



SOFTWARE REQUIREMENTS SPECIFICATION FOR PhotoN WEBSITE

Version 1.0

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Contents

1	Introduction	3
1.1	Purpose	3
1.2	Scope	3
1.2.1	In Scope	3
1.2.2	Out of Scope	3
1.3	Definitions	4
1.4	References	4
1.5	Overview	5
2	Overall Description	6
2.1	Product Perspective	6
2.2	Product Functions	6
2.3	User Characteristics	9
2.4	Principle Actors	9
2.5	General Constraints	9
2.6	Assumptions and Dependencies	9
3	Specific Requirements	10
3.1	Functional Requirements	10
3.1.1	Use Cases Related to User Account Management	10
3.1.2	Use Cases Related to Photo Management	12
3.1.3	Use Cases Related to Folder Operations	15
3.1.4	Use Cases Related to MarketPlace Interaction	20
3.1.5	Use Cases Related to Album Operations	20
3.1.6	Use Cases Related to Social Interaction	24
3.1.7	Use Cases Related to Search Functionality	26
3.1.8	Use Cases Related to Administrative Functions	27
3.2	Performance Requirements	28
3.3	Design Constraints	28
3.4	External Interface Requirements	28
4	Future Extensions	29
5	Appendix	30
5.1	Appendix - A	30

1 Introduction

1.1 Purpose

The **PhotoN** platform is intended to be a network for photos that offers a rich set of features for photo storage, sharing, and exploration.

This document outlines the functional and non-functional requirements for **PhotoN**. It serves as a dictionary for developers to design and implement the system. This SRS will act as a foundational guide throughout the development process.

1.2 Scope

Now, we see the features that are in the scope of the software and that are not.

1.2.1 In Scope

- User profile creation and customization, providing a personalized experience on the platform
- Login and Signup with user authentication
- Upload and management of photos by individual users
- A sharing mechanism that allows users to share private photos with selected individuals
- A public marketplace for users to display their photographs, which includes features for viewing, saving, and downloading
- A search feature that enables users to find public photos based on tags and descriptions and users based on the username of the users

1.2.2 Out of Scope

- The direct sale or purchase of photographs or any form of e-commerce functionality
- Editing of photographs within the platform
- Any form of automatic image categorization using AI
- Clicking photos directly from the website

1.3 Definitions

- **PhotoN:** The name of the photo storage, sharing, and exploration platform.
- **Private Photos:** Photos that are private to the user and not visible to other platform users.
- **Shared Photos:** Photos shared by one user from their private collection to specific other users
- **Public Photos:** Photos that are available in the marketplace, viewable by any user on the platform
- **Vault:** It serves as a collection to store and manage their photos securely.
- **Albums:** These are the vaults that are created by the user for organizing photos.
- **Folders:** These are the predefined vaults that are given by the application.
- **Follow Feed:** Feed based on photos uploaded by the users followed by this user.
- **Public Feed:** Feed based on interests of the user.
- **Global Feed:** This is just nomenclature indicating Follow Feed + Public Feed.
- **All Photos:** Contains all the photos uploaded by the user to the application and the photos saved by the user from global feed.
- **Recently Uploaded:** Contains the most recently uploaded photos for viewing
- **Time View:** We need to select a start date and an end date, all the photos between that time are displayed.
- **Favorites:** Contains the photos that we favorite
- **Locked Folder:** Need a passcode to open this folder, which contains private photos that are sent into this folder
- **Bin:** Contains the photos that were deleted from the application
- **Shared Folder:** Contains the Photos and Albums shared by other users
- **Global Favorites:** Contains the Photos which are made favorite from the global feed
- **Global Photos:** Contains the Photos which are made global by us

1.4 References

- **Appendix A:** User Screens

1.5 Overview

The remaining SRS would be in the format:

- **Section 2: Overall Description:** In this section we present a detailed description of the software, specifying the anticipated level of user proficiency, outlining the general constraints of the software development, and stating the assumptions and dependencies that are assumed for the project's context.
- **Section 3: Specific Requirements:** In this section, we will list exactly what **PhotoN** needs to do, and we'll describe its main features using examples of how people will use the website. We'll also talk about how fast and well it should work and what rules we need to follow while creating it.
- **Section 4: Future Extensions:** In Section 4, we'll talk about how we might make **PhotoN** better in the future, like new features we could add later on to enhance the website.
- **Section 5: Appendix:** The appendices contain supplemental material that supports the SRS, including basic user screen screenshots.

