

# WUPHF PROJECT PROPOSAL

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# WUPHF Project Proposal

## Table of Contents

Part I – Business Proposal .....	2
What is WUPHF? .....	2
How Does it Provide Value? .....	3
Stakeholders .....	3
The WUPHF Corporation.....	3
Users .....	3
Investors.....	4
Technical Solution.....	4
Economic Analysis.....	5
Advertising .....	5
Subscriptions.....	5
Donations .....	5
Risk Analysis .....	5
Business risks .....	5
Project risks.....	5
Product risks.....	6
SWOT Analysis.....	6
Project Plan .....	6
Timeline.....	6
Expectations and Milestones .....	6
Testing.....	6
Part II – Requirements, Architecture, and Design .....	7
Kano Model Analysis .....	7
Functional Specifications .....	7
Account Management .....	7
Communications Management .....	9
Application .....	10
Non-Functional Requirements.....	12
Application .....	12
Usability .....	13
Security .....	13
Activity Diagrams .....	14

# WUPHF Project Proposal

Sending a WUPHF .....	14
Add a new Premium Subscription.....	14
User Creates WUPHF Account .....	15
Domain Model .....	16
WUPHF Services .....	16
Communications and Linked Services.....	17
Payments and Profiles.....	18
Lists .....	19
Glossary.....	19
Actors .....	21
Program Model .....	22
Context Diagram .....	22
Account Access .....	23
Account Management .....	30
Communication Management .....	34
Application .....	43
Application - Group Management .....	47
Communications .....	53
Technical Architecture .....	59
Specification Release Organization.....	59
Release 1 .....	59
Release 2 .....	60

## Part I – Business Proposal

### What is WUPHF?

For Kelly, it was impossible to remember where she heard or saw something. Every day she would talk, video chat, skype, phone, text, and tweet. One day, a new company decided it was time to fix the complexity of social networking. Because of that, Kelly could get all her communication in one place. For Kelly, social media was easy again. Finally, a new last word in communication exists, and it is WUPHF.

# WUPHF Project Proposal

With over 200 major and active social media platforms<sup>1</sup> with people frequently subscribing to several at a time, it's hard to know if a message is heard. WUPHF will be the last word in social networking. WUPHF links all of a user's communication portals, so WUPHF messages are guaranteed to be seen and heard. Messages sent via the WUPHF delivery system capture a recipient's full attention, always go through, and are never ignored. WUPHF users know they are always within reach, as incoming WUPHF messages go to all of the possible places, all at the same time.

The primary goal of the WUPHF project is to create a service where users can communicate with friends without having to choose how or where they'll communicate. Each WUPHF user can link their existing social media accounts to their WUPHF account. When a WUPHF is received, that message is transmitted to all connected social media accounts, simultaneously.

## How Does it Provide Value?

The value of The WUPHF Service for its users lies in giving our users a way to communicate via all of their pre-existing **Communication Services** without having to wonder how they'll send a message. The **WUPHF Service** simplifies the social media experience and provides a method for users to ensure that what they say is heard.

The value of The **WUPHF Service** for its investors and the **WUPHF Corporation** lies in advertising within the WUPHF app and website, and users upgrading their subscriptions to no longer receive advertisements and gain more features. This system provides incentive to **WUPHF Users** to obtain a paid subscription to the **WUPHF Service**. In addition, users will have the opportunity to make **donations** to the WUPHF project. Donations can also provide **premium** user features for a limited time if a certain payment threshold is reached.

## Stakeholders

### The WUPHF Corporation

**The WUPHF Corporation** is responsible for developing and maintaining **The WUPHF Service**. It will also be responsible for researching market need and the financial viability of the project. The corporation will be expected to report on the progress of the project and any blocking issues to the investors.

### Users

**WUPHF users** will have a lot of social media accounts and other communication platforms that they use heavily, and their contacts will too. **WUPHF users** will use WUPHF because they are the kind of people that want to be certain they receive messages from their friends and family as soon as possible. The service will gain new users via advertising, and people witnessing their friends and family receiving a phone call, text, and email simultaneously, and then asking about it. **WUPHF users** will use the system to send messages to friends and family. Users will be responsible for generating revenue through advertising, subscriptions, and donations.

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<sup>1</sup> [http://en.wikipedia.org/wiki/List\\_of\\_social\\_networking\\_websites](http://en.wikipedia.org/wiki/List_of_social_networking_websites)

# WUPHF Project Proposal

Preliminary usage testing on the WUPHF prototype will determine the best interface to make the system as easy to navigate as possible. After release, users will generate usage data that will help determine the next features and releases.

## Investors

Investors will provide the necessary capital to develop **The WUPHF Service**. Seed funding will be used to develop the initial proof of concept and to perform additional market research. Angel funding will further develop the prototype and bring the **WUPHF service** to initial rollout including revenue generating functionality. If additional funding is necessary, a series A round can be used to implement any remaining functionality that will facilitate The WUPHF Service's self-sufficiency and general availability.

## Technical Solution

**WUPHF** is a service that allows users to send messages to other **WUPHF Users** over their existing communications services. It is designed to meet the business need of guaranteed visibility and communication. Currently there are no other services which provide this same functionality. **WUPHF Users** are able to select **Social Networking Platforms** that they have accounts with and activate them as portals for communication. In addition, premium users can also specify phone numbers for voicemail, SMS, and FAX as additional points of contact.

A user can send a **WUPHF** to a **Friend** by logging into the **WUPHF Service** using a computer or mobile platform. A **Friend** that receives a **WUPHF** will have text, pictures, or voice messages delivered to all their connected **Communication Services**. When one WUPHF user messages another, the WUPHF Service will broadcast that message to all connected portals (and telephony services) of the receiving user, simultaneously.

The intended design of the service is unidirectional communication (through WUPHF) and opt-in. Users not wishing to receive **WUPHF message** broadcasts on particular social media or telephony platforms can deactivate that portal on their account. Users can additionally filter incoming messages to be from friends only, or only certain people, to prevent spamming.

Security will be a strong emphasis throughout this project, specifically regarding the protection of user privacy. Where possible, user account information will not be stored on the **WUPHF Service**. OAuth will serve as a primary authentication token for connected social network platforms to minimize damages from unauthorized account access. All user monetary transactions will be handled initially through PayPal, not through the **WUPHF Service**.

Connections to **Social Networking Platforms** will primarily be handled through existing API frameworks. The **WUPHF Service** will work with the various social network providers when available to ensure that service availability is maintained. In the event that no API or SDK exists for a particular service, the **WUPHF Service** will attempt to reverse engineer connection points to **Social Networking Platforms**. If connections cannot be maintained, certain social networks may become temporarily unavailable until a resolution is found.

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## Economic Analysis

### Advertising

<Placeholder>

### Subscriptions

<Placeholder>

### Donations

<Placeholder>

## Risk Analysis

### Business risks

Risk Description	Likelihood	Severity	Mitigation Strategy
User interest is low because of a small user base	High	High	Advertise on social networking platforms and implement an invite system.
Incorrectly assessed market need	Low	High	Continually perform market research to ensure the data supports the product.
Recipients of WUPHF Messages will find them to be tedious quickly and detest the messages	Medium	High	Advertise the product as for emergencies only, or as for people in specific professions
Users Utilizing Ad-blocking software	Medium	Medium	Place a more prominent donate action artifact if ad-blocking software is detected and inform the user that advertising supports the service.

### Project risks

Risk Description	Likelihood	Severity	Mitigation Strategy
Mass exodus of development talent	Low	High	Develop a comprehensive compensation package for all staff including perks.
Social Networking Platform API closes	Medium	Medium	Work directly with external social media platforms to keep the API open. In the event of closed-API platforms, re-engineer connection points. Rejected messages automatically send email petitions to that social network's customer service team to request connection points through WUPHF.
WUPHF does not integrate well with telephony services	Low	High	Hire a telecommunication specialist to ensure that WUPHF's telephony services integrate with existing telephony infrastructure in the best possible fashion.
Social Networking Platform API changes	Medium	Medium	Develop social networking connections in a modular fashion so they can be easily updated.
Popularity of supported social networks changes during development	Low	Low	Develop social networking connections modules so they can be added easily.

# WUPHF Project Proposal

## Product risks

Risk Description	Likelihood	Severity	Mitigation Strategy
WUPHF Servers are Down	Low	High	Run redundant systems with AWS/Google Compute Engine in order to spool up a new instance quickly to minimize downtime
Payment Processors are Unavailable	Low	High	Inform the user with an error and ask if they would like to have WUPHF attempt the payment again.
User Payment Data is Compromised	Medium	High	All user data will be encrypted as stated in NF-SS-01. All data will be treated under the assumption the WUPHF network will be breached. Developers will be trained and special emphasis will be placed on web application security as stated in NF-SS-03.
A User's account is compromised	Medium	High	Suspicious activity and actions violating the WUPHF Service Terms of Service will cause that user's account to be deactivated. That user must contact support for reactivation assistance.
Social Networking Platform is unavailable	Medium	Low	Display an error and inform the user that WUPHF will post their message as soon as the platform is available
A User's Social Networking Platform Account is compromised	Low	Low	No mitigation possible. If WUPHF is unable to post to the social networking platform, display an error and ask for updated credentials.

