Debugging Angels

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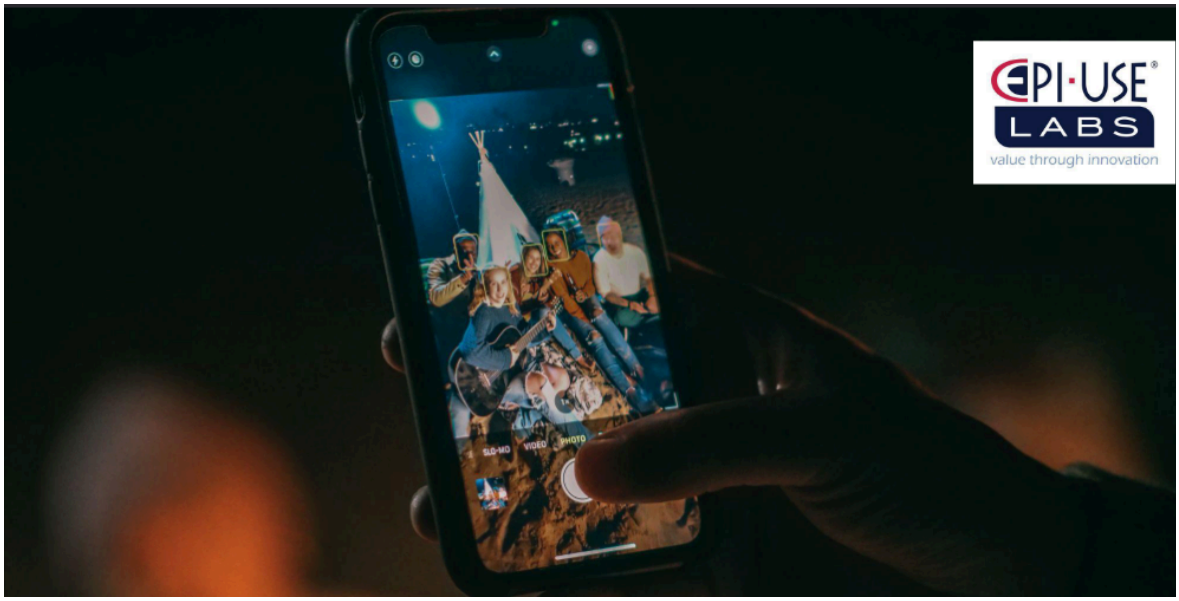
SOFTWARE REQUIREMENTS SPECIFICATION



XPOSE-photo sharing platform

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Introduction

xPOSE is a unique photo-sharing app that simplifies event management and enhances photo collaboration. With customizable privacy settings, it offers a seamless platform for sharing and reliving cherished memories with friends and loved ones. Say goodbye to endless scrolling and searching through social media feeds, as xPOSE revolutionises the way you capture, share, and preserve moments.

xPOSE transforms the way you capture, share, and relive your cherished memories. Whether it's a family gathering, a weekend getaway, or a special celebration, xPOSE is the perfect companion for any occasion. The app combines simplicity, convenience, and enhanced collaboration to provide a unique photo-sharing experience like no other.

User Needs and Purpose.

The increasing popularity of social media and the rapid growth of smartphone photography have created a demand for a dedicated photo-sharing app that specifically caters to event-based photo collaboration. Traditional methods of sharing photos through social media platforms or messaging apps often lack efficient organisation and privacy controls. xPOSE addresses this need by providing a specialised platform designed for event-based photo sharing, which simplifies the process and enhances user experience.

The purpose of xPOSE is to provide users with an easy and interactive way to share photos for their events. Whether it be a birthday party or a wedding, users can easily create events, invite friends, and upload and share photos for everyone to see.The app is designed to meet the user's needs by providing them with a simple platform to share memories, without any hassle or confusion.

The key objectives of xPOSE are as follows:

1. Simplify event organisation: The app aims to streamline the process of creating and managing events by providing intuitive event creation, invitation, and management features.

2. Seamless photo sharing: xPOSE focuses on enabling users to easily share photos with friends and family members attending the same event. The app ensures a hassle-free experience for uploading and sorting photos in a shared cloud, making it convenient to collaborate and reminisce on shared memories.
3. Customizable privacy settings: Recognizing the importance of privacy, xPOSE offers customizable privacy settings, allowing users to control who can view and contribute to their shared photos. This feature ensures that users have full control over the visibility of their personal memories.