2 Overall Description

2.1 Product Perspective

PhotoN is designed for individuals who are passionate about photography, whether they are casual photographers or professional photographers. The platform provides a digital space for users to upload, manage, and share their photographs, as well as engage with the photography community. **PhotoN** aims to be an easy-to-navigate website that does not require advanced technical skills to use. Users can quickly learn how to manage their photo galleries, share their images, and follow with other users.

The **PhotoN** platform is a self-contained web service that operates independently, without the need for any additional software. It is accessible from a variety of web browsers and devices and is compatible with different operating systems, ensuring a broad reach for users with diverse technology preferences. The intention is to create a versatile and reliable platform that serves as a one-stop solution for all photo management and sharing needs.

2.2 Product Functions

Class of Use Cases	Use Cases	Description of Use Cases
User Account Management	Signup	Users can register for an account on PhotoN .
	Login	Users can log into their PhotoN account.
	Logout	Users can exit from PhotoN .
	Profile Management	Users can edit their personal information.
Photo Management	Upload Photos	Users can upload photos to PhotoN .
	Move to bin	Users can delete photos from PhotoN then the photo is moved to bin.
	Edit Photos	Users can edit the attributes associated with a photo.

Class of Use Cases	Use Cases	Description of Use Cases
	Save Photo	Users can add photos from global feed to All Photos .
	Download Photo	User can download photos from the application to their local device.
	PhotoMap	User can view photos as points mapped on a map.
Folder Operations	Favorite a photo	When a photo is favorited it is added to Favorites folder
	UnFavorite a photo	When a photo is made unfavorite it is removed from the Favorites folder
	Like a photo	When a photo from is global feed is liked it is added to Global favorites folder.
	Unlike a photo	When a photo from is made Global Favorite is unliked it is removed from the Global favorites folder.
	Add to Locked Folder	Photo can be added to Locked folder
	Remove from Locked Folder	A Photo added to Locked folder can be remove from the folder.
	Restore from Bin	A photo which is deleted previously can be restored back to All Photos .
	Delete from Bin	A photo can be completely removed from the PhotoN application.
	Remove from Shared Folder	A photo or album can be removed from Shared folder .
	Remove from Global Photos	A photo can be removed from Global Photos which results in removal of the photo from Market-Place.
MarketPlace Interaction	Add a photo	User can add a photo to global feed from the users' private photos

Class of Use Cases	Use Cases	Description of Use Cases
Album Operations	Create Album	User can select required photos from All Photos to add to album
	Remove Album	When the user deletes an album the photos in the album are not effected
	Delete Album	When the user deletes an album the photos in the album are moved to bin
	Add Photo	User can select required photos from All Photos to add to album
	Copy Photo	User can copy a photo from a vault(only some) to an album.
	Move Photo	User can move a photo from one album to another
	Remove Photo	User can remove a photo from the album
Social Interaction	Follow User	Users can follow other users' profiles.
	Unfollow User	Users can unfollow, followed other users'.
	List of following users	Displaying the users followed by the user.
	Photo Sharing	Users can share their private photos with other users.
	Album Sharing	Users can share their private albums with other users.
Search Functionality	Photo Search	Users can search photos based on tags or description.
	User Search	Users can find other users using their username.
Administrative Functions	Content Moderation	Moderator can remove photos from global feed based on censorship.