## SWOT Analysis

<b>Strengths</b> <ul style="list-style-type: none"><li>Motivated development team</li></ul>	<b>Weaknesses</b> <ul style="list-style-type: none"><li>Inexperienced staff</li><li>Long development time.</li></ul>
<b>Opportunities</b> <ul style="list-style-type: none"><li>No competition</li></ul>	<b>Threats</b> <ul style="list-style-type: none"><li>Might not be a market need</li><li>Low entry-cost for competitors</li><li>Lack of product awareness</li></ul>

## Project Plan

### Timeline

<Placeholder>

### Expectations and Milestones

<Placeholder>

### Testing

Use cases are traceable to feature specifications are requirements to allow for test-driven development. A per-feature unit test framework will allow the development team to reduce debugging efforts and create self-documenting tests that are small and easy to read.

# WUPHF Project Proposal

## Part II – Requirements, Architecture, and Design

### Kano Model Analysis

Feature	Kano Category
Create a WUPHF account	Basic
Recover password	Basic
Edit personal profile information	Basic
link/edit/unlink social networking services	Performance
enable/disable linked <b>Communication Services</b> .	Performance
Set the visibility of profile information and linked <b>Communication Services</b> .	Performance
Add to <b>Friends List</b> .	Basic
edit <b>Friends List</b> .	Basic
remove <b>Friends</b> from their <b>Friends List</b> .	Basic
add/remove users from <b>Blocked List</b> .	Basic
display advertisements	Reverse
purchase/cancel a subscription	Basic
add/edit/remove payment methods through	Basic
view payment and subscription history	Performance
search for other WUPHF users	Basic
categorize <b>Friends</b> into Groups.	Excitement
add/edit/remove Groups	Excitement
send a WUPHF	Basic
post to all active, linked <b>Communication Services</b> simultaneously when a WUPHF has been sent.	Basic
end their session using the Logoff Button.	Basic

### Functional Specifications

#### Account Management

The following requirements describe the functionality related to managing a **WUPHF Account**.

#### Account Creation

ID	Requirement
FR-AA-01	A <b>User</b> shall be able to create a <b>WUPHF Account</b> that stores personal information about a <b>User</b> .
FR-AA-02	A <b>User</b> shall be able to provide <b>WUPHF</b> a first and last name.
FR-AA-03	A <b>User</b> must provide <b>WUPHF</b> a username.
FR-AA-04	A <b>User</b> must provide <b>WUPHF</b> a password that meets password complexity requirements.
FR-AA-05	A <b>User</b> must confirm that they are at least 13 years of age.
FR-AA-06	<b>WUPHF</b> shall be able to accept a <b>User's</b> uploaded profile picture.
FR-AA-07	<b>WUPHF</b> shall be able to accept a <b>User's</b> profile text description message.
FR-AA-09	A <b>User</b> must agree to the Terms of Service in order to create a <b>WUPHF Account</b> .
FR-AA-10	The <b>WUPHF Service</b> must provide the <b>User</b> with the ability to set a default language.



# WUPHF Project Proposal

## *Password Management*

ID	Requirement
FR-AB-01	A <b>WUPHF User</b> shall be able to reset their password if it has been forgotten.
FR-AB-02	The <b>WUPHF Service</b> will send a password reset email to the <b>WUPHF User's</b> registered email address and allow them to reset their password.

## *Profile Management*

ID	Requirement
FR-AC-01	An <b>Authenticated User</b> must be able to change their first and last name.
FR-AC-02	An <b>Authenticated User</b> must be able to change their email address.
FR-AC-03	An <b>Authenticated User</b> must be able to change their password with a new password that meets a password complexity requirement.
FR-AC-04	An <b>Authenticated User</b> must be able to change their profile picture.
FR-AC-05	An <b>Authenticated User</b> must be able to change their profile text description message.
FR-AC-06	An <b>Authenticated User</b> must be able to change their default language.

## *Privacy Management*

ID	Requirement
FR-AD-01	An <b>Authenticated User</b> shall be able to set the visibility of information contained in their profile to other <b>Users</b> to "Hidden", meaning the profile elements are not viewable to any other <b>User</b> .
FR-AD-02	An <b>Authenticated User</b> shall be able to set the visibility of information contained in their profile to other <b>Users</b> to "Friends Only", meaning the profile elements is viewable to <b>Friends</b> only, but not viewable to any other <b>User</b> .
FR-AD-03	An <b>Authenticated User</b> shall be able to set the visibility of information contained in their profile to other <b>Users</b> to "Public", meaning the profile element is viewable to all <b>Users</b> .
FR-AD-04	First and last name, and profile description message must remain public regardless of the current visibility setting for profile information.

## *Subscription Management*

ID	Requirement
FR-AE-01	An <b>Authenticated User</b> shall be able to purchase a subscription to the <b>WUPHF Service</b> .
FR-AE-02	An <b>Authenticated User</b> shall be able to cancel a subscription to the <b>WUPHF Service</b> .

## *Payment Management*

ID	Requirement
FR-AF-01	An <b>Authenticated User</b> shall be able to add payment methods to the <b>WUPHF Service</b> .

# WUPHF Project Proposal

ID	Requirement
FR-AF-02	An <b>Authenticated User</b> shall be able to remove non-active payment methods from the <b>WUPHF Service</b> .
FR-AF-03	The <b>WUPHF Service</b> shall comply with PCI DSS 3.1 standards and best practices.

## *Payment History Management*

ID	Requirement
FR-AG-01	An <b>Authenticated User</b> shall be able to view subscription and payment history to the <b>WUPHF Service</b> .
FR-AG-02	An <b>Authenticated User</b> shall be able to view <b>Donation History</b> to the <b>WUPHF Service</b> .

## *Communications Management*

The requirements in this section describe the functionality related to managing the communication element of the **WUPHF Service**.

## *Communication Services Support*

ID	Requirement
FR-BA-01	The <b>WUPHF Service</b> shall launch with support for 15 <b>Social Networking Platforms</b> , as follows: Google+, Facebook, Twitter, Qzone, Sina Weibo, Habbo, VK, Tumblr, LinkedIn, Renren, Instagram, Bebo, Tagged, Netlog, and Friendster.
FR-BA-02	The <b>WUPHF Service</b> shall add support for five additional <b>Social Networking Platforms</b> per month, not to exceed 60 additional platforms. Priority and platform preference will be discretion of the <b>WUPHF Corporation</b> .
FR-BA-03	The <b>WUPHF Service</b> shall launch with support for <b>Telephony Services</b> , as follows: voice telephony messages, <b>SMS</b> messages, and fax messages.

## *Communication Services Management*

ID	Requirement
FR-BB-01	The <b>WUPHF Service</b> shall provide an <b>Authenticated User</b> with a list of all supported <b>Social Networking Platforms</b> .
FR-BB-02	An <b>Authenticated User</b> must be able to choose the <b>Communication Services</b> to be connected to the <b>WUPHF Service</b> .
FR-BB-03	The <b>WUPHF Service</b> must allow an <b>Authenticated User</b> to provide account credentials to access connected <b>Social Networking Platforms</b> .
FR-BB-04	The <b>WUPHF Service</b> must allow an <b>Authenticated User</b> to activate a connected <b>Social Networking Platform</b> . The <b>User</b> will receive a <b>WUPHF Message</b> at this location.

# WUPHF Project Proposal

ID	Requirement
FR-BB-05	The <b>WUPHF Service</b> must allow an <b>Authenticated User</b> to deactivate a connected <b>Social Networking Platform</b> . The <b>User</b> will no longer receive a <b>WUPHF Message</b> at this location. The <b>Social Networking Platform</b> will NOT be disconnected and removed from the <b>User's</b> account.
FR-BB-06	The <b>WUPHF Service</b> must allow an <b>Authenticated User</b> to remove and disconnect a <b>Social Networking Platform</b> .
FR-BB-07	The <b>WUPHF Service</b> shall NOT store an <b>Authenticated User's</b> account credentials for disconnected <b>Social Networking Platforms</b> .

