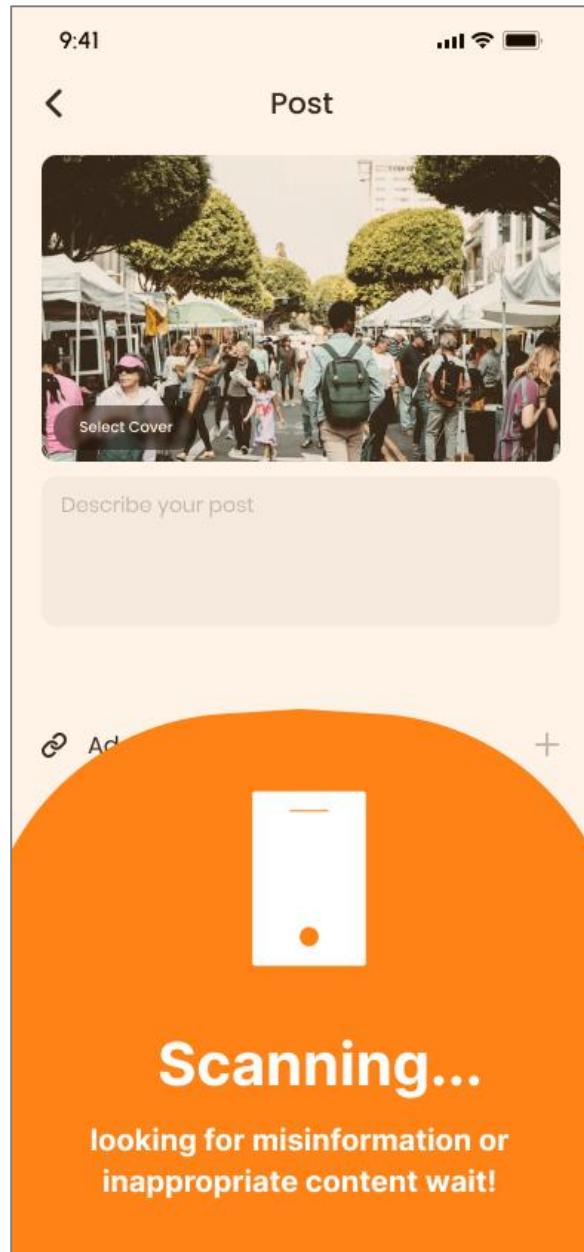


Figure 5.12:Filter Content Screen

Figure 5.12 shows the Content Filter screen where the Application runs the content through Machine Learning Algorithm to look for any misinformation.

5.3.11 Filter Audience Screen

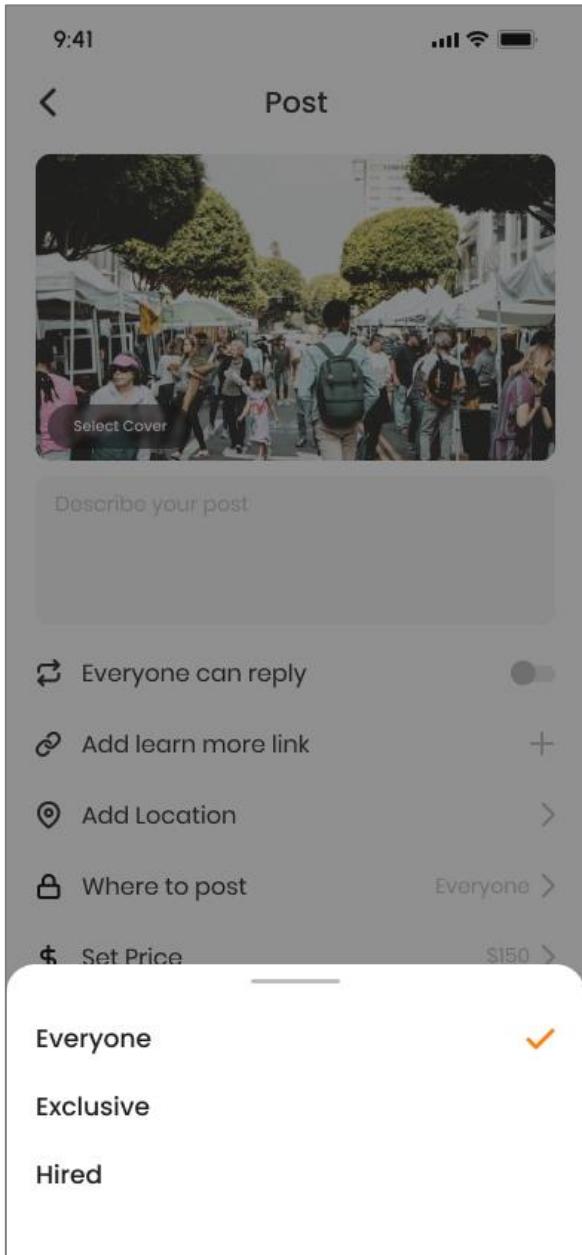


Figure 5.13:Filter Audience Screen

Figure 5.13 shows the filter Audience Screen which shows the audience who can see the posted content

5.3.12 Option popup Screen

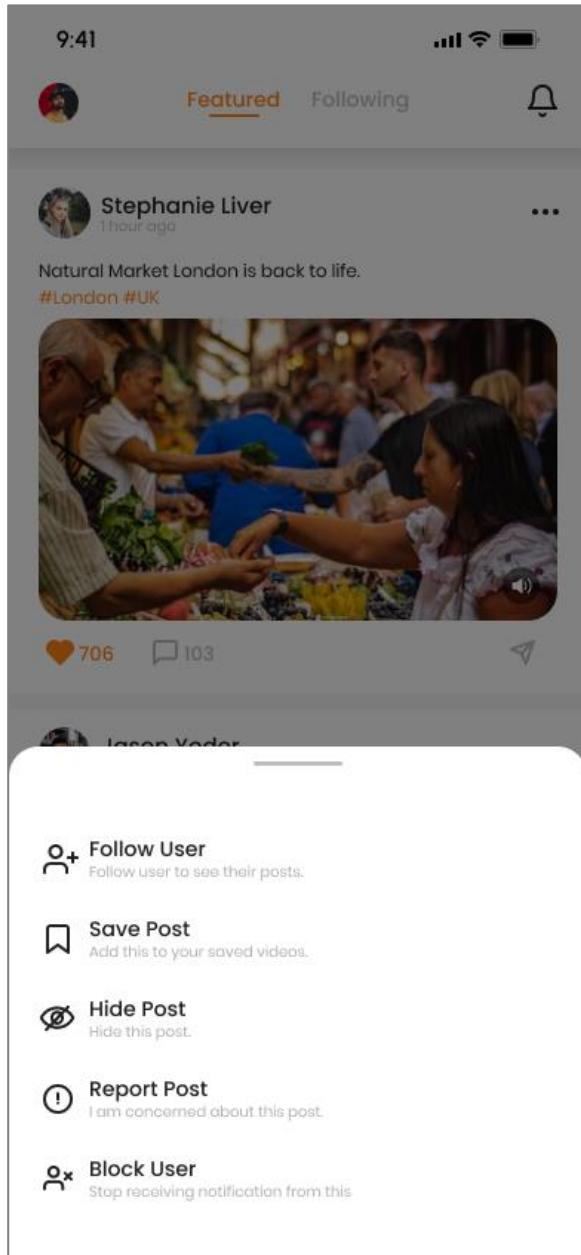


Figure 5.14:Option popup Screen

Figure 5.14 shows the Option popup screen where different option are provided to the user