2.3 User Characteristics

- **Photography Knowledge:** Users should have a basic understanding of photography terminology and the ability to categorize their photos.
- **Technical Proficiency:** Users should possess the necessary skills to navigate a web platform and should be understand how the features works in application.
- **Privacy Awareness:** Users should understand the concept of public and private sharing to manage their photo galleries effectively. They should be able to decide which photos to keep private, share with select individuals, or make public.
- **Social Interaction:** Users are expected to have some basic knowledge about how social interactions are done online and how to search photos based on requirement.

2.4 Principle Actors

We have two principle actors in this application User and Moderator.

2.5 General Constraints

- **Internet Dependence:** To access all the features of **PhotoN**, a stable internet connection is required. The platform is online-based, and functionalities such as photo uploading, sharing, and community interaction are dependent on the user's internet connectivity.
- **Browser Compatibility:** The platform is designed to be compatible with modern and updated web browsers. Users should ensure their browser is up-to-date to experience the full range of features of the website.
- **Multi-User Environment:** Unlike single user systems, **PhotoN** is a multi-user platform that allows interaction between different users.

2.6 Assumptions and Dependencies

- **Internet Connectivity:** **PhotoN** assumes that the user has a consistent and stable internet connection.
- **User Proficiency:** **PhotoN** assumes that users will apply appropriate and relevant tags corresponding to the content of their photos. This is vital as it directly affects the searchability and organization of images, contributing to the overall user experience.
- **Image Clarity:** Photos in the global feed of **PhotoN** depends on the photo quality which the uploading user has with him.

3 Specific Requirements

3.1 Functional Requirements

The functional requirements are outlined through a series of different use cases.

3.1.1 Use Cases Related to User Account Management

Use Case 1: Signup

Primary Actor: New User

Pre Conditions: The user is not already registered on PhotoN.

Main Scenario:

- The user selects the **Signup option** on the PhotoN homepage.
- The system presents a registration form requesting details such as email address, username, and password.
- The user fills out the form with their information and submits it.
- The system validates the information to ensure all fields are correctly filled and that the username and email are not already in use.
- Upon successful validation, the system creates a new user account and sends a verification email to the provided email address.
- The user clicks the verification link in the email to activate their account.

Alternate Scenario:

- The system displays an error message and requests the user to provide the necessary corrections if the entered credentials are wrong for registration, then again the user is given another chance to fill the form.
- The user attempts to register with an email that is already associated with an existing account then an error is popped up, and then the user needs to select another new email for registration.

Use Case 2: Login

Primary Actor: User

Pre Conditions: The user is already registered in PhotoN.

Main Scenario:

- The user navigates to the Login page on the PhotoN platform.
- The system displays a login form asking for the username and password.
- The user enters their credentials and submits the form.
- If the credentials are correct, the system grants access to the user's account and redirects them to their personal dashboard.

Alternate Scenario:

- The user enters incorrect login credentials then an error message is shown, then the user is given the option to try entering their credentials again.

Use Case 3: Logout

Primary Actor: User

Pre Conditions: The user is currently logged in to their PhotoN account.

Main Scenario:

- The user clicks on the Logout option within their dashboard or the navigation menu.
- The system asks for confirmation to proceed with logging out.
- The user confirms their intention to log out.
- The system terminates the user's session and redirects them to the login page.

Alternate Scenario:

- The user decides not to log out and cancels the action.

Use Case 4: Profile Management

Primary Actor: User

Pre Conditions: The user is logged into their PhotoN account.

Main Scenario:

- The user navigates to their profile settings on the PhotoN platform.
- The system displays the current profile information, including options for editing.
- The user selects the information they wish to update, such as their profile picture or personal details.

- The user makes the desired changes and submits the updated information.
- The system validates and saves the new profile details.

Alternate Scenario:

- The user attempts to submit invalid or incomplete profile information. In such a situation an error message is shown, then the user is again given chance to edit profile.
- The user chooses to cancel the update.