## *Telephony Services Management*

ID	Requirement
FR-BC-01	The <b>WUPHF Service</b> shall provide an <b>Authenticated User</b> with a list of all supported <b>Telephony Services</b> .
FR-BC-02	An <b>Authenticated User</b> must be able to choose <b>Telephony Services</b> that he or she wishes to connect with the <b>WUPHF Service</b> .
FR-BC-03	The <b>WUPHF Service</b> must allow an <b>Authenticated User</b> to provide phone numbers for each <b>Telephony Service</b> .
FR-BC-04	The <b>WUPHF Service</b> must allow an <b>Authenticated User</b> to activate a connected <b>Telephony Service</b> . The <b>User</b> will receive a <b>WUPHF Message</b> at this location.
FR-BC-05	The <b>WUPHF Service</b> must allow an <b>Authenticated User</b> to deactivate a connected <b>Telephony Service</b> . The <b>User</b> will no longer receive a <b>WUPHF Message</b> at this location. The <b>Telephony Service</b> will NOT be disconnected and removed from the <b>User's</b> account.
FR-BC-06	The <b>WUPHF Service</b> must allow an <b>Authenticated User</b> to remove and disconnect a <b>Telephony Service</b> .

## *Application*

This requirements in this section describe the functionality of the application itself.

### *User Authentication*

ID	Requirement
FR-DA-01	A <b>WUPHF User</b> shall be able to sign into, and sign out of, the <b>WUPHF Service</b> .
FR-DA-02	A <b>WUPHF User</b> must sign into the <b>WUPHF Service</b> , thereby becoming an <b>Authenticated User</b> , by providing an email and password combination.

### *Search*

ID	Requirement
FR-DB-01	An <b>Authenticated User</b> must be able to search the <b>WUPHF Service</b> for other specific <b>WUPHF Users</b> .
FR-DB-02	<b>WUPHF Users</b> will only be able to search for other <b>WUPHF Users</b> by first and last name, or email address.

# WUPHF Project Proposal

## *Friends List*

ID	Requirement
FR-DC-01	An <b>Authenticated User</b> shall be able to view a <b>Friends List</b> of other <b>WUPHF Users</b> .
FR-DC-02	A <b>WUPHF User</b> shall only be able to add another <b>WUPHF User</b> as a <b>Friend</b> after one <b>User</b> sends a <b>Friend</b> request, and the other <b>User</b> accepts the <b>Friend</b> request.
FR-DC-03	An <b>Authenticated User</b> must be able to remove another <b>WUPHF User</b> from their <b>Friends List</b> . If removed, this <b>User</b> will no longer appear in the other <b>WUPHF User's Friend</b> List.

## *Groups*

ID	Requirement
FR-DD-01	The <b>WUPHF Service</b> shall contain one default <b>Group</b> which contains all <b>Friends</b> on a <b>WUPHF User's Friends List</b> that have not been added to a <b>User-Created Group</b> .
FR-DD-02	The <b>WUPHF Service</b> shall allow <b>Authenticated Users</b> to create <b>Groups</b> for <b>Friends</b> using a custom name.
FR-DD-03	The <b>WUPHF Service</b> shall allow an <b>Authenticated User</b> to add existing <b>Friends</b> on their <b>Friends List</b> to a <b>Group</b> , as well as to remove them.
FR-DD-04	The <b>WUPHF Service</b> shall allow an <b>Authenticated User</b> to add existing <b>Friends</b> in their <b>Friends List</b> to more than one <b>Group</b> .
FR-DD-05	The <b>WUPHF Service</b> shall allow an <b>Authenticated User</b> to remove <b>Groups</b> .
FR-DD-06	The <b>WUPHF Service</b> should confirm a non-empty <b>Group</b> removal with the <b>WUPHF User</b> that initiated the removal.

## *Viewing Profiles*

ID	Requirement
FR-DE-01	The <b>WUPHF Service</b> shall allow <b>Authenticated Users</b> to view other <b>WUPHF User's</b> profiles. Information viewable on those profiles is determined by that <b>WUPHF User's</b> privacy settings.

## *Blocked List Management*

ID	Requirement
FR-DF-01	The <b>WUPHF Service</b> shall allow <b>Authenticated Users</b> to block <b>Users</b> . Any <b>User</b> that is blocked will appear on a list of blocked <b>Users</b> .
FR-DF-02	An <b>Authenticated User</b> must be able to add and remove other <b>WUPHF Users</b> from their <b>Blocked List</b> .
FR-DF-03	The <b>WUPHF Service</b> shall allow a <b>User</b> to stop receiving communications from another <b>User</b> by adding that <b>User</b> to a <b>Blocked List</b> .

## *Application Communications*

ID	Requirement
FR-DG-01	An <b>Authenticated User</b> shall be able to send a <b>WUPHF Message</b> to another <b>WUPHF User</b> .

# WUPHF Project Proposal

ID	Requirement
FR-DG-02	A received <b>WUPHF Message</b> shall be able to post to all active, linked <b>Communication Services</b> simultaneously for a particular <b>User</b> , in the following ways: <ul style="list-style-type: none"> <li>• Text content will remain text on services that support text.</li> <li>• Text content will be broken into several messages on services that impose limitations on content length.</li> <li>• Text content will be converted to speech as appropriate on services that only support voice.</li> <li>• Pictures will be ignored on services that do not support images.</li> </ul>
FR-DG-03	<b>WUPHF</b> shall NOT be an aggregator of notifications from a <b>User's</b> linked <b>Communication Services</b> .
FR-DG-04	<b>WUPHF</b> shall NOT display or access messages from a <b>User's</b> linked <b>Communication Services</b> .
FR-DG-05	<b>WUPHF</b> shall NOT directly open the websites of linked <b>Communication Services</b> through the <b>WUPHF User</b> interface or through the <b>User's</b> web browser.
FR-DG-06	<b>WUPHF</b> shall NOT require an application or background task installed and running on a <b>User's</b> device in order to function.
FR-DG-07	<b>WUPHF</b> shall NOT allow advertisers to SPAM <b>WUPHF Users</b> with <b>WUPHF Messages</b> without permission of the <b>WUPHF User</b> .

## User Types

ID	Requirement
FR-DH-01	The <b>WUPHF Service</b> shall have two types of <b>Authenticated Users</b> : <ul style="list-style-type: none"> <li>• <b>Basic User</b></li> <li>• <b>Premium User</b></li> </ul>
FR-DH-02	The <b>WUPHF Service</b> shall allow a <b>Basic User</b> to upgrade to a <b>Premium User</b> by purchasing a subscription, or through a single donation.
FR-DH-03	The <b>WUPHF Service</b> will display advertisements to <b>Basic Users</b> , but not <b>Premium Users</b> .

## Non-Functional Requirements

### Application

ID	Requirement
NF-APP-01	<b>WUPHF</b> shall be compatible with the following Operating Systems: <ul style="list-style-type: none"> <li>• Windows 7 or later</li> <li>• Mac OSX 10.7 "Lion" or later</li> <li>• Android 4.1.x "Jelly Bean" or later</li> <li>• Apple iOS 5.0 or later</li> <li>• Windows Phone 8 or later</li> </ul>
NF-APP-02	<b>WUPHF</b> shall be easily adaptable to changes in social media platforms and API changes.
NF-APP-03	<b>WUPHF</b> should be able to work with new social media platforms when they become popular.

# WUPHF Project Proposal

ID	Requirement
NF-APP-04	A <b>User's WUPHF Account</b> shall be available on any platform.
NF-APP-05	<b>WUPHF</b> shall be cross-platform (mobile, PC).
NF-APP-06	<b>WUPHF</b> shall be resistant to cyber-attack to protect the <b>User's</b> contact and payment information.

## Usability

ID	Requirement
NF-US-01	The graphical <b>User</b> interface for sending <b>WUPHF Messages</b> should be easy to use and intuitive. A <b>User</b> should be able to accomplish each desired task on a single screen.
NF-US-02	The <b>WUPHF corporation</b> will work with accessibility specialists to create modes that add extra text for hearing impaired users, and extra audio for vision impaired users.