5.3.15 Message Screen

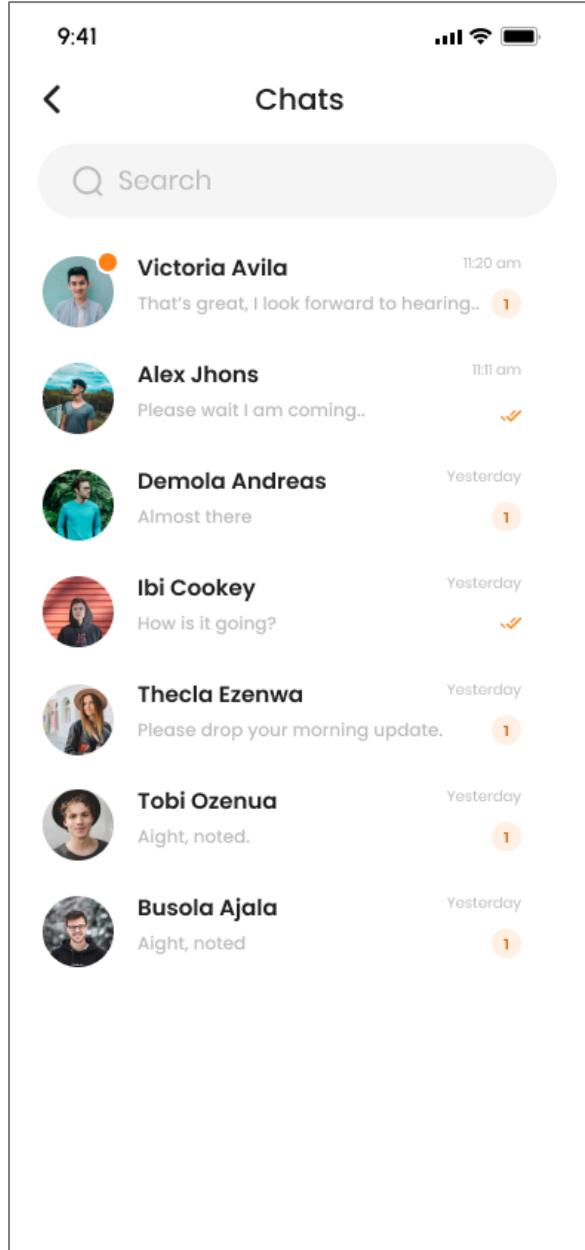


Figure 5.15:Chat Screen

Figure 5.15 shows the list of user the user has interacted with

5.3.16 Chat Screen

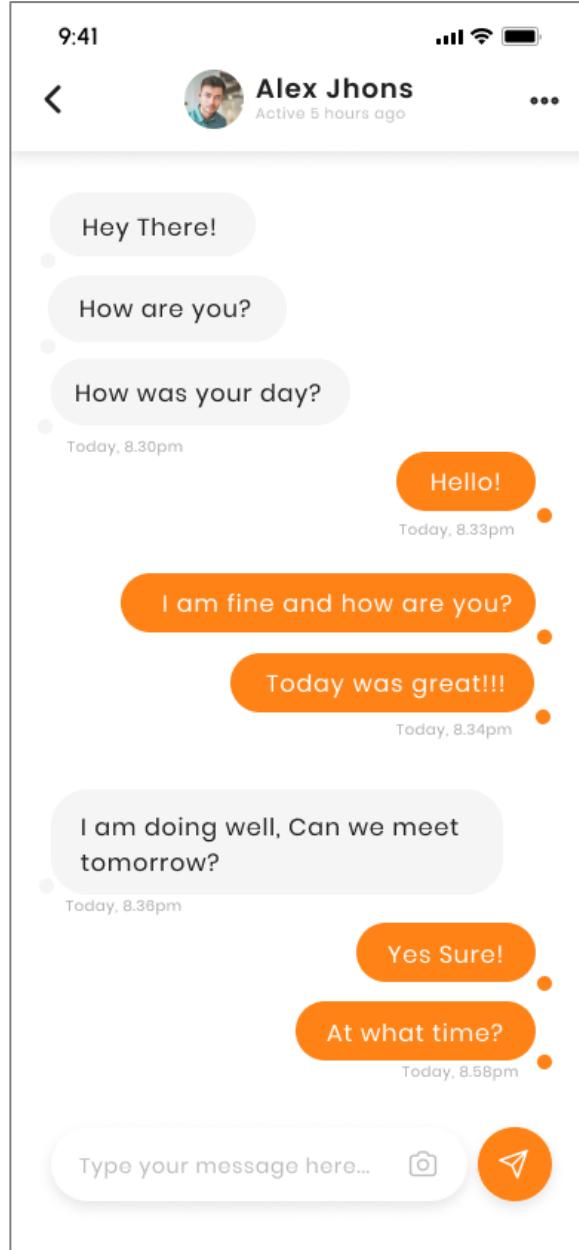


Figure 5.16:Message Screen

Figure 5.16 shows the message screen where user can receive and send messages to other users

5.3.17 Notification Screen

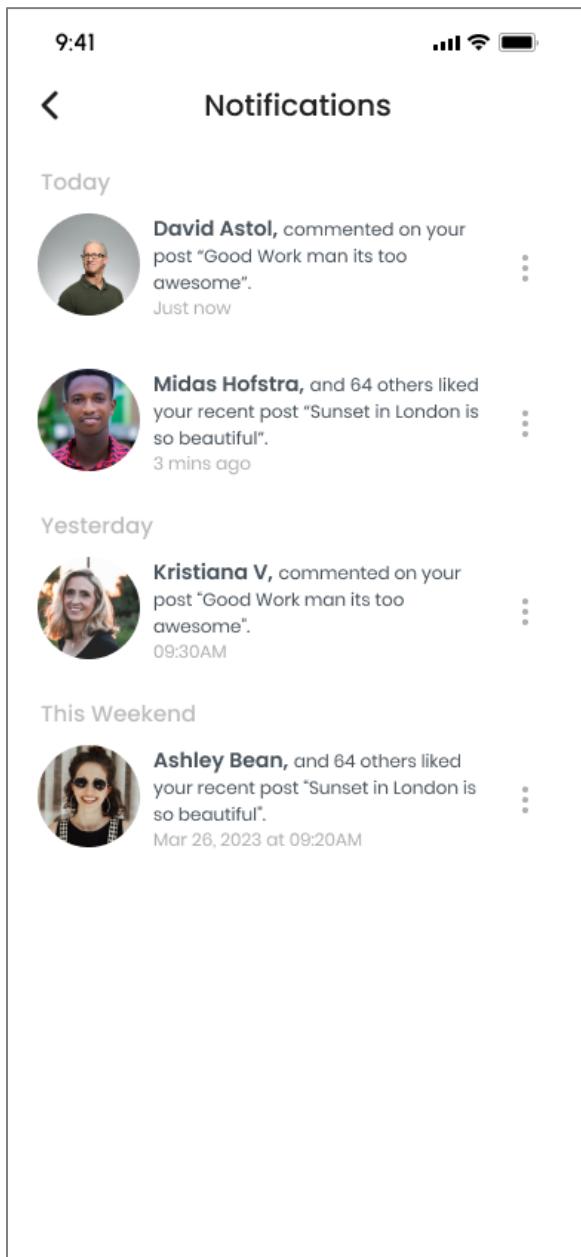


Figure 5.17:Notification Screen

Figure 5.17 shows Notification screen where the user is able to view all the notifications.