3.1.2 Use Cases Related to Photo Management

Use Case 5: Upload Photos

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and is in all photos or any other album

Main Scenario:

- The user selects the Upload Photos option in the respective vault.
- The system displays an upload interface, where the user can choose files from their device.
- The user selects the photo that the user wish to upload and optionally adds tags (automated tags are added by OpenAI API).
- Once the upload is complete, the system confirms the successful upload and the photos appear in the user's gallery.

Alternate Scenario:

- The upload process is interrupted due to a network issue or any user action, then the photo is not uploaded. The user page is refreshed then the user can select to upload again.
- The user chooses to cancel the upload.

Use Case 6: Move to Bin

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has navigated to the vault where photos are displayed

Main Scenario:

- The user selects the photo they wish to delete.

- The user clicks on the Move to Bin option provided near the selected photos or in a menu.
- The system prompts the user to confirm the deletion to prevent accidental loss of photos.
- Upon confirmation, the system moves the selected photos to the Bin folder, allowing for recovery.
- The system confirms that the photos have been successfully moved to the bin.

Alternate Scenario:

- The user decides against deleting the photo and cancels the action. Then the system cancel the deletion process and photos remain in the current state.

Use Case 7: Edit Photos

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and viewing a photo they wish to edit.

Main Scenario:

- The user selects the photo they wish to edit from their gallery.
- The user clicks the "Edit" option associated with the photo.
- The system presents the user with an editing interface, displaying attributes that can be edited, such as name of the file, tags.
- The user makes desired changes to the photo's attributes.
- The user submits the changes, and the system updates the photo with the new attributes.
- The system displays a confirmation message that the photo has been updated.

Alternate Scenario:

- The user attempts to submit invalid changes or leaves required fields blank, then the system displays an error message indicating what needs to be corrected. Then the user can edit the details again.
- The user can exit the edit process.

Use Case 8: Save Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and is browsing through the global feed or in the shared folder

Main Scenario:

- The user finds a photo in the global feed or another user's gallery that they wish to save.
- The user clicks on a Save option on the photo.
- Then the system adds the photo to our All Photos folder.
- The system confirms to the user that the photo has been saved successfully.

Alternate Scenario:

- The system encounters an issue while saving the photo (e.g., server error or loss of connectivity), the system displays an error message and offers the user the option to retry saving the photo.

Use Case 9: Download Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has navigated to a photo they wish to download.

Main Scenario:

- The user views the photo they wish to download and selects the Download option.
- The user selects their preferences and confirms the download.
- The system processes the request and the photo is downloaded to the specified location on the user's device.
- The system provides a visual confirmation, such as a download completion.

Alternate Scenario:

- The user was not able to download the image which is verified manually by the user, then the user requests for downloading the photo again.

Use Case 10: PhotoMap

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and is in All Photos or any User created Album.

Main Scenario:

- The user navigates to the PhotoMap feature within the PhotoN platform.
- The system displays a map interface to the user.
- The system retrieves the user's photos with geo tags and plots them on the map according to their locations.
- The user can interact with the map to view photos from different locations.
- The user can browse through their photo collection based on geographical locations on the map.

Alternate Scenario:

- The user has no geo tagged photos, in this situation the system informs the user that there are no photos to display on the map. Then the user need to add new photos to the album.

3.1.3 Use Cases Related to Folder Operations

Use Case 11: Favorite a Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and viewing a photo they like in All Photos or Recently Uploaded or Time View or in any user created Album

Main Scenario:

- The user selects the Favorite option on a photo they wish to mark as a favorite.
- The system adds the photo to the user's Favorites folder, which is a collection of preferred images.
- The system updates the user interface to reflect that the photo has been favorited, indicated by a highlighted star.
- The user can later access all favorited photos from the Favorites folder in their account.

Alternate Scenario:

- The system is unable to add the photo to the Favorites folder due to any situation, then the system notifies the user of the issue and the user need to try again favoriting the photo.