The scope of the xPOSE project encompasses the development of a mobile application for both iOS and Android platforms. The application will include features such as event creation, invitation management, QR code sharing, photo uploading, cloud-based storage, photo sorting, and customizable privacy settings. The project will focus on creating an intuitive and user-friendly interface to ensure a seamless experience for users of all technical backgrounds.

Additionally, the project will involve building a scalable and secure backend infrastructure to support event management, photo storage, and user authentication. The app will be developed with a focus on performance, scalability, and data privacy, ensuring that user data is protected and the app can handle a growing user base.

Overall, the xPOSE project aims to provide a comprehensive and innovative solution for event-based photo sharing, meeting the needs of individuals and groups who seek a user-friendly platform to capture and cherish their shared memories.

User Story/Characteristics

xPose is designed to be used by a diverse range of users for various purposes such as sharing photos from events, promoting brands and more.

Bellow are intended users and their purpose for using the application (xPose)

1. Event organisers: They can create events and invite participants to the event using the application. They can also set privacy settings for the event and view all photos uploaded by the participants.

2. Participants: They can join events and upload photos to the shared cloud storage, view other participants' photos and interact with them using the application.

3. **Friends and family members:** They can view photos uploaded by participants and interact with them by commenting on the photos.

4. **Photographers:** They can use the application to share their photos with a large group of people and promote their photography skills.

5. **Businesses:** They can use the application to share photos of their events and products with their customers and promote their brand.

6. **Social media influencers:** They can use the application to share photos with their followers and engage with them.

The Social Butterfly

This user loves connecting with people and needs an app that allows them to easily create and manage events, invite friends, and share photos.

The Memory Keeper

This user loves capturing memories and needs an app that helps them easily upload, share, and sort photos.

The Private Photographer

This user loves taking photos but wants to control who sees them. They need an app with customizable privacy settings that allows them to share photos with only the intended audience.

System Features

Event Creation Users can create and manage events, set privacy settings, invite participants, and share event or QR codes.	**Invitations** Users can send invitations directly through the app, making event planning simple and hassle-free.	**QR Code Sharing** Users can share unique QR codes with friends, making it easy to access the event and share photos.
Cloud Photo Uploading Users can post photos to the shared cloud, making it easy for everyone to view and download. It'll either be automatic or manual	**Reporting and moderation** Users can report inappropriate or offensive content, and moderators can take appropriate action.	**Photo sorting and searching** The application automatically sorts photos by event, making it easy for users to find the photos they are interested in.
Notifications Users can set up notifications to receive alerts when new photos are uploaded to an event.	**Privacy settings** Users can choose whether an event is public or private, and control who can view and access event photos.	**Commenting and liking** Participants can comment on and like photos, creating an interactive and engaging photo-sharing experience.
User registration and authentication Users can register and create an account, and then log in securely using their credentials.	**Account deletion** Users can permanently delete their account, removing all of the user's photos and events	**Friend Users** Users can send each other friend requests to be able to see each other's private posts

Functional Requirements

These requirements define the desired behaviour and functionalities of the system. Here are the functional requirements for xPOSE:

1.1. Authentication

1.1.1.Login:

The user logs in to their xPose account

Service Contract:

- Preconditions: The user has already registered an xPose account and the account is existing.
- Postconditions: The session is maintained once the user has logged in.

1.1.2.Register:

The user signs up for a new xPose account

Service Contract:

- Preconditions: The user does not have an existing xPose account with the provided registration credentials.
- Postconditions: The session is maintained once the user has registered.

1.1.3.Logout:

The user logs out of xPose

Service Contract:

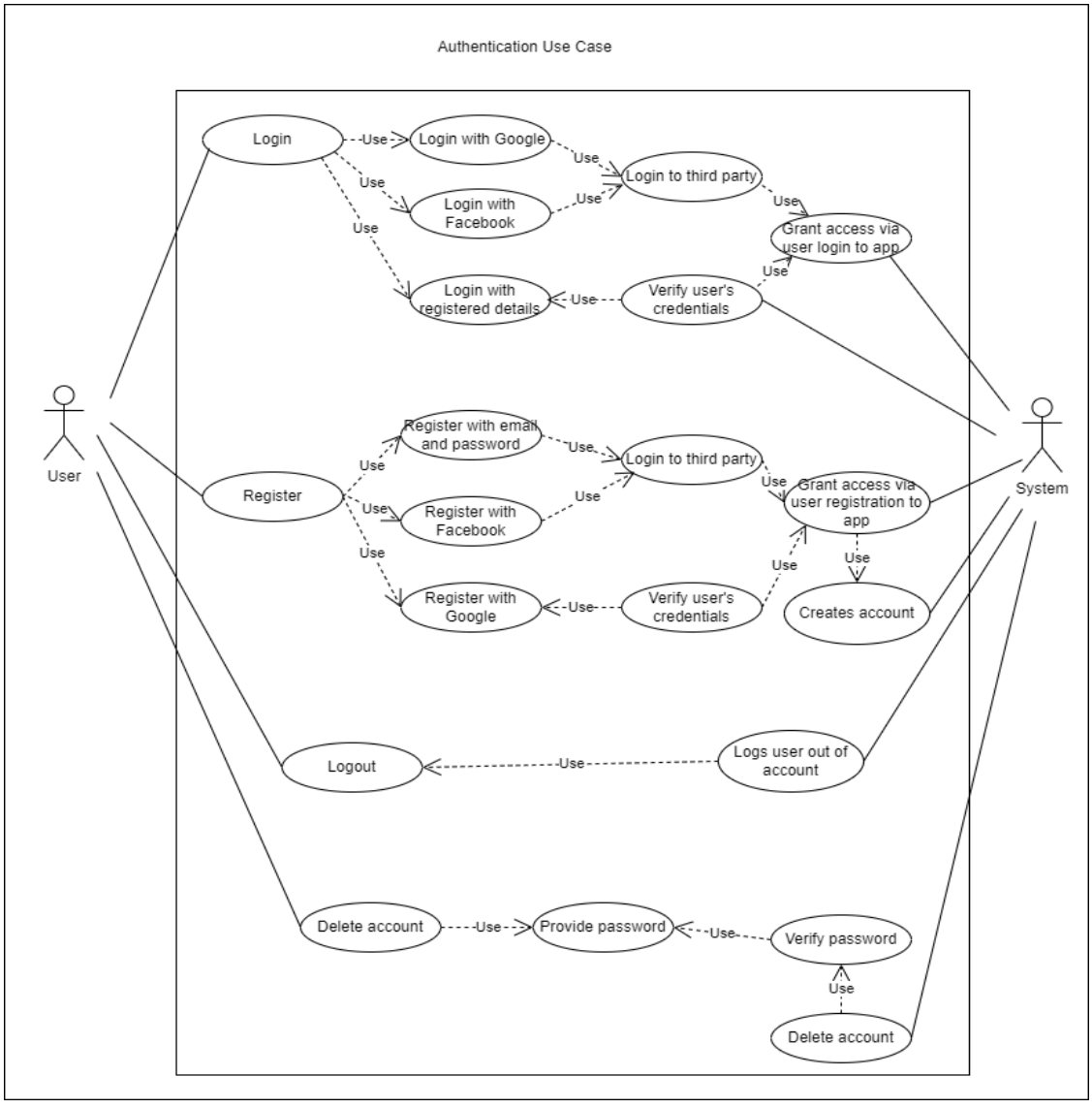
- Preconditions: The user was logged into xPose.
- Postconditions: The session is terminated but the user's credentials and previous activity on xPose are stored.

1.1.4.Delete account:

The user deletes their xPose account

Service Contract:

- Preconditions: The user was logged into xPose/ has an account registered with xPose
- Postconditions: The session is terminated and the users credentials, data and activity on the app are erased.



1.2. Event management:

1.2.1.Event Creation:

The user creates a new event that other users can join

Service Contract:

- Preconditions: The user was logged into xPose.
- Postconditions: The event (private or public) is created and available for other users to join.

1.2.2.Join Event:

The user joins an existing event

Service Contract:

- Preconditions: The user was logged into xPose.
- Postconditions: The user has joined an event and can view/upload photos.

1.2.3.Leave event:

The user leaves an event that they were part of

Service Contract:

- Preconditions: The user was logged into xPose and is part of the event they wish to leave.
- Postconditions: The user has left an event.