5.3.18 Settings Screen

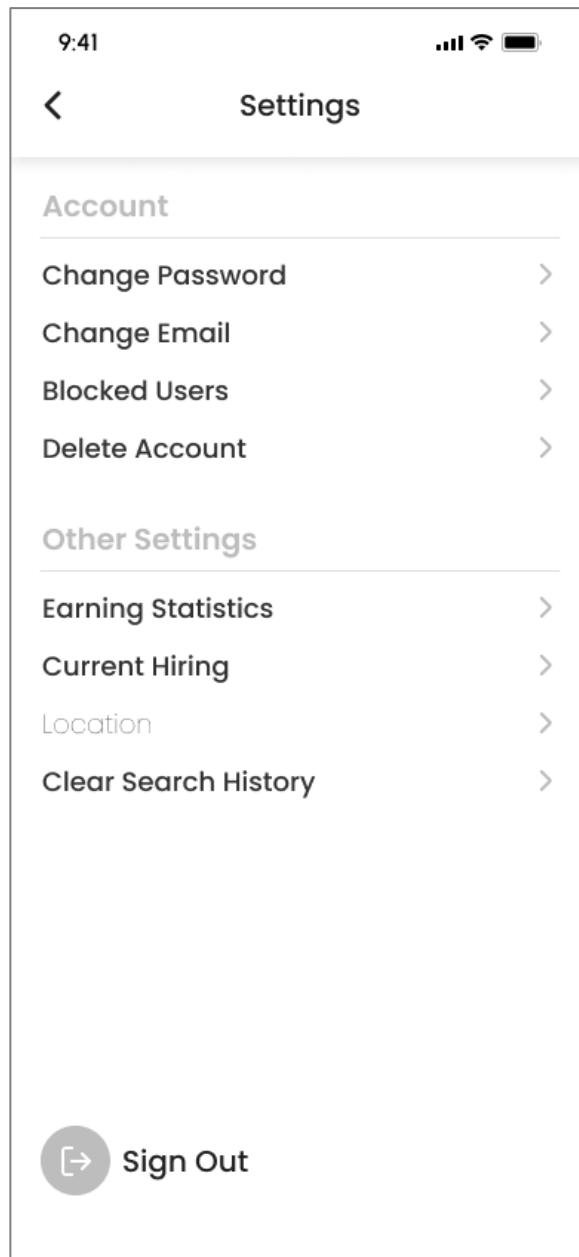


Figure 5.18:Setting Screen

Figure 5.18 shows Settings Screen where the user can make changes to his account.

5.3.19 Map Screen

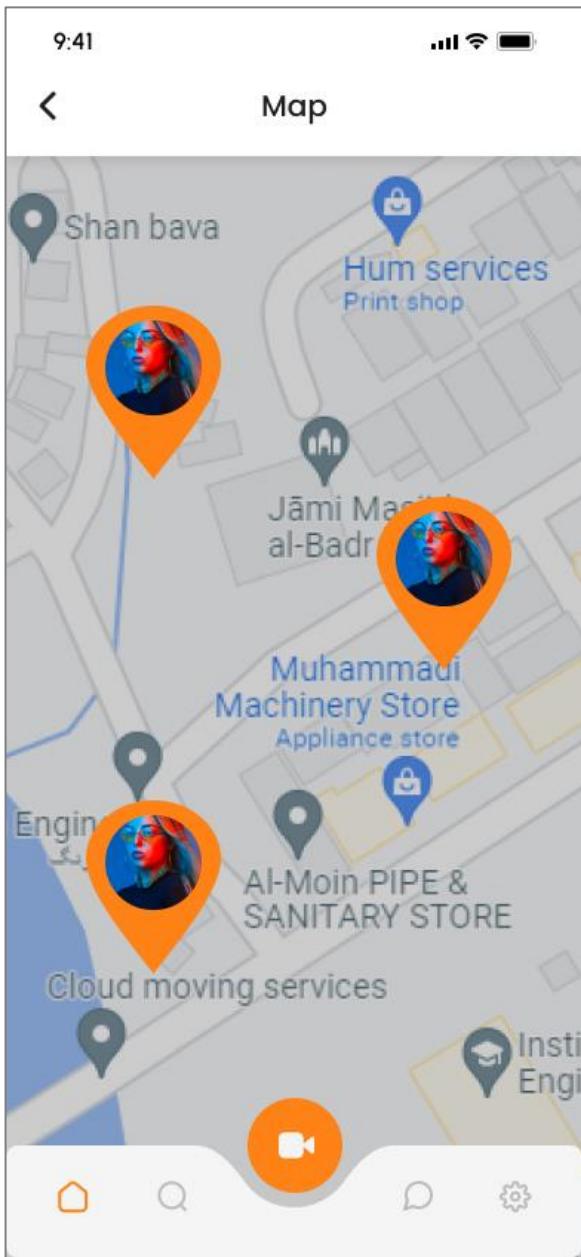


Figure 5.19:Map Screen

Figure 5.19 shows Map screen where the user is able to view other user around his area.