Use Case 12: UnFavorite a Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has opened a previously favorited photo which the user wish to unfavorite.

Main Scenario:

- The user navigates to their Favorites folder within their account.
- The user selects the photo they wish to unfavorite.
- The user clicks on the Unfavorite option, which may be represented by a deselected or less highlighted version of the star icon.
- The system removes the selected photo from the Favorites folder.
- The system updates the interface to show that the photo is no longer marked as a favorite.

Alternate Scenario:

- The system encounters an error while attempting to unfavorite the photo. The system displays an error message to the user, then the user is given the option to try to unfavorite the photo again.

Use Case 13: Like a Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and browsing through photos in the global feed.

Main Scenario:

- The user comes across a photo they wish to like.
- The user clicks the Like button, often represented by a thumbs-up or heart icon, associated with the photo.
- The photo is added the folder Global Favorites which is private to the the user.
- The system provides visual feedback to confirm the action, by animating the like button.

Alternate Scenario:

- The system fails to register the like due to a technical issue. The system displays an error message, then the system offers the user the option to retry liking the photo.

Use Case 14: Unlike a Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has previously liked a photo which is now in their Global Favorites.

Main Scenario:

- The user views their Global Favorites for the previously liked photo.

- The user selects the photo they wish to unlike.
- The user clicks the Unlike button.
- The system updates the interface to indicate that the photo has been unliked by changing the like button back its default state.

Alternate Scenario:

- The system fails to register the unlike action due to a technical issue. The system displays an error message, then the system offers the user the option to retry unliking the photo.

Use Case 15: Add to Locked Folder

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and is viewing a photo they want to add to the locked folder.

Main Scenario:

- The user selects the photo they wish to secure in the locked folder.
- The user clicks on the option to Add to Locked Folder from the available actions.
- the system moves the photo to the locked folder, which is a private and secure area that cannot be opened unless you enter the password.
- The system confirms to the user that the photo has been successfully moved to the locked folder.

Alternate Scenario:

- The user decides not to proceed with securing the photo in the locked folder, then the system cancels the action and keeps the photo in its original location.

Use Case 16: Remove from Locked Folder

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has previously added photos to the Locked Folder.

Main Scenario:

- The user accesses their Locked Folder by providing the necessary authentication.
- The user selects the photo they wish to remove from the Locked Folder.
- The user clicks on the option to Remove from Locked Folder.

- The system moves the selected photo(s) out of the Locked Folder and back into the user's All Photos folder.
- The system updates the user interface to reflect the changes and may confirm the action with a message to the user.

Alternate Scenario:

- The user fails to provide the correct authentication for the Locked Folder, the system denies access to the Locked Folder and asks for the password again.

Use Case 17: Restore from Bin

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has photos in the Bin that they wish to restore.

Main Scenario:

- The user opens the Bin folder on the PhotoN platform.
- The user browses through the photos and selects the ones they wish to restore.
- The user clicks on the Restore option provided for the selected photos.
- The system moves the selected photo out of the Bin and back into the user's All Photos folder.
- The system updates All Photos to include the restored photos and confirms the successful restoration to the user.

Alternate Scenario:

- The photo cannot be restored due to a system error, the photo can again be restored going to the bin folder.

Use Case 18: Delete from Bin

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has photos in the Bin that they wish to permanently delete

Main Scenario:

- The user accesses the Bin within their PhotoN account.
- The user selects the photo they want to permanently delete.
- The user clicks on the Permanently Delete option or a similarly labeled button.
- The system prompts the user to confirm the permanent deletion, warning that this action cannot be undone.

- Upon confirmation, the system permanently removes the selected photo from the Bin and the PhotoN platform, ensuring they cannot be recovered.
- The system updates to reflect the removal and may provide a brief notification or message indicating successful deletion.

Alternate Scenario:

- The user cancels the action after the confirmation prompt, then the system cancels the deletion and the photo remains in the Bin.