1.2.4.Edit event name:

The user can edit the event name

Service Contract:

- Preconditions: The user was logged into xPose and is the owner of the event.
- Postconditions: The event's name is successfully edited.

1.2.5.Upload photo:

User's newly taken photos are automatically uploaded

Service Contract:

- Preconditions:
- Postconditions: System automatically uploads the newly taken photos associated with the event.

1.2.6.Facial Recognition:

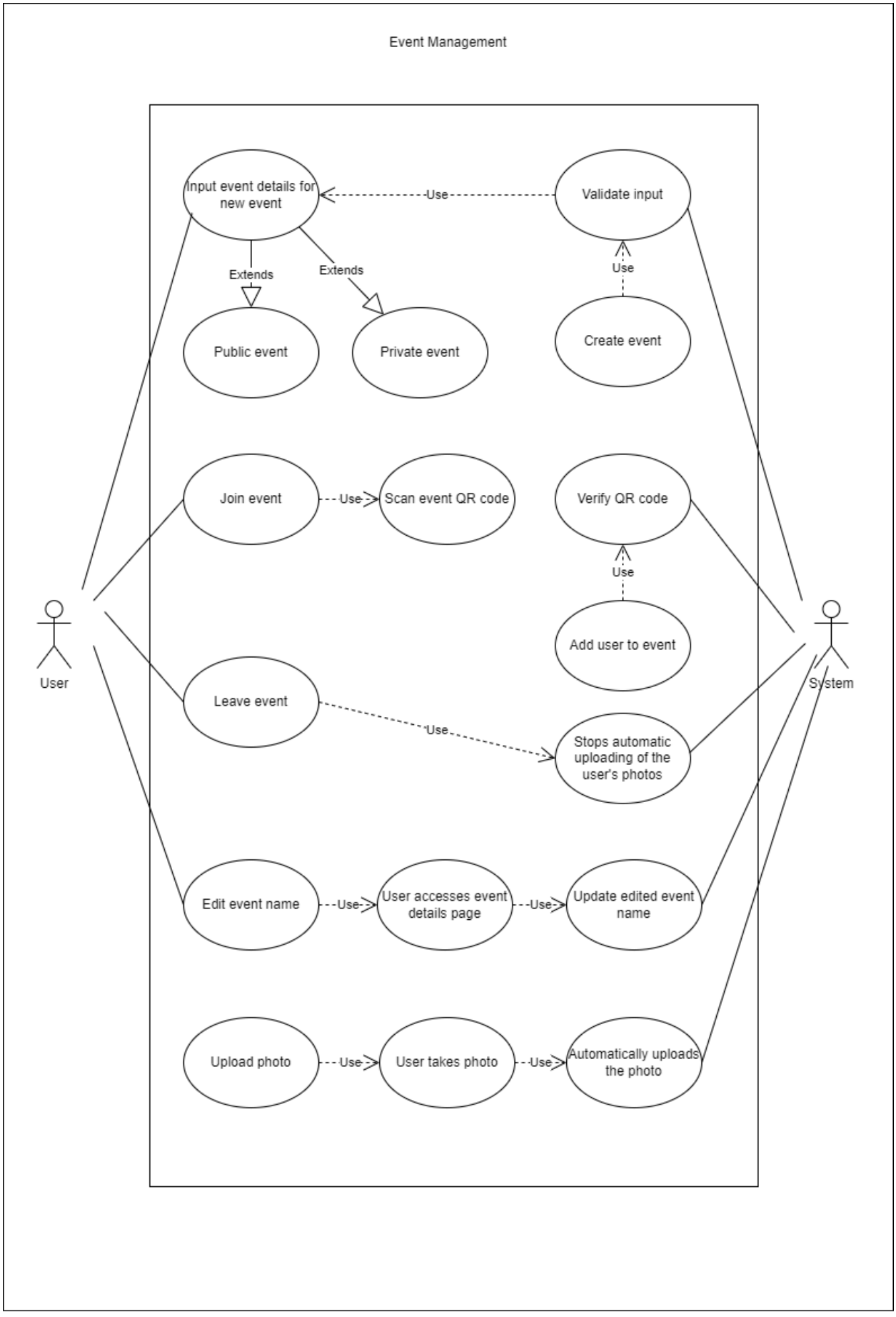
In the case of a private event, facial recognition must be used to find photos with the user in them so that these photos can be viewed.