5.3.20 Buy Content Screen

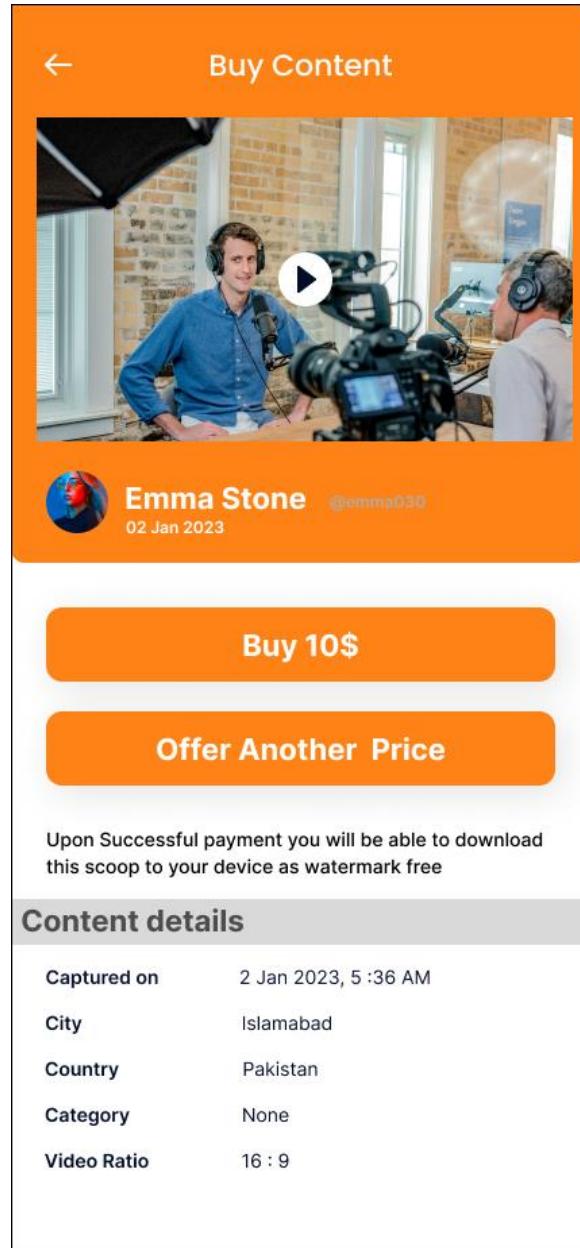


Figure 5.20:Buy Content Screen

Figure 5.20 shows Buy Content screen where the user is able to view the price of content.

5.3.21 Forgot Password Screen

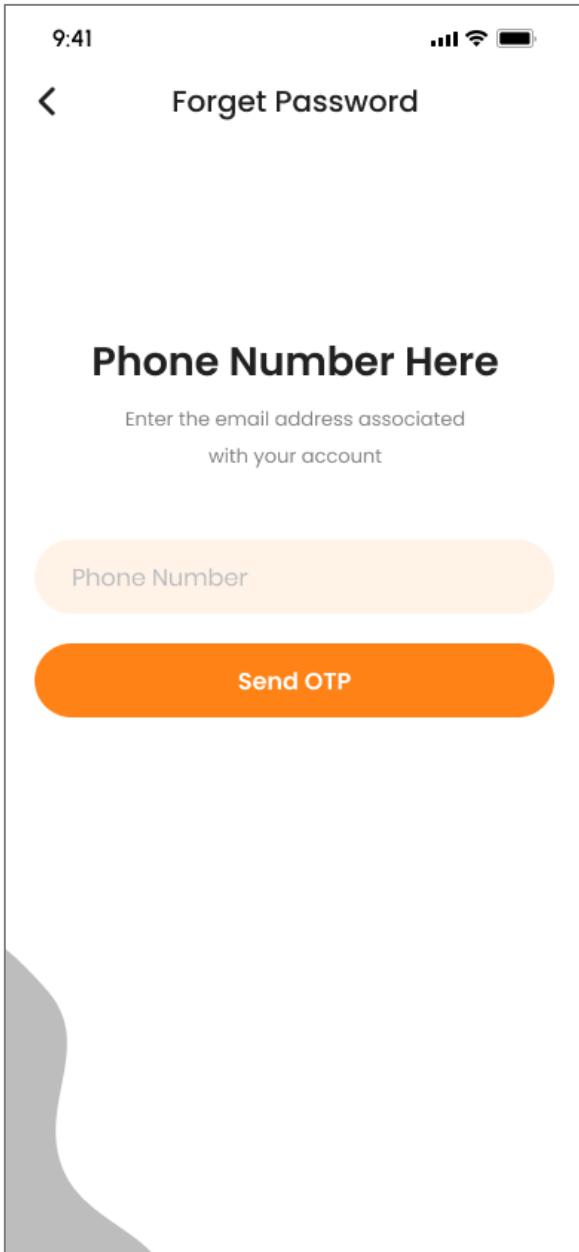


Figure 5.21:Forgot Password Screen

Figure 5.21 Forgot Password screen where the user is able to reset his password.

5.3.22 Reset Password Screen

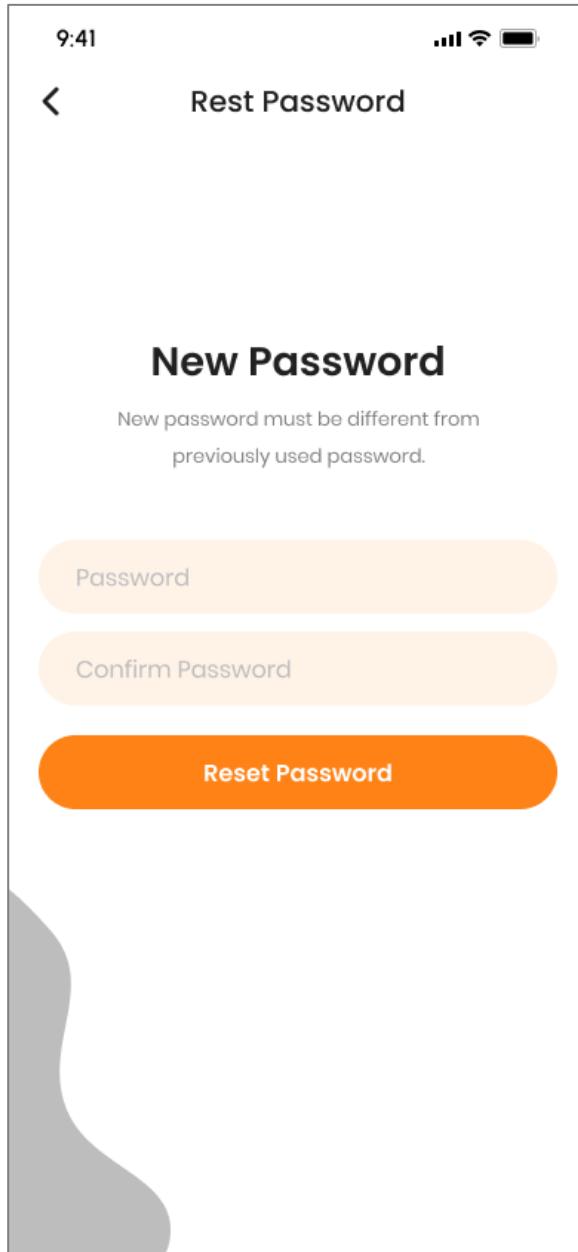


Figure 5.22:Reset Password Screen

Figure 5.22 shows reset Password screen where the user is able to reset his password.