Use Case 19: Remove from Shared Folder

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and there are shared photos by other users in Shared Folder.

Main Scenario:

- The user navigates to the Shared Folder on their PhotoN account.
- The user selects the photo or album they wish to remove from the Shared Folder.
- The user clicks on the Remove from Shared option.
- The system removes the selected photo or album from the Shared Folder.
- The system updates the interface to reflect that the items are no longer in the Shared Folder and confirms the action to the user.

Alternate Scenario:

- The system encounters an error while attempting to remove the items from the Shared Folder, then the system displays an error message. The user is taken back to the Shared Folder for again selection of the photo for deletion.

Use Case 20: Remove from Global Photos

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has photos in the Global Photos section which they want to remove.

Main Scenario:

- The user accesses the Global Photos section, where their publicly shared photos are displayed.
- The user selects the photo they wish to remove from the Global Photos.
- The user clicks the Remove from Global option.

- The system removes the selected photo from the Global Photos section, which means these photos will no longer be publicly visible or featured in the Marketplace.
- The system updates to show that the photo(s) have been removed from Global Photos and confirms the removal to the user by an alert.

Alternate Scenario:

- The system is unable to remove the photo(s) due to a technical issue. The system displays an error message. The user is taken back to the Global Photos for again selection of the photo for deletion.

3.1.4 Use Cases Related to MarketPlace Interaction

Use Case 21: Add a Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has private photos they wish to add to the global feed for marketplace interaction.

Main Scenario:

- The user selects the desired photo from the private photos.
- Then Add to Marketplace option is selected for the photo.
- Then the system processes the submission, and upon successful addition the photo becomes visible in the global feed.
- Upon successful addition the user is given a notification.

Alternate Scenario:

- Upon unsuccessful addition to marketplace an error message is shown and the user is taken back so that the photo can be added again to global feed.

3.1.5 Use Cases Related to Album Operations

Use Case 22: Create Album

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and wants to organize photos into a new album.

Main Scenario:

- The user navigates to the Create Album option within the PhotoN platform.
- The system presents a form for album creation, prompting the user to enter details like album name.

- The user fills out the form with the desired information and selects Create. The Album is created.
- The user is notified that the album has been successfully created.

Alternate Scenario:

- The system detects an error with the album creation(ex: name is already in use). The system displays an error message. The user adjusts the album details accordingly and attempts to create the album again.

Use Case 23: Remove Album

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and wishes to remove an album without deleting its contents

Main Scenario:

- The user navigates to the album they wish to remove within their PhotoN account.
- The user selects the Remove Album option, which does not delete the photos within.
- The system updates the user's album list to reflect the removal and provides a confirmation message that the album has been removed successfully.

Alternate Scenario:

- The user decides not to remove the album at the confirmation prompt. The system cancels the removal process and the album remains intact.

Use Case 24: Delete Album

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has identified an album they want to move to bin, including all its contents

Main Scenario:

- The user selects the album they want to delete from their list of albums.
- The user clicks on the Delete Album option.
- The system prompts the user for confirmation, warning them that this action will move all the photos to bin.
- Upon user confirmation, the system permanently deletes the album and moves the photos to the Bin.
- The system updates to no longer display the deleted album and confirms the deletion to the user.

Alternate Scenario:

- The user decides against deleting the album at the confirmation prompt. The system cancels the deletion request, and the album remains unchanged.

Use Case 25: Add Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has identified photos they wish to organize into an album.

Main Scenario:

- The user selects the Add Photo option within All Photos.
- The system presents a selection interface where the user can choose a photo to add to the album.
- The system updates the album content to include the new photos and displays a confirmation to the user that the photos have been added.

Alternate Scenario:

- The photo is not added to the album due to a system problem, then an error is showed and user is redirected to initial page and the user can again select the add photos option to add the failed photo.