## Security

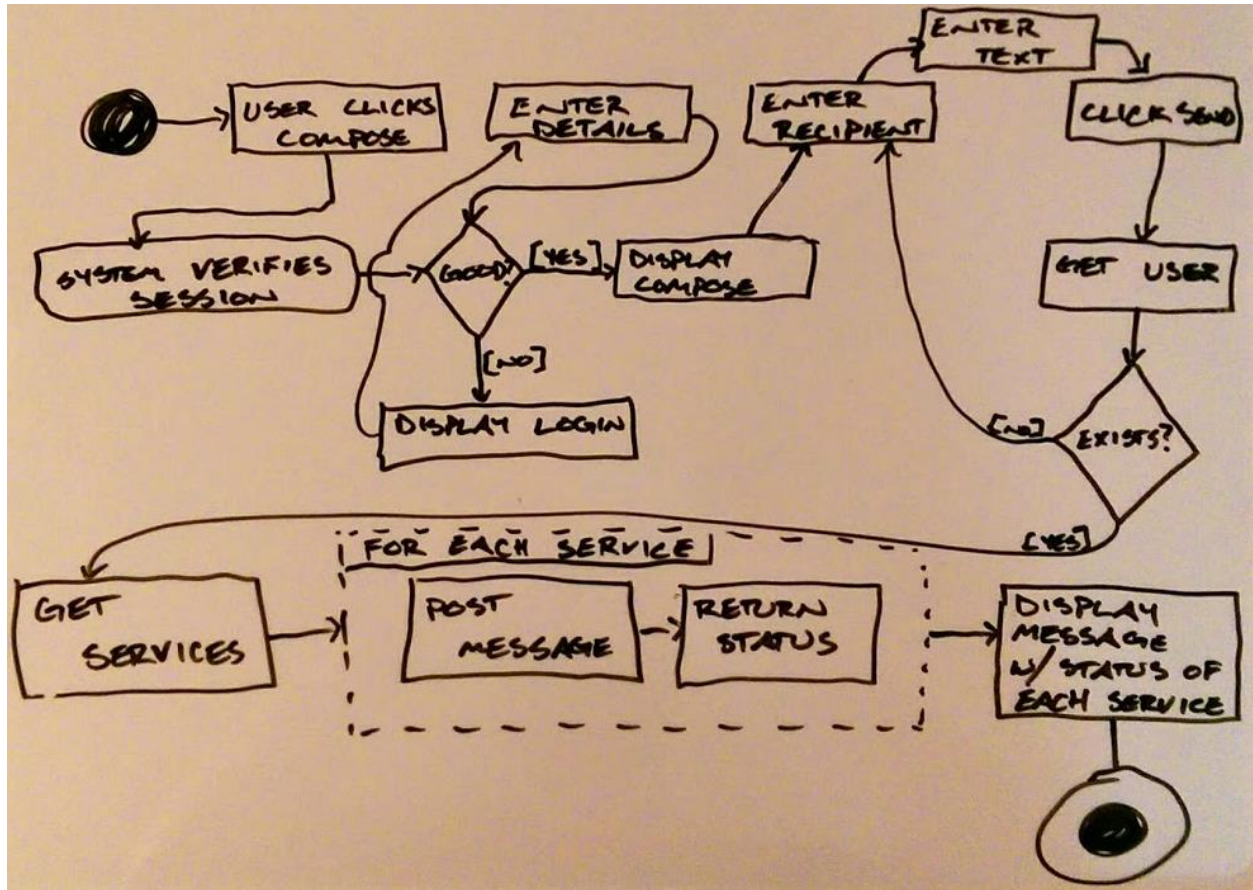
ID	Requirement
NF-SS-01	The <b>WUPHF Service</b> shall use a well-established cryptographic storage method for ALL user information including, but not limited to: Username, password, payment information, profile information.
NF-SS-02	The <b>WUPHF Service</b> shall sanitize all user inputs to prevent SQL injection and XSS vulnerabilities.
NF-SS-03	The <b>WUPHF Service</b> shall adhere to all OWASP Proven Security Principles as detailed by OWASP at <a href="http://owasp.org">owasp.org</a> .
NF-SS-04	The <b>WUPHF Service</b> shall utilize the TLS 1.2 protocol to communicate across networks to prevent eavesdropping and tampering.

# WUPHF Project Proposal

## Activity Diagrams

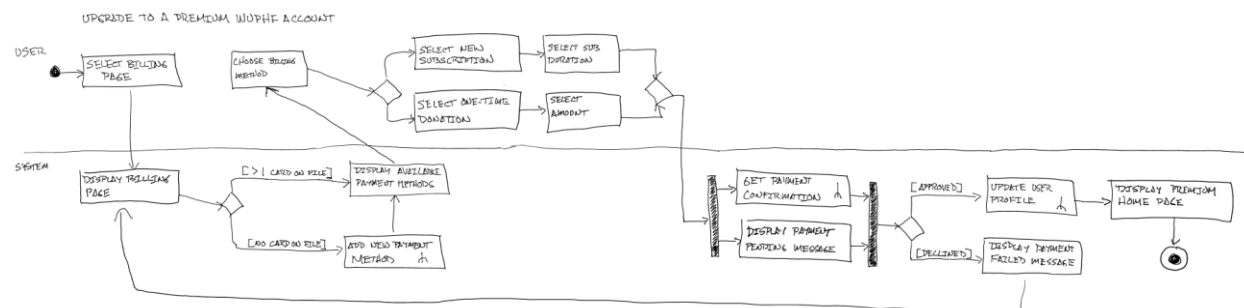
### Sending a WUPHF

This activity diagram describes the actions to send a **WUPHF Message** to another user.



### Add a new Premium Subscription

This activity diagram describes the actions to upgrade to a **premium WUPHF account**.

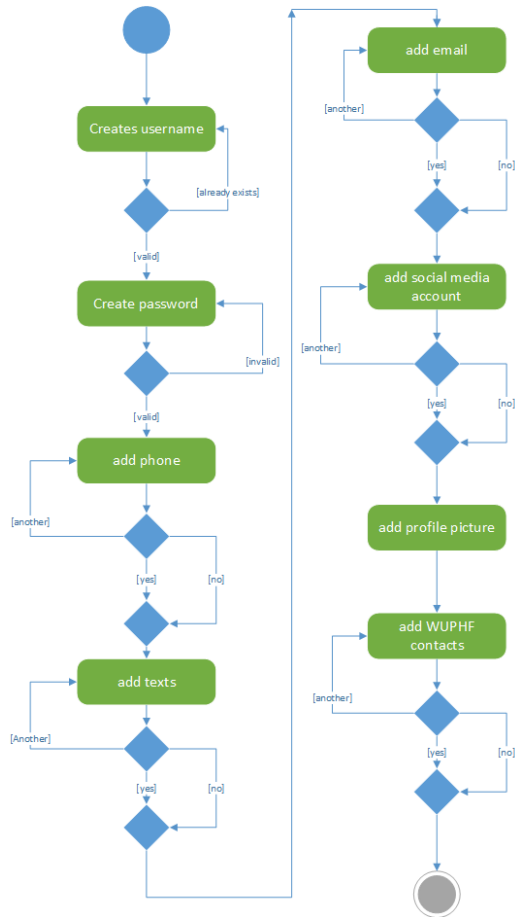




# WUPHF Project Proposal

## User Creates WUPHF Account

This activity diagram illustrates the process of creating a **WUPHF account**.