5.3.23 Reset Password Screen

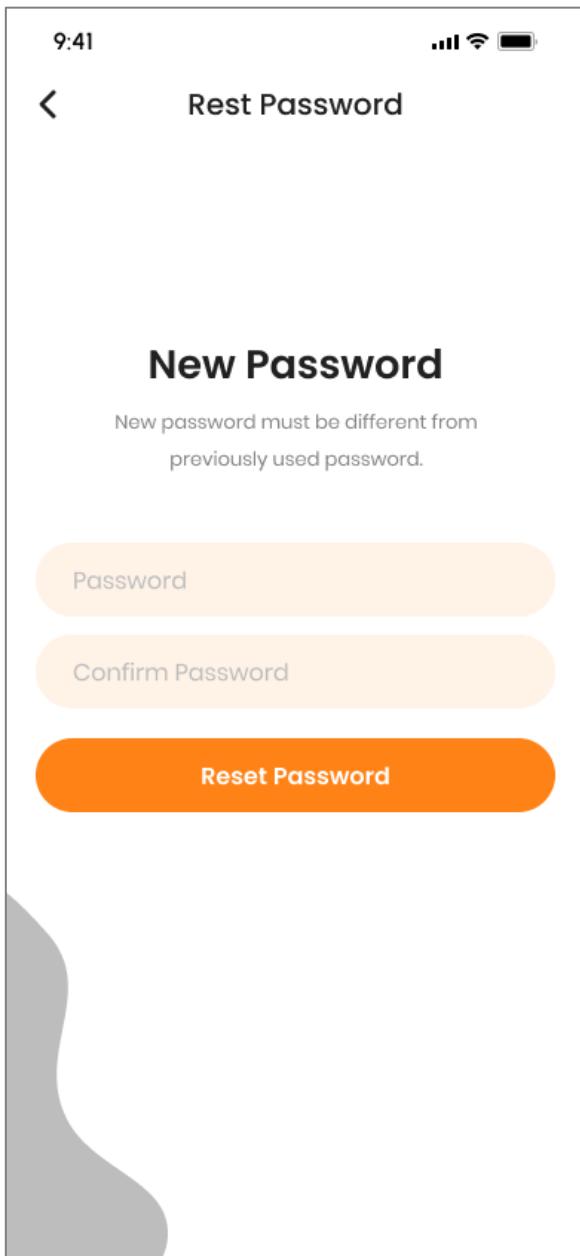


Figure 5.23:Reset Password Screen

Figure 5.23 shows Reset Password screen where the user is able to reset password.

5.3.24 Search Screen

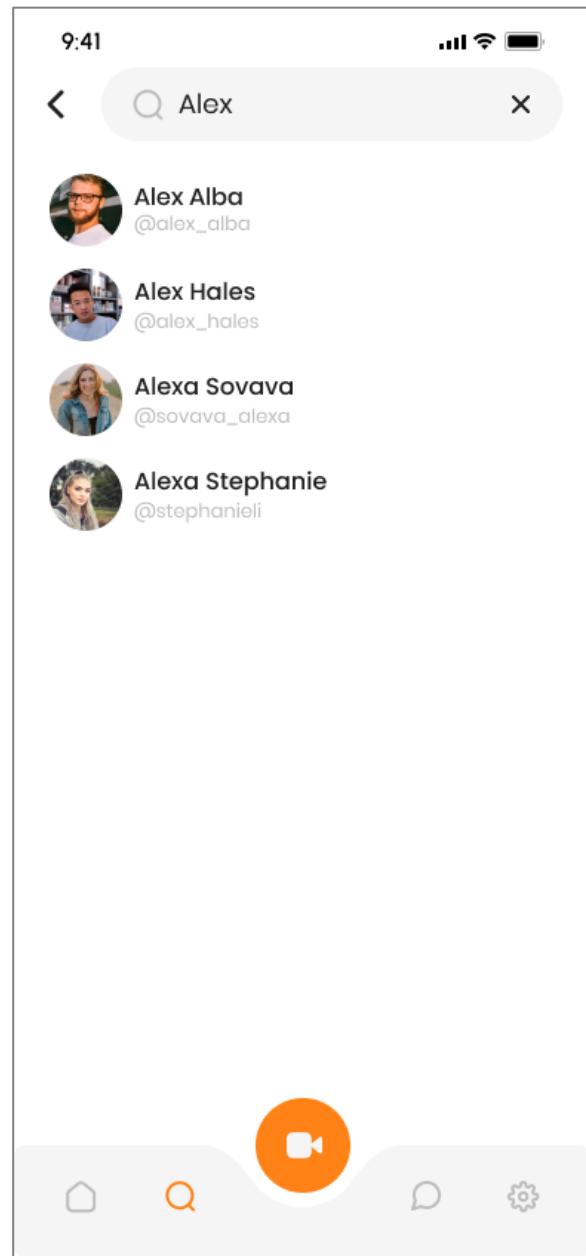


Figure 5.24:Search Screen

Figure 5.24 shows Search screen where the user is able to Search for people.

5.4 Deployment

Frontend:

For hosting and live testing of the sub-systems in our project using Azure Kubernetes Service (AKS), we can leverage the power of containerization and orchestration. The front end can be hosted on AKS by containerizing the application using tools like Docker and deploying it as a containerized workload. This allows for easy scalability, flexibility, and management of the front-end application. We can choose our front-end framework, such as Next.js and utilize the latest versions supported by the framework and containerization tools.

Backend:

Similarly, the backend API can also be deployed on AKS as a containerized workload. By containerizing the backend using technologies like Docker, we can easily package and deploy the API on AKS. This ensures a consistent and scalable deployment environment for the backend services.

AKS provides a managed Kubernetes environment, which automates the deployment, scaling, and management of containerized applications. It simplifies the process of deploying and managing the various components of our application stack. By utilizing AKS, we can take advantage of the scalability, high availability, and load balancing features offered by Kubernetes.

Additionally, we can also integrate other Azure services with AKS to enhance our application's functionality. This includes services like Azure Container Registry for hosting container images, Azure Active Directory for authentication and authorization, and Azure Monitor for monitoring and logging. When deploying on AKS, it is essential that we are using the latest versions of the containerization tools, Kubernetes, and other dependencies to benefit from the latest features, security patches, and improvements..

6 Testing and Evaluation

This chapter includes several kinds of test cases including unit tests, integration and functional tests used to test the functionality of our system and their results as well.

6.1 Unit Testing

Following are the Unit Tests of News Wave.

6.1.1 UT-6.1.1: User Registration Form

Testing Objective: To ensure the registration form is working correctly with valid and invalid credentials/inputs.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check the email field of login to validate that it takes proper email	Email: abc@gmail.com	Validates email address and moves cursor to next textbox	Pass
2	Check the email field of login to validate that it displays error message.	Email: abc.gmail.com	Highlights field and displays error message	Pass
3	Verify that the system generates a validation message on missing a mandatory field when clicking on the submit button.	Name: "Sobia" Email :"" Password: test1234	Error is displayed i-e "Please enter valid email"	Pass
4	Verify that empty field leads to validation error	Name: "" Email: "" Password: ""	Validation error is displayed for all the fields.	Pass
5	Verify that system remove error message on valid data	Name: "Sobia" Email: sobi.a@hotmail.com Password: 12345678	Validation error message is no more visible	Pass

6	Verify that Email already taken message is displayed for already used email		System will return a response message saying Email is already in use or invalid. For email which already exists in database	Pass
7	Checks the password entered is correct and has a maximum length of 8.	Password: Abc123#0	Validates the password and displays no error.	Pass
8	Verify that the success message is returned after registration.		System will return a success message on successful attempt of registration.	Pass
9	Verify that system redirects User to Home Page after successful signup		System takes user to home screen	Pass
10	Verify that the user can not go back to the login screen after successfully signing up and navigating to the home screen.		System removes all the routes screen from stack to avoid memory leak	Pass