1.2.7.Downloading and Sharing Photos:

All photos should be able to be downloaded and shared to multiple social media platforms.

1.2.8.Photo Metadata:

For security purposes, the metadata of all photos should be scrubbed. Certain information can be left such as the date, time and location of the photo but any personal information needs to be removed.


Event Management
Input event details for new event
Use
Validate input
Extends
Extends
Use
Public event
Private event
Create event
Join event
Use
Scan event QR code
Verify QR code
Use
Add user to event
User
System
Leave event
Use
Stops automatic uploading of the user's photos
Edit event name
Use
User accesses event details page
Use
Update edited event name
Upload photo
Use
User takes photo
Use
Automatically uploads the photo

1.3. User interaction management

1.3.1.Comments:

Users must be able to add comments to photos uploaded by participants.

The system must allow users to view and manage comments on their photos and other participants' photos.

1.3.2.Likes

Users must be able to like photos uploaded by participants.

The system must allow users to view and manage likes on their photos and other participants' photos.

The system must notify the photo uploader when a new like is added to their photo.

1.3.3.Notifications:

Users must receive notifications for new comments, likes, shares, and other relevant events related to events they have joined or photos they have uploaded.

Additional requirements:

1. Favourite Photos: Users could be able to favourite photos from events and have all their favourite photos in the same location to be easily found and perused.

2. Public Profile: Users could be able to create a public profile (complete with a profile photo, status and a “current location” that will only be shown when a user is at an event).

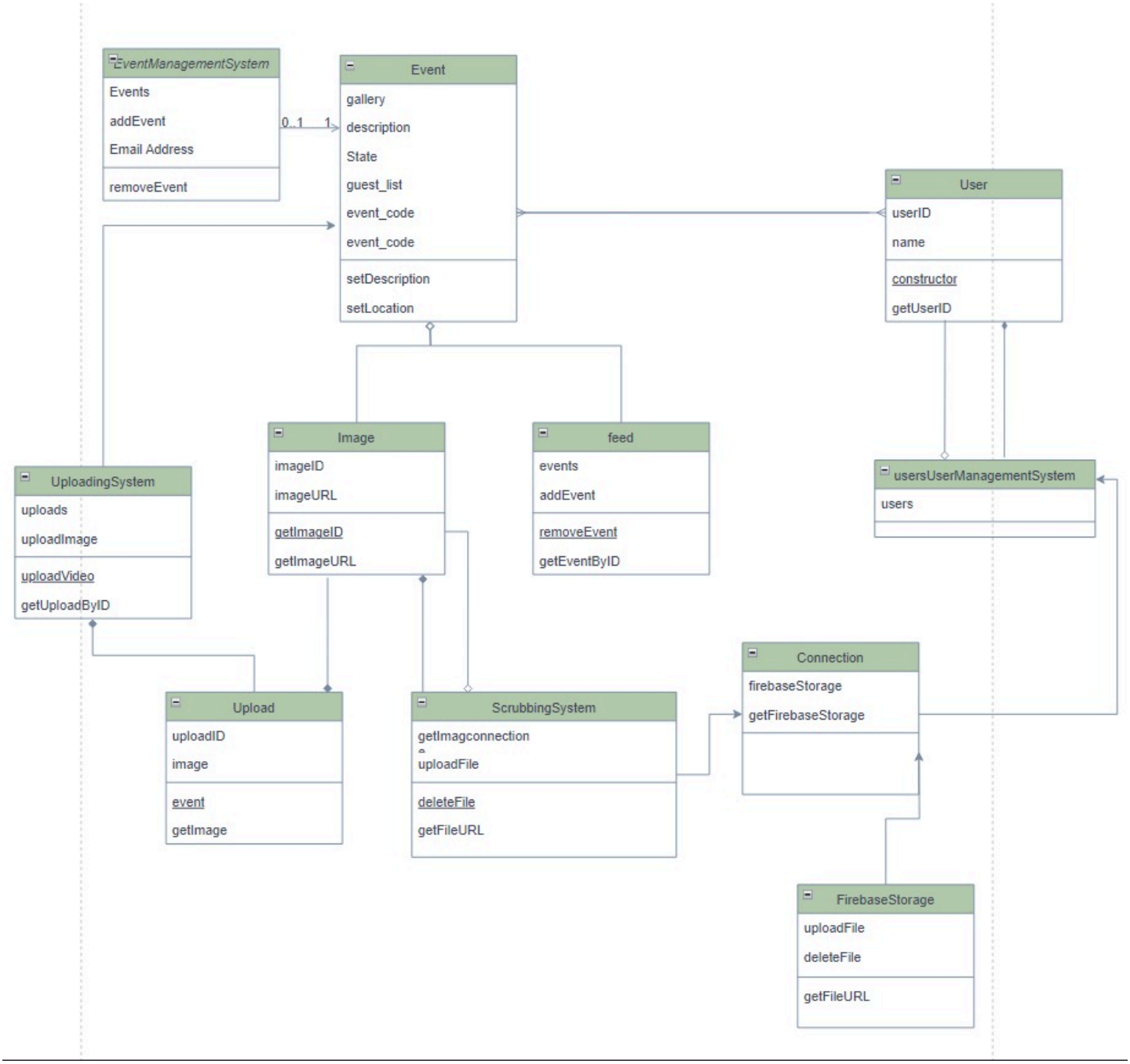
3. Friends: Users could be able to make friends by sending friend requests, view their friend’s public profiles and invite their friends to events.