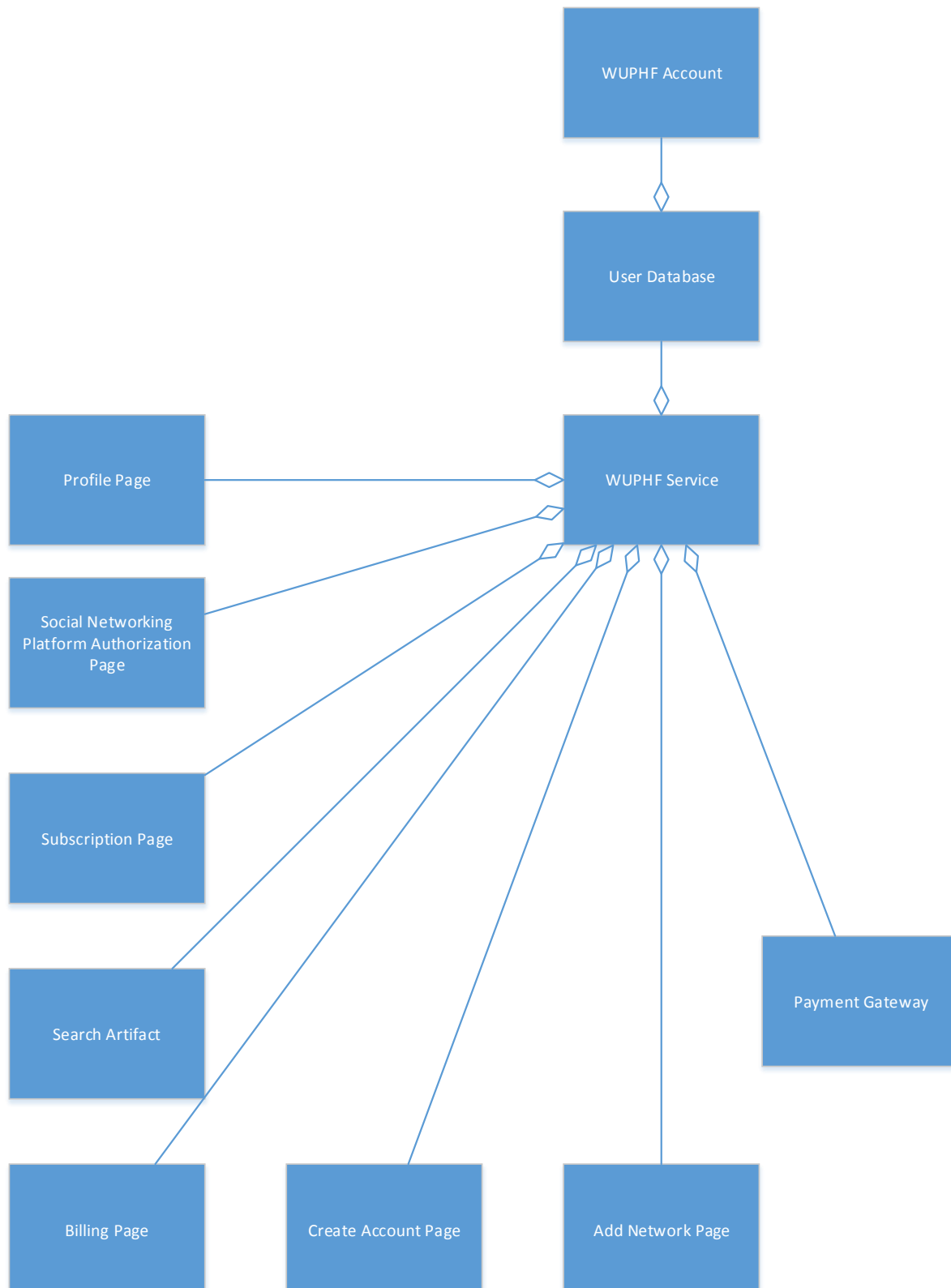




# WUPHF Project Proposal

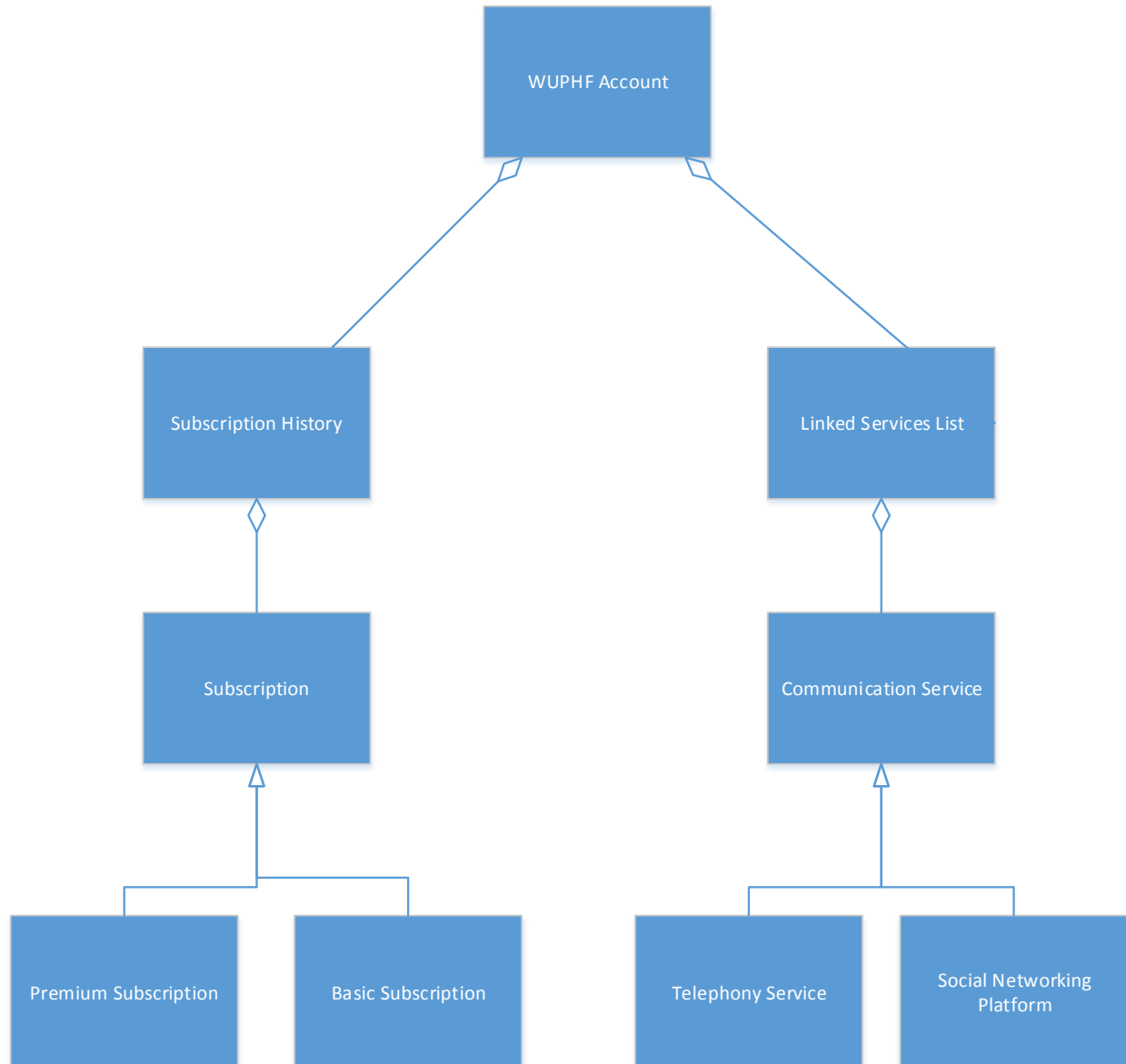
## Domain Model

### WUPHF Services



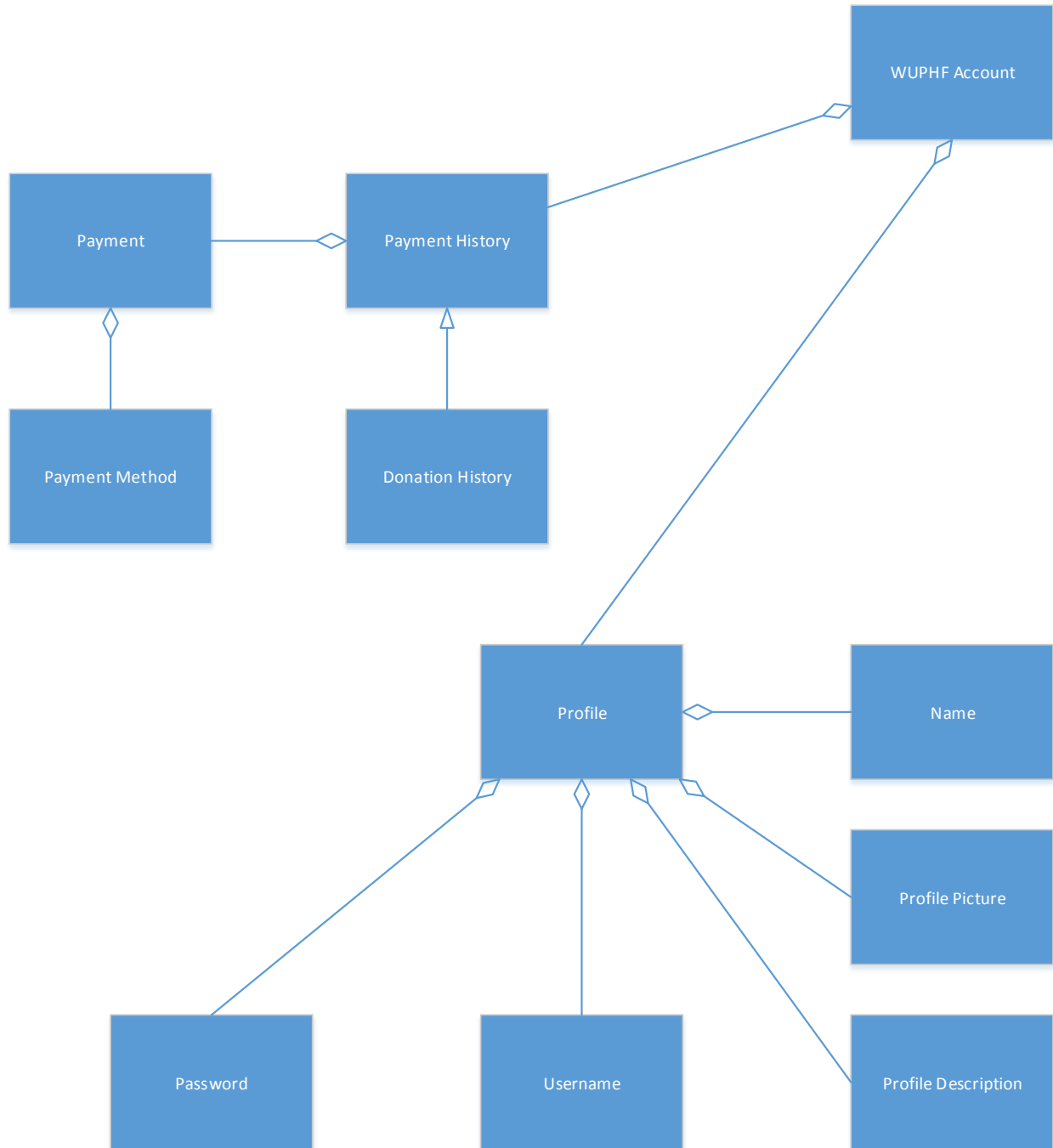
# WUPHF Project Proposal

## Communications and Linked Services



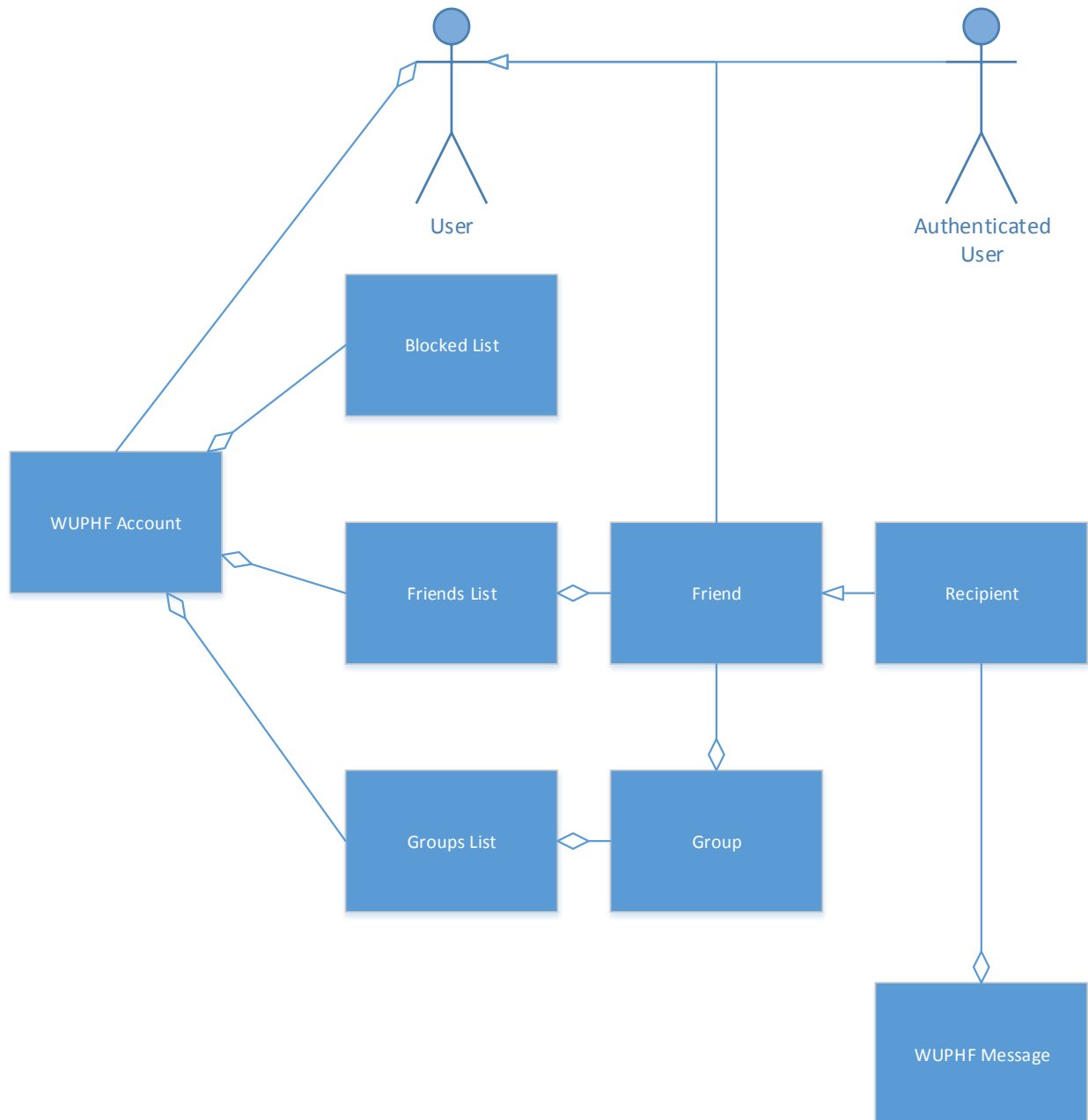
# WUPHF Project Proposal

## Payments and Profiles



# WUPHF Project Proposal

## Lists



## Glossary

Term	Definition
Add Network Page	The page on which a user can add a <b>Communication Service</b>
Authenticated User	A user which has successfully logged in using their credentials
Basic Subscription	A subscription with no applicable donations or traditional payments
Billing Page	The page on which the user can view payment methods and history

# WUPHF Project Proposal

Term	Definition
Blocked List	A list of all Users that the User has chosen to not receive communications from via WUPHF Service.
Communication Service	Umbrella term for both <b>Social Networking Platform</b> and <b>Telephony Service</b> .
Create Account Page	The page on which a new user creates a new <b>WUPHF Account</b>
Donation History	A chronological list of all previous donations to the <b>WUPHF Service</b> recorded for a particular user.
Friend	Another User of the same service who the User has chosen to store for future communication.
Friends List	A list of all Users the User has chosen to communicate with via the WUPHF Service.
Group	A <b>WUPHF User</b> created subset of their <b>Friends</b> in order to organize their <b>Friends List</b> . Ex: Work, Friends, Family, etc.
Groups List	A list of all Groupings of <b>Friends</b> created by the User.
Linked Services List	A collection of available communication portals a user links to their WUPHF account for receiving their <b>Friends'</b> WUPHF messages
Login Page	The page on which a user logs in via their credentials, becoming an <b>Authenticated User</b>
Name	The name a user wants to be associated with their account, and displayed for other WUPHF users to view when they search for the user