6.1.2 UT-6.1.2: User Login Form

Testing Objective: To ensure the Login form is working correctly with valid and invalid credentials/inputs.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Verify that login form is visible and accessible		User can see login screen when click on	Pass

			login	
2	Verify that Login form has validation on all fields as signup form	Email “test” Password “test1234	Validation error is displayed for email and password	Pass
3	Verify that Error message is displayed when user account does not exist		User will get a response message with.	Pass
4	Check the email of the user if it is entered correctly.	Email: Abc123@gmail.com	Displays no error.	Pass
5	Checks the password entered is correct and has a maximum length of 8.	Password: Abc123#0	Displays no error.	Pass
6	Verify that Email already taken message is displayed for already used email		System will return a response message saying Email is already in use or invalid. For email which already exists in database	Pass
7	Checks if the “Login” button directs user to the home page of the application.	Valid credentials.	Displays home page.	Pass
8	Checks if the “Login” button does not direct the user to the homepage of the application.	Invalid credentials	Displays error message for entering valid input.	Pass

9	Check if the “Forget Password” link works correctly.	Incorrect Password	Directs the user to forget the password page.	Pass
10	Check if the “Sign up” button works correctly.	User does not have an account.	Directs the user to assign up page.	Pass

6.1.3 UT-6.1.3: Forgot Password page

Testing Objective: To ensure that the user can log in the account by creating a new password.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check the email of the user if it is entered correctly.	Email: Abc123@gmail.com	Validates email and the cursor is move to the next textbox.	Pass
2	Checks if the email is entered incorrectly.	Email: Jjsd.@gmail.com	Displays a message that the email is invalid.	Pass
3	Check if the “Send reset link” button works correctly.	A valid registered email should be entered.	A reset link is sent to the email address.	Pass.
4	Check if the “Send reset link” button does not work correctly.	An invalid email address has been entered.	Displays error message a valid email address is required.	Pass
5	Check if the “Login” button works correctly.	User remembers the password.	Directs to the user login page.	Pass
6	Check if the “back arrow” works correctly.		Directs to the login page.	Pass

6.1.4 UT-6.1.4: Profile Screen

Testing Objective: To ensure that the user's profile is displayed to the user.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Checks if the user profile is displayed.		User name and email is displayed.	Pass
2	Checks the Profile drawer is displayed		Displays the profile drawer screen.	Pass
3	Check if the “following and follower” button works correctly.		Displays the user's wish list.	Pass
4	Check if the “buy” button works correctly.		Displays the user's bought and sold content.	Pass
5	Check if the “logout” button works correctly.		Logs users out of their profile.	Pass
6	Check if the “Delete account” button works correctly.		Displays a message “Are you sure you want to delete your account? Yes or Go Back”.	Pass
7	Check if the user's content being displayed.		The User Content is being displayed in order of upload. In grid and list form.	Pass

8	Check if the users content is editbale.		The user content is editble by clicking the three dot button on the content right corner	Pass
---	---	--	--	------

6.1.5 UT-6.1.5: Home Screen

Testing Objective: To ensure the Home screen is working and the write content is being shown to the user.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the content is being shown to the user.		Content is being displayed	Pass
2	Click on the featured button		Featured button is working correctly and content is being shown.	Pass
3	Click on the following button		Following button is working correctly and content is being shown.	Pass
4	Click on the Watch button		Watch button is working correctly and content is being shown.	Pass
5	Click on the bell button		Bell button is working correctly and screen is navigating to notification screen.	Pass
6	Click on the three dots on any content video		The button is working and giving various option in the popup model	Pass
7	Click on the like button		Like button is working correctly and the count is being incremented	Pass

8	Click on the download button		The button is working and screen is navigating to buy content screen	Pass
9	Scroll through the window		The scroll is working and the homescreen is being scrolled in three screens	Pass

6.1.6 UT-6.1.6: Search Main Screen

Testing Objective: To ensure the Search Main Screen is working correctly and displaying tags and top scoopers.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the user Main Search Screen is being displayed		The Search main screen is working displaying the top scoopers and different tags	Pass
2	Checks if the input text tab is working		Input text tab is working o clicking it navigates to a new screen allowing user for search	Pass
3	Check if top Scoopers view all button works		View All button works on clicking the user gets a list of top scoopers	Pass.
4	Check if tags view all button works		View All button works on clicking the user gets a list of tags	Pass.

6.1.7 UT-6.1.7: Search Form

Testing Objective: To ensure the Search form is working correctly with valid and invalid credentials/inputs.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the empty fields are sent.	“”	Displays user message “Please fill out the form”	Pass
2	Enter john in the text field .	Name : john	It shows a list of users with similar name below the text field	Pass
3	Enter invalid in the text field .	Name : sjdff	It shows not found message below the text field	Pass
4	Check if the back button works		Back button works and on clicking we go back to main search screen	Pass
5	Check if the cancel button works		Cancel button works and it clears the data written in the text field	Pass
6	Check if the clear recent search button works		Clear recent search button works and it clears the recent searches	pass

6.1.8 UT-6.1.8: Notification Screen

Testing Objective: To ensure the Notification Screen works and the user is getting timely notifications.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the back button works		Back button works and on clicking we go back to previous screen	Pass
2	List of notifications visible.		Notification list is visible	Pass

3	Are the notifications clickable		Notifications are clickable and navigate to their screen on click	Pass
4	Is notification disable button working		On click the notifications are being enabled and disabled	Pass

6.1.9 UT-6.1.9: Chat Screen

Testing Objective: To ensure the Chat Screen is working correctly.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the list of chats is being shown		List of chats is being displayed	Pass
2	Is Chat clickable.		Chat is Clickable and on click the screen is shifted to new window where the user can send and receive messages	Pass
3	Check if the back button works		Back button works and on clicking we go back to main search screen	Pass
4	Is the Plus button working		Plus button is working and allowing the user to write a new message on click.	Pass
5	Are the messages deleteable.		On long press a modal pops up and the user is able to delete the message	Pass
6	Enter text in the text field.	Name : john	If the user has a history of messages with john than his name will pop up else it will give message not found.	Pass

6.1.10 UT-6.1.10: Message Screen

Testing Objective: To ensure if the messages are correctly being sent and received.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the chat between users is being shown		chat is being displayed, showing the sent messages in orange and received messages in gray background	Pass
2	Is Chat scrollable.		Chat is Scrollable showing all previous and new messages on scroll	Pass
3	Check if the back button works		Back button works and on clicking we go back to previous screen	Pass
4	Is the send button working		Send button is working and allowing the user to send the written message.	Pass
5	Are the messages deleteable.		On long press a modal pops up and the user is able to delete the message	Pass
6	Enter text in the text field.	Name : john	The text is being entered in the field	Pass