4. Comments: Friends could be able to view the favourite photos of their friends and leave comments.

Quality Requirements

Quality	Description
Performance	xPOSE should be responsive and perform efficiently. The app should have fast loading times, quick photo uploads, and smooth navigation between screens. It should be able to handle multiple concurrent users and large volumes of photos without significant performance degradation.
Scalability	As the user base and data storage grow, xPOSE should be scalable to handle increased demands. The app's architecture and infrastructure should be designed to accommodate growing user numbers, increasing event and photo uploads, and additional features without compromising performance or user experience.
Security	xPOSE's security must protect user data and ensure that whatever images they upload are scrubbed and have no sensitive user data exposed.
Usability	xPOSE should have a user-friendly interface. It should be easy to navigate, with clear instructions and feedback provided to users. The app should follow established design guidelines and accessibility standards to ensure usability for users with varying levels of technical expertise and abilities.
Compatibility	xPOSE should be compatible with different mobile devices, operating systems (e.g., iOS and Android), and screen sizes. It should also work well across different web browsers to ensure a consistent experience for all users.

Class Diagram



Trace-ability Matrix

Requirements	User Authentication	Event Management	Photo Upload	Photo Sorting	Notifications	Privacy Settings	Commenting & Liking	Sharing Options	Reporting & Moderation	Analytics & Insights
Performance		X	X	X	X		X	X		X
Scalability		X	X	X	X					X
Reliability	X	X	X	X	X	X	X	X	X	X
Security	X	X	X			X	X		X	
Usability	X	X	X	X	X	X	X	X		
Compatibility	X	X	X	X	X	X	X	X		
Maintainability		X				X				
Accessibility	X	X	X	X	X	X	X			
Internationalisation		X				X				

Requirements	User Authentication	Event Management	Photo Upload	Photo Sorting	Notifications	Privacy Settings	Commenting & Liking	Sharing Options	Reporting & Moderation	Analytics & Insights
Performance		X	X	X	X		X	X		X
Scalability		X	X	X	X					X
Reliability	X	X	X	X	X	X	X	X	X	X
Performance under stress	X	X	X	X	X		X	X		

System Features	Non-Functional Requirements
User registration and authentication	Reliability, Security, Usability
Event creation and management	Usability, Compatibility
Photo uploading and storage	Performance, Scalability, Reliability
Photo sorting and searching	Usability
Notifications	Usability, Performance
Privacy settings	Security
Commenting and liking	Usability
Sharing options	Usability
Reporting and moderation	Security
Analytics and insights	Maintainability, Performance

Conclusion

xPOSE provides users with a fast and easy way to share photos and memories for any event. With customizable privacy settings, automatic photo sorting, and easy event management, xPOSE is a must-have app for social butterflies and memory keepers alike.

In summary, xPOSE aims to revolutionise photo sharing by simplifying event management, streamlining photo uploads, and fostering social interaction among participants. With its user-centric approach and commitment to meeting the needs of its users, xPOSE has the potential to become a go-to app for capturing and sharing memories in a fun and convenient way.