New Message Page	The page on which a user composes a new <b>WUPHF Message</b>
Payment	A transfer of money to the WUPHF Corporation from a user.
Payment Gateway	The third-party payment processing company through which all <b>Payments</b> are made
Payment History	A chronological list of all previous payments to the WUPHF Service recorded for a particular user
Payment Method	A method that a user uses to transfer money to the WUPHF Corporation
Premium Subscription	A subscription paid for by a traditional payment or with a donation that surpassed the threshold for Premium User status
Profile	A collection of personal data associated with a specific user
Profile Description	A user written description of themselves
Profile Page	The page on which a user views their <b>Profile</b>
Profile Picture	An aspect of a profile that contains an image of the user
Recipient	A user using the WUPHF Service that receives a WUPHF Message
Search Artifact	The graphical artifact with which a user can search for other <b>WUPHF Users</b>
Social Networking Platform	An external social media service such as Facebook, Twitter, etc.
Subscription	A contract that a user creates with the WUPHF Corporation which specifies payment from the user to the WUPHF Corporation for a certain duration, at a certain frequency.
Subscription History	A chronological list of all previous subscriptions to the WUPHF Service recorded for a particular user.

# WUPHF Project Proposal

Term	Definition
Subscription Page	The page on which a user can select a new <b>Premium Subscription</b> and view current subscription information
Telephony Service	An external offline <b>Communication Service</b> such as telephony, text message, or fax
WUPHF User	A person using their <b>WUPHF Account</b>
User Database	Contains a list of WUPHF Accounts.
WUPHF Account	All information associated with a WUPHF User: personal profile information, <b>Friends List</b> , Groups List, and payment/subscription information.
WUPHF Message	A message sent by a User to a recipient through the WUPHF Service.