6.1.11 UT-6.1.11: Setting Screen

Testing Objective: To ensure the Setting Screen is being displayed showing all the options to make changes to the account.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Is the list of options being shown in the setting screen		All the options are visible in the setting screen	Pass
2	Check if Options are clickable.		Options are clickable either	Pass

			triggering popups or navigating to new screen	
3	Check if the back button works		Back button works and on clicking we go back to previous screen	Pass
4	Check if the log out button is working		Log out button is working triggering a pop up and asking for confirmation.	Pass
5	Check if the delete account button is working		All the options are visible in the setting screen	Pass

6.1.12 UT-6.1.12: video recording Screen

Testing Objective: To ensure the Video recording Screen is working

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Is the video button recording the video		On press the video button pause and play recording the video.	Pass
2	Is the Filter button working.		The filter button is working showing a list of filters the user can choose from while recording video or before recording video	Pass
3	Is the teleprompter button working		The teleprompter button is working on click it navigate to the teleprompter screen where user can write the script	Pass
4	Is the script written in teleprompter shown while recording video		The script is being shown while recording the video	Pass
5	Is the cross button on the script working		The cross button on the script is working it makes	Pass

			the scripts disappear	
6	Is camera flip button working		The camera flip button is working on one click it will switch to front camera and on the next it will do vice versa	Pass
7	Is the flash button working		The flash button is working on click it turns on/off the flash of your phone	Pass
8	Is the stopped recording being saved		The stopped recording id being saved and on press of next it moves to the upload Screen	Pass

6.1.13 UT-6.1.13: Teleprompter

Testing Objective: To ensure the teleprompter screen is working correctly

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check whether the data is being entered in the text field		On press of button the data is being entered in the text input.	Pass
2	Check whether the save button is working		The save button is working and we are navigating back to the camera screen with a script we written on the teleprompter screen.	Pass
3	Is the back button working		The button button is working pushing the stack back to previous screen	Pass
4	Is the text being clear on clear button		On pressing the clear button the data in the text field is being cleared.	Pass

6.1.14 UT-6.1.14: Upload content screen

Testing Objective: To ensure the Upload Content screen is working and the content is being uploaded on the home screen being visible to intended audience.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Is the recorded video being shown in the uploaded screen		The right recorded video is being shown in the upload content screen	Pass
2	Check whether video description can be given in the field		Video description can be given by adding text in the field.	Pass
3	Check if the save to draft button is working		The save to draft button is working and the video is being saved to draft	Pass
4	Check if the upload button is working		The upload button is working and the video is being displayed on the home screen	Pass
5	Check if the price of content being set		The price of the content is being set	Pass
6	Check if the intended audience is being set		The audience can be set by choosing between three options	Pass

6.1.15 UT-6.1.15: change password Screen

Testing Objective: To ensure the change password screen is working correctly with valid and invalid credentials/inputs.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the enter old password text field works	Password: asldskfls	Checks for the password for the user in the database if found the password will reset	Pass

			and if not error message	
2	Check if the enter new password text field works	Password: adfdfdfndn	The new password field is working	Pass
3	Check if the set password button works		If the user has entered correct credentials the password will be reset or an error message	Pass

6.1.16 UT-6.1.16: Content Enhancement Screen

Testing Objective: To ensure the Content Enhancement form is working correctly.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if effects can be applied on the video		Effects are being applied on the video according to users choice.	Pass
2	Check if the sound removal button is working		Sound removal button is working onclick the sound is turned on and off	Pass
3	Check if the crop button is working		Crop button is working on click it gives the user option to trim the video according to choice.	Pass
4	Check if the add location button is working		Add location button is working on click the user's current location is being added in the video.	Pass
5	Check if the sound removal button is working		Sound removal button is working onclick the sound is turned on and off	Pass

6.1.17 UT-6.1.17: Edit Profile Screen

Testing Objective: To ensure the Edit profile Screen is working correctly.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Verify that the Edit Profile form contains username, name and surname, phone, address, email, country, image and save button.		All fields are visible and working.	Pass
2	Verify that the system generates a validation message on missing a mandatory field when clicking on the submit button.	Username: 'Urooj' Name and Surname: 'Urooj Murtaza' Email: ''	Error is displayed i-e "Please enter validemail"	Pass
3	Verify that the system shows validation message on entering invalid email address format.	Username: 'Urooj' Name and Surname: 'Urooj Murtaza' Email: "urooj" Password: "abc123"	Error is displayed i-e "Please enter a validemail"	Pass
4	Verify that empty field leads to validation error	Name: "" Email: ""	Validation error is displayed for all the fields.	Pass

5	Verify that system remove error message on valid data	Name: "Urooj" Email: urooj@hotmail.com	Validation error message is no more visible on correct data	Pass
6	Verify that the image upload button is working fine and successfully uploads image.	Upload an image using the "Upload Image" form button	Image successfully gets uploaded and stored in the directory as well as in the database.	Pass
7	Verify the image on the left gets updated after uploading new image.	Upload an image using the "Upload Image" form button	Profile Picture successfully gets updated.	
8	Verify that the success message is returned after saving the form		System will return a success message on successful attempt of editing profile.	Pass
9	Verify that all the information regarding user is showing successfully in the fields.		All the user information is loaded successfully.	Pass
10	Verify that all the correct information is showing on the screen.	Verifying the data showing on the screen with the data in the database.	All the data showing on the screen is correct.	Pass

6.1.18 UT-6.1.18: Follow and follower list screen

Testing Objective: To ensure the Follow and followers list screen is working correctly.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the correct following and follower list is being shown		The correct list of user is being shown	Pass
2	Check if each user is clickable		All the user in the list are clickable and on click we navigate on their profile.	Pass
3	Ensure the user is being shown the correct count of follower and followings		The correct amount of follower and following count is being shown	pass

6.1.19 UT-6.1.19: Job Posting Screen

Testing Objective: To ensure the Job posting screen is working correctly so that both news channels and users can post jobs in order to cover new stories.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Check if the right information is being shown in job posting screen		The correct information is being shown in screen	Pass
2	Check whether the jobs are being posted		Jobs are being posted by providing proper information and then provided to intended users of interest 3	Pass

6.1.20 UT-6.1.20: Buy Content Screen

Testing Objective: To ensure the buy content screen is working correctly so that buyers are able to view the price of the uploaded content and can offer a new price for the content to the owner.

No.	Test case/Test script	Attribute and value	Expected result	Result
1	Verify the correct video is being shown for		The correct video is being shown to	Pass

	buying		the user	
2	Verify that buy button is working		The buy button is working for any particular video	Pass
3	Verify that offer another price button is working		The offer another price button is working for any particular video	Pass

6.2 Functional Testing

Following are the Functional Tests of News Wave.