Use Case 26: Copy Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and wishes to copy a photo from one vault to an album without removing it from the original location.

Main Scenario:

- The user navigates to the vault where the photo is currently stored.
- The user selects the photo they wish to copy.
- The user clicks the Copy option, then selects the destination album from a list of their existing albums.
- The system creates a copy of the selected photo in the chosen album while retaining the original photo in its current location.
- The system confirms to the user that the photo has been successfully copied to the destination album.

Alternate Scenario:

- The photo is not copied to the album due to a system problem, then an error is showed and user is redirected to initial page and the user can again select the copy photo option to copy the failed photo.
- The user doesn't want to add the photo to any album, the cancel option is pressed, then the stops the process for copying.
- If there are no albums to copy to and error message is shown to create an album. Then the user creates a new album for copying.

Use Case 27: Move Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has identified photos they wish to move from one album to another.

Main Scenario:

- The user opens the album containing the photo they want to move.
- The user selects the photo for moving.
- The user clicks on the Move option, which allows them to choose a destination album from their existing albums.
- The user selects the destination album for the photo.
- The system moves the photo from the current album to the selected destination album. The system updates both the source and destination albums to reflect the changes and confirms to the user that the move has been successful.

Alternate Scenario:

- The photo is not moved to the album due to a system problem, then an error is showed and user is redirected to initial page and the user can again select the move photo option to move the failed photo.
- The user doesn't want to move the photo to any album, the cancel option is pressed, then the stops the process for moving.
- If there are no albums to move to and error message is shown to create an album. Then the user creates a new album for moving.

Use Case 28: Remove Photo

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and is viewing the album from which they wish to remove the photo.

Main Scenario:

- The user selects the photo they want to remove from the album.
- The user clicks on the Remove Photo.
- The system prompts the user to confirm the removal of the selected photo from the album.
- Upon confirmation, the system removes the photo from the album but does not delete the photo from the user's All Photos folder.
- The system updates the album to no longer display the removed photo and confirms the action to the user.

Alternate Scenario:

- The user cancels the removal action at the confirmation prompt. The system cancels the removal request, and the photo remain in the album.

3.1.6 Use Cases Related to Social Interaction

Use Case 29: Follow User

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and wishes to follow another user's profile.

Main Scenario:

- The user navigates to the profile of another user they wish to follow.
- The user clicks on the Follow button or link on that user's profile.
- The system processes the action and adds the followed user to the following list of the active user.
- The system updates the interface to show that the profile has been followed, often by changing the Follow button to Following.

Alternate Scenario:

- The system fails to process the follow action due to a technical issue. The system displays an error message. The user is given the option to retry following the user.

Use Case 30: Unfollow User

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has previously followed another user whom they now wish to unfollow.

Main Scenario:

- The user visits the profile of the user they wish to unfollow.

- The user clicks the Unfollow button, which may have previously read Following.
- The system processes the request and removes the unfollowed user from the active user's list of followed profiles.
- The system updates the interface to reflect that the profile is no longer being followed, typically by changing the button back to Follow.

Alternate Scenario:

- The system encounters an error and cannot process the unfollow request. The system displays an error message. The user is given the option to retry the unfollow action.

Use Case 31: List of following users

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and wants to view the list of profiles they are following.

Main Scenario:

- The user navigates to the section of their profile where their following list is accessible labeled as "Following".
- The user clicks on this section to view the list.
- The system displays all the profiles that the user is currently following with the user's username's.
- The user can interact with this list, choosing to visit profiles, see recent photos from these users.

Alternate Scenario:

- If there are no user's that are followed by the current user. The page shows a message regarding No Followers.

Use Case 32: Photo Sharing

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has selected a private photo they wish to share with other users.

Main Scenario:

- The user views a private photo from their personal collection or gallery within PhotoN.
- The user selects the Share Photo option available for that photo.