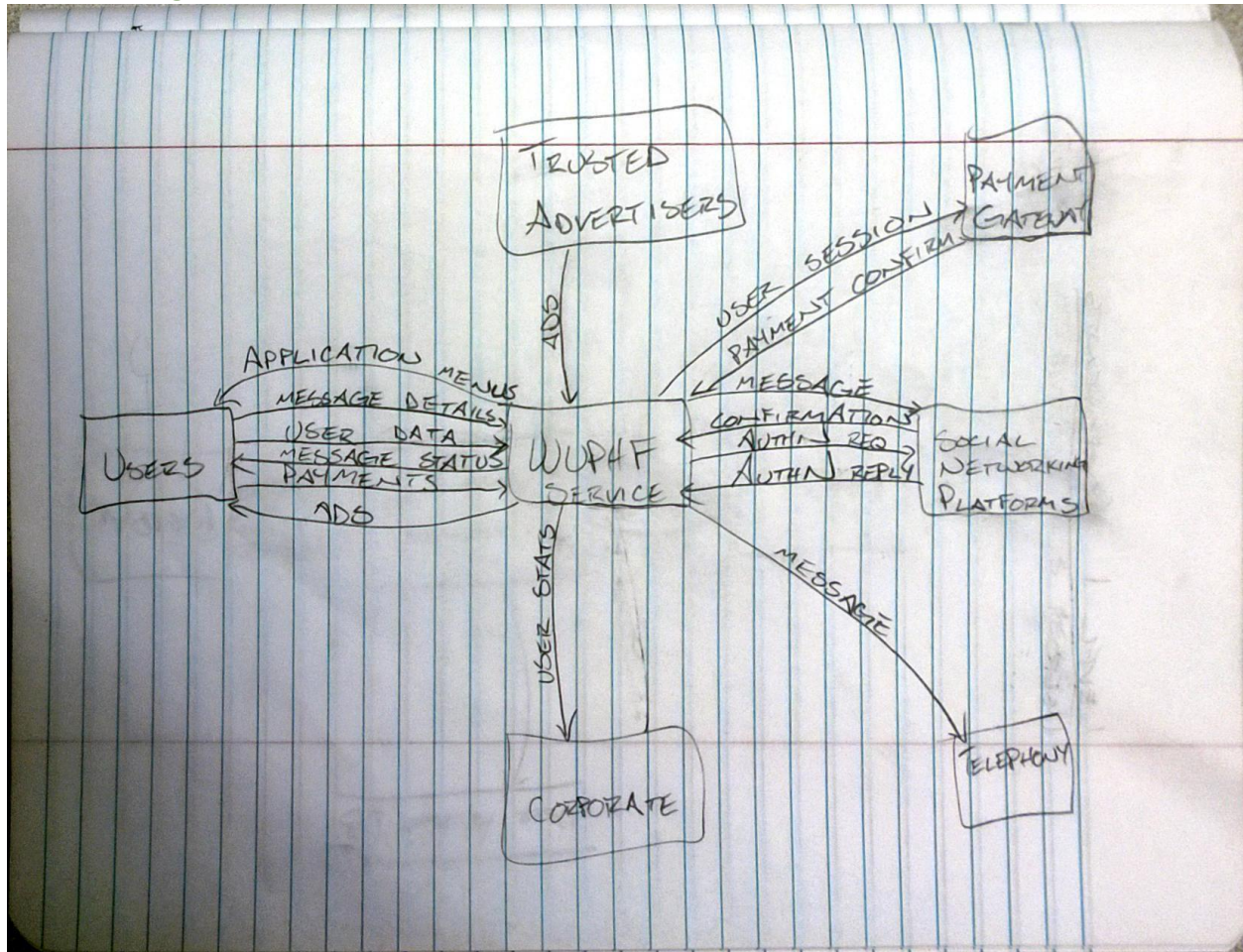
## Actors

Actor	Description
Authenticated User	A user that has previously created a WUPHF Account and is logged into the WUPHF Service.
Payment Gateway	A service provider of online payment processing that is external to the WUPHF Service.
Premium User	A user that has additional connectivity and feature options.
Social Network Platform	A service provider of online communication platforms that is external to the WUPHF Service.
Telephony Service	A service provider of offline communication platforms that is external to the WUPHF Service.
Trusted Advertiser	An advertiser which has a proven track record of supplying responsible advertisements.
User	A user is a potential customer of the WUPHF Service. Users are not known to the system prior to authentication.

# WUPHF Project Proposal

## Program Model

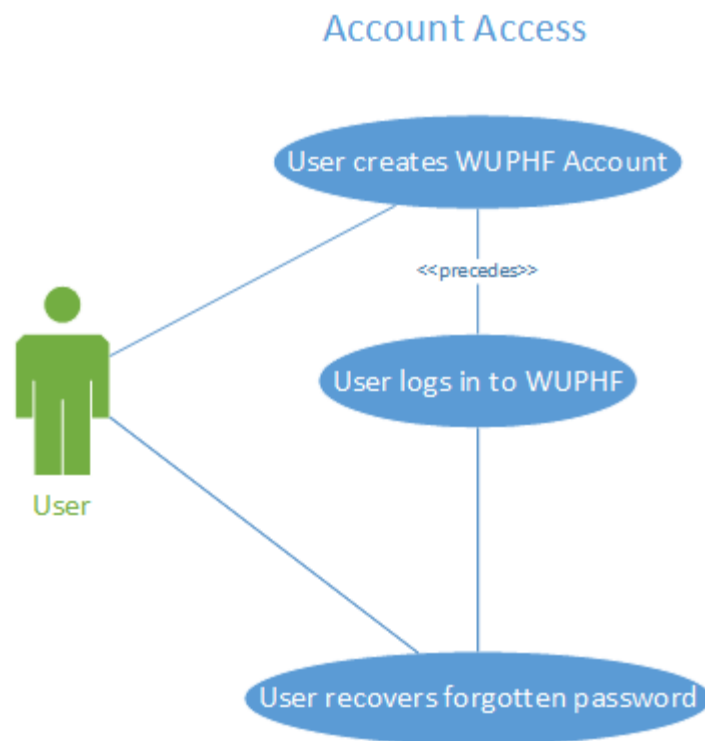
### Context Diagram



# WUPHF Project Proposal

## Account Access

This use case diagram describes the interactions between unauthenticated users and the **WUPHF Service**. The basic flow of events for this diagram has a user creating a **WUPHF account**, and logging into the **WUPHF service**. Alternately, the user can recover a forgotten password if necessary. (Traceable to requirements: FR-AA-01, FR-AB-01, FR-DA-01)



## User Creates WUPHF Account

### Use Case

Use Case ID: 008

### Requirements Satisfied

FR-AA-01, FR-AA-03, FR-AA-04

### Basic Course:

The user types their desired username into the username textbox and clicks the continue button, and the system stores the username and displays the select password page. The new user types their desired password into the password textbox and clicks the continue button, and the system stores the password.

### Alternate Course A: The user enters a username that is already taken

The system displays the choose username page once more with a message in red above the username textbox that says, "The username is already taken. Please choose another."



# WUPHF Project Proposal

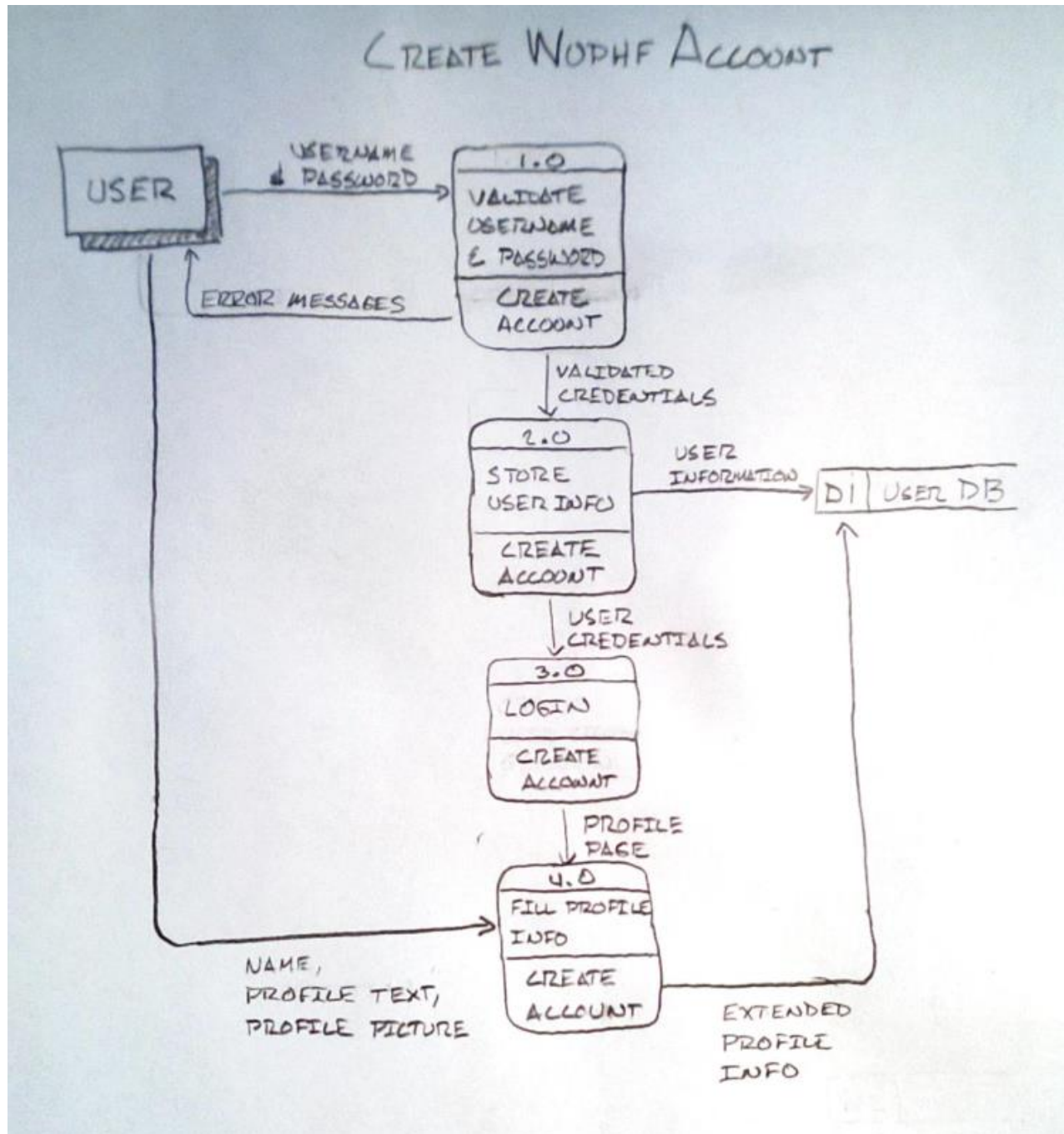
*Alternate Course B: The user enters a username that is not long enough*

The system displays the choose username page once more with a message in red above the username textbox that says, "The username is not long enough. Please choose another."

*Alternate Course C: The user enters a password that is not long enough*

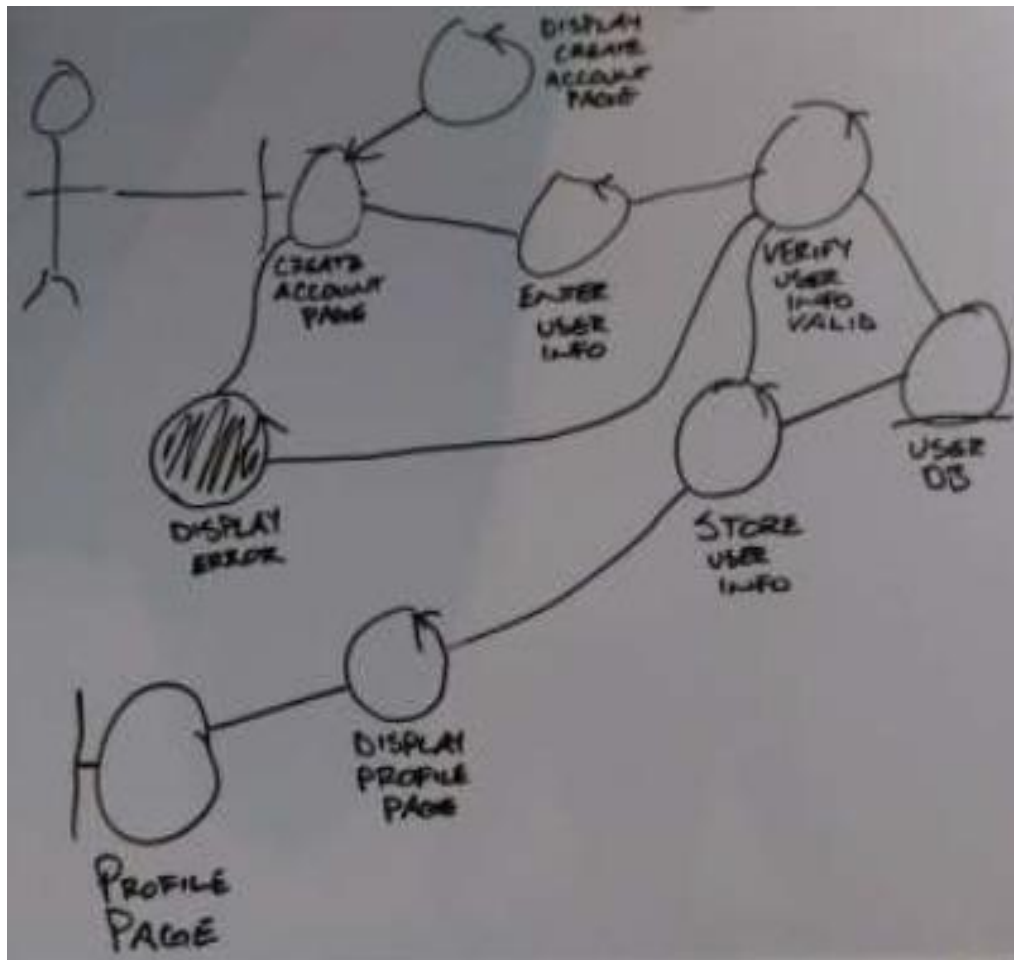
The system displays the choose password page once more with a message in red above the password textbox that says, "The password is not long enough. Please choose another."

## Data Flow Diagram



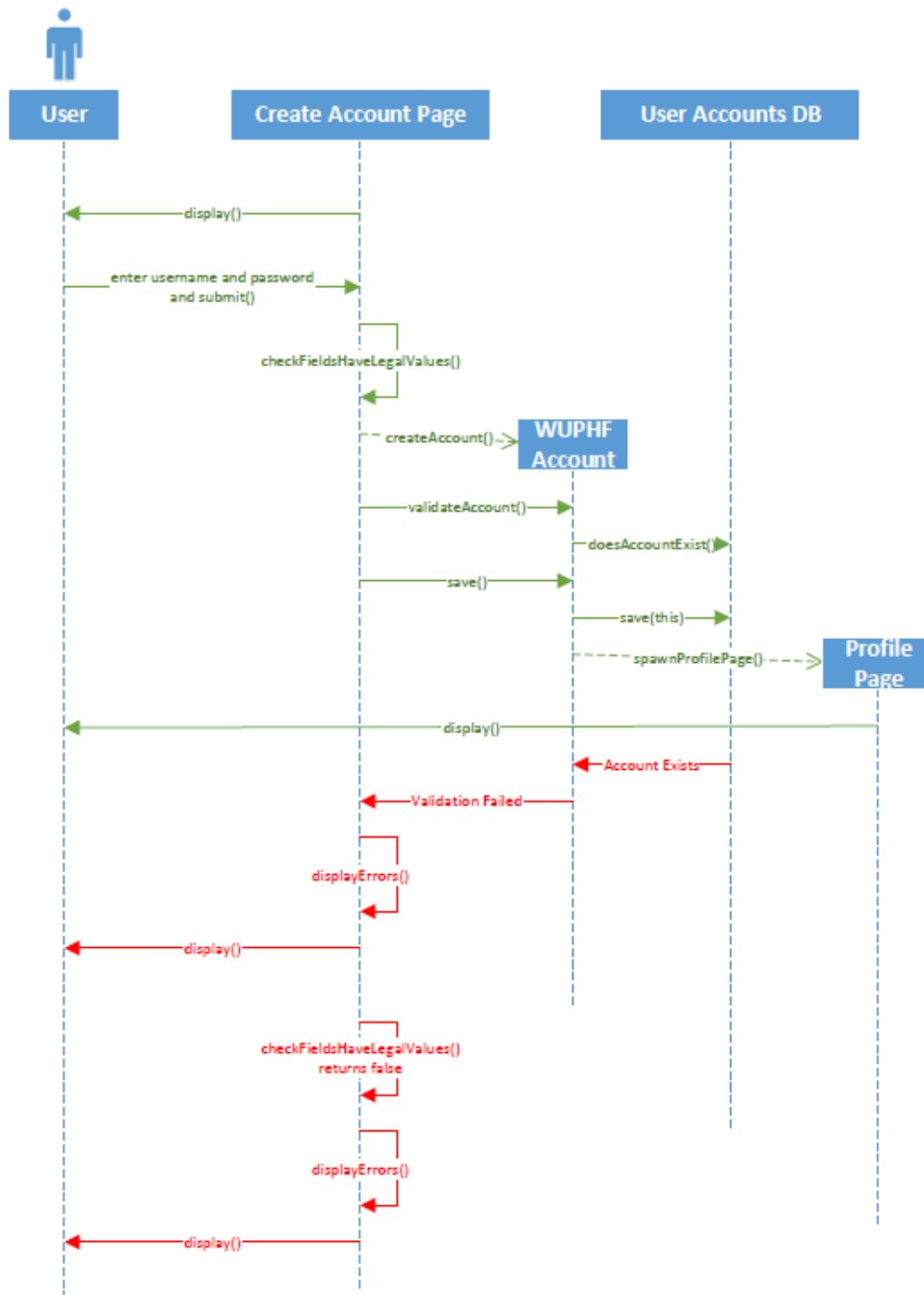
# WUPHF Project Proposal

## Robustness Analysis