6.2.1 FT-6.2.1: Profile Handling

Objective: To ensure that the user has logged in to the system after successfully creating an account.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Enter Credentials	User Name, Email Address	Credentials written in the required field.	Credentials displayed on the respective fields.	Pass
2.	Set Password	Password>8 characters	Password validated.	Successfully saved	Pass
3	Login	Button pressed	Directed to Home Page.	Home Page displayed	Pass
4	Forget Password	Password doesn't match	Forget Password page opens.	User successfully directed to forget password page.	Pass
5	Confirm Password	Old and new password entered.	Password changed	Password changed	Pass
6	Edit Profile	Update pr	Changes saved	Profile updated.	Pass

		ofile information.			
7	Sign Out	Logged in user.	Logs out of the account.	Successfully Logs out of the account.	Pass
8	Delete account	Clicks delete account button.	User account deleted.	Successfully deleted the account.	Pass

6.2.2 FT-6.2.2: Profile Handling

Objective: To ensure that the user has logged in to the system after successfully creating an account.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Signing up with correct credentials.	Name: Mohsin Email: umurtaza@gmail.com Password: 1234	User gets registered successfully.	User gets registered successfully.	Pass
2.	Signing up again with the same credentials.	Name: Mohsin Email: umurtaza@gmail.com Password: 1234 Confirm Password: 1234	User gets an error message “User already exists”.	User gets an error message “User already exists”.	Pass
3	Passwords don't match	Name: Mohsin	User gets an error message “Passwords don't match”	User gets an error message “Passwords don't match”	Pass

		Email: umurtaza@gmail.com Password: 1234 Confirm Password: 123			
4	Signing up with invalid email format	Name: Mohsin Email: umurtaza@gmail Password: 1234 Confirm Password: 123	User gets a validation message “Enter a valid email”	User gets a validation message “Enter a valid email”	Pass

6.2.3 FT-6.2.3: Login with different roles (News channel, user)

Objective: To ensure that the correct page with the correct navigation bar is loaded.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Login as a users.	Username: mosin Password: 1234	User is redirected to the home screen.	User is redirected to the user homescreen	Pass
2	Login as News Channel	Username: Arynews	User is redirected to the News channel home screen.	User is redirected to newschannel homescreen.	Pass

6.2.4 FT-6.2.4: viewing, updating and deleting content through User

Objective: To ensure that the user level can view, edit and delete content through user

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result

1.	Viewing data regarding content videos tags etc.	Navigating to home screen or profile Screen.	The required correct information is shown on the screen	The required correct information is shown on the screen	Pass
2.	Editing information shown on the content.	Clicking on the edit (three dots) and updating information.	The information Gets updated successfully.	The information gets updated successfully.	Pass
3.	Deleting uploaded content.	Clicking on the edit (three dots) and updating information.	The information Will be deleted successfully.	The information gets deleted successfully.	Pass

6.2.5 FT-6.2.5: video recording

Objective: To ensure that the user has access to recording video which is the main objective of our app.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Video recording is working smoothly		Video is being recorded with pause and play option.	Video is being recorded with pause and play option.	Pass
2.	Teleprompter is working and user is able to add filters while recording		Video recording is allowing to add script and apply special filters	Video recording is allowing to add script and apply special filters	Pass
3.	Video recording is allowing camera switching while recording		Video is being recorded with the feature of front and back camera switch	Video is being recorded with the feature of front and back camera switch	Pass

6.2.6 FT-6.2.6: Upload Content

Objective: To ensure that the user is able to upload the recorded content on his profile and set a price for the content in order to get paid.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	User is able to upload content	Video, description, price, audience	User is able to provide necessary information to upload the video and video is being uploaded	User is able to provide necessary information to upload the video and video is being uploaded	Pass
2.	User is able to set a price for his content	Price	User is able to set a price and payment method for his uploaded content	User is able to set a price and payment method for his uploaded content	Pass
3.	User is able to set the privacy of his uploaded content		User is able to decide the audience he wants to share the content with	User is able to decide the audience he wants to share the content with	Pass

6.2.7 FT-6.2.7: Job posting

Objective: To ensure that the user and the news channels are able to post jobs and able to cover their favorite topics .

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	News channel and users are able to post jobs		News channel are able to post jobs and provide to intended audience	News channel are able to post jobs and provide to intended audience	Pass
2.	News channel are recommended with users who can cover their topic of interest		News channel are provided with list of potential users with their reviews and ratings	News channel are provided with list of potential users with their reviews and ratings	Pass
3.	Users able to get info of jobs posted by news channels and other users		Users will view posted jobs around their area	Users will view posted jobs around their area	Pass
4.	Users are able to apply to the posted jobs and get paid for it		Users are able to apply to the posted jobs and get paid for it	Users are able to apply to the posted jobs and get paid for it	Pass

6.2.8 F T-6.2.8: Payment and billing

Objective: To ensure that the user are able to set a price for their content and also get paid for it through different payment methods

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Viewing detailed information regarding payment.	Navigating to the order details page to view information.	The required and correct information is shown on the screen.	The required and correct information is shown on the screen.	Pass
2.	Completing payment.	Clicking on the complete payment button.	The order gets completed successfully.	The order gets completed successfully.	Pass
3	Cancelled payment.	Clicking on the cancel order button.	The order gets cancelled successfully.	The order gets cancelled successfully.	Pass

6.3 Integration Testing

Integration tests of news wave are as follow

6.3.1 IT-6.3.1: User

Testing Objective: To ensure the scheduling is being done correctly and the **interface** between module content management and video recording module is running correctly.

No.	Test case/Test script	Attribute and value	Expected result	Actual result	Result
1.	Viewing content videos	Navigating to home screen or	The required correct information is shown on	The required correct	Pass

		profile Screen.	the screen	information is shown on the screen	
2.	Editing information shown on the content.	Clicking on the edit(three dots) and updating information.	The information Gets updated successfully.	The information gets updated successfully.	Pass
3.	Deleting uploaded content.	Clicking on the edit(three dots) and updating information.	The information Will be deleted successfully.	The information gets deleted successfully.	Pass
4.	upload content	Video, description, price, audience	User is able to provide necessary information to upload the video and video is being uploaded	User is able to provide necessary information to upload the video and video is being uploaded	Pass
5.	Video recording is working smoothly		Video is being recorded with pause and play option.	Video is being recorded with pause and play option.	Pass
6.	Teleprompter is working and user is able to add filters while recording		Video recording is allowing to add script and apply special filters	Video recording is allowing to add script and apply special filters	Pass
7.	Video recording is allowing camera switching while recording		Video is being recorded with the feature of front and back camera switch	Video is being recorded with the feature of front and back camera switch	Pass

7 Conclusion and Future Work

7.1 Conclusion

We have tested all completed possible aspects of our application. We are constantly optimizing our mobile application to offer the best experience to our user base. While we have covered every aspect, we deemed necessary to test, we will continue to test and debug our application as the development and updating process continues. Development has gone very smooth recently and all milestones are achieved . High quality images and icons are used in the development with help of react native and reactjs APIs and latest SDKs.

7.2 Future Work

In the future we aim to increase the efficiency of the project and add more video recording features, Enhance fact-checking mechanisms and collaboration with established news organizations, Develop algorithms that tailor news feeds to individual user preferences. Provide personalized recommendations, ensuring that users receive content aligned with their interests. We will test this application with fellow students and local bloggers to get their feedback and improve the performance.

8. References

Following are the most important source of reference for this project

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