- Then the user specifies the username of the user to whom they want to share.
- The system processes the share request and sends the photo to the chosen users. Then that photo is added to that users Shared Folder.
- The system confirms to the user that the photo has been shared successfully.

Alternate Scenario:

- The username entered by the user for sharing doesn't exist. Then an error is shown, and the user is taken back for photo viewing where the user can again select to share the photo but by entering correct username this time.

Use Case 33: Album Sharing

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and has an album they wish to share with other users.

Main Scenario:

- The user navigates to the album they intend to share within their PhotoN account.
- The user clicks on the Share Album option, which could be represented by an icon or a button.
- Then the user specifies the username of the user to whom they want to share.
- The system processes the share request and sends the album to the chosen users. Then that album is added to that users Shared Folder.
- The system confirms to the user that the album has been shared successfully.

Alternate Scenario:

- The username entered by the user for sharing doesn't exist. Then an error is shown, and the user is taken back to the album where the user can again select to share the photo but by entering correct username this time.

3.1.7 Use Cases Related to Search Functionality

Use Case 34: Photo Search

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and wants to find photos based on specific tags or descriptions.

Main Scenario:

- The user accesses the search feature on the PhotoN platform.
- The user enters search terms related to tags or descriptions in the search bar.

- The system processes the search query and retrieves photos that match the search criteria.
- The system displays a list or grid of photos that have tags or descriptions matching the user's search terms.
- The user can browse through the search results and select any photo to view it in more detail.

Alternate Scenario:

- No photos match the user's search criteria. The system informs the user that there are no matching results and suggests modifying the search terms or trying different keywords.

Use Case 35: User Search

Primary Actor: User

Pre Conditions: User is logged into their PhotoN account and wants to find other users by their username.

Main Scenario:

- The user navigates to the search function on the PhotoN platform.
- The user types in the username of the person they are trying to find in the search bar.
- The system processes the search query and retrieves user profiles that match with the entered username.
- The system displays a list of user profiles along with basic information such as as profile picture, username.
- The user can click on a profile from the search results to visit that user's public profile page on PhotoN.

Alternate Scenario:

- No user profiles matches the searched username. The system displays a message indicating there are no users found matching the username and suggests checking the spelling or trying a different username.

3.1.8 Use Cases Related to Administrative Functions

Use Case 36: Content Moderation

Primary Actor: Moderator

Pre Conditions: The moderator is logged into the administrative panel of PhotoN

Main Scenario:

- The moderator observes photos in the global feed.
- The moderator evaluates the content against the platform's community standards and censorship policies.
- If a photo is found to be in violation, the moderator selects the photo for removal.
- Upon confirmation, the system removes the photo from the global feed.

3.2 Performance Requirements

- **System Compatibility:** The platform should be fully functional on devices with varying capacities, ensuring broad accessibility even on less powerful hardware with an updated web browser environment.
- **Response Time:** For a fluid user experience, 90% of all actions on the website should complete within 2 seconds.
- **Search Efficiency:** Search results within the platform should be generated quickly, delivering relevant results without significant delay.

3.3 Design Constraints

- **Data Privacy:** The system will only collect necessary user information, provide users with control over their data.
- **Fault Tolerance:** The application will have safeguards in place to prevent data corruption in the event of hardware malfunctions, system crashes, or unexpected power outages.
- **Security:** The database where the photos are stored should be safe from viruses, data breaches. Accordingly various security measures are implemented for handling these issues.

3.4 External Interface Requirements

4 Future Extensions

- **Improved Moderation Tools:** Development of an enhanced post moderation system that utilizes machine learning to ensure the integrity and appropriateness of posts, maintaining community standards and user safety.
- **Photo Clustering Algorithm:** Integration of a clustering algorithm to intelligently group similar photos, enabling users to discover clusters of images based on themes, locations, or visual content.
- **Integrated Photo Mart:** Allowing photographers to monetize their work by listing their photos for sale and enabling buyers to purchase images directly through the platform

5 Appendix

5.1 Appendix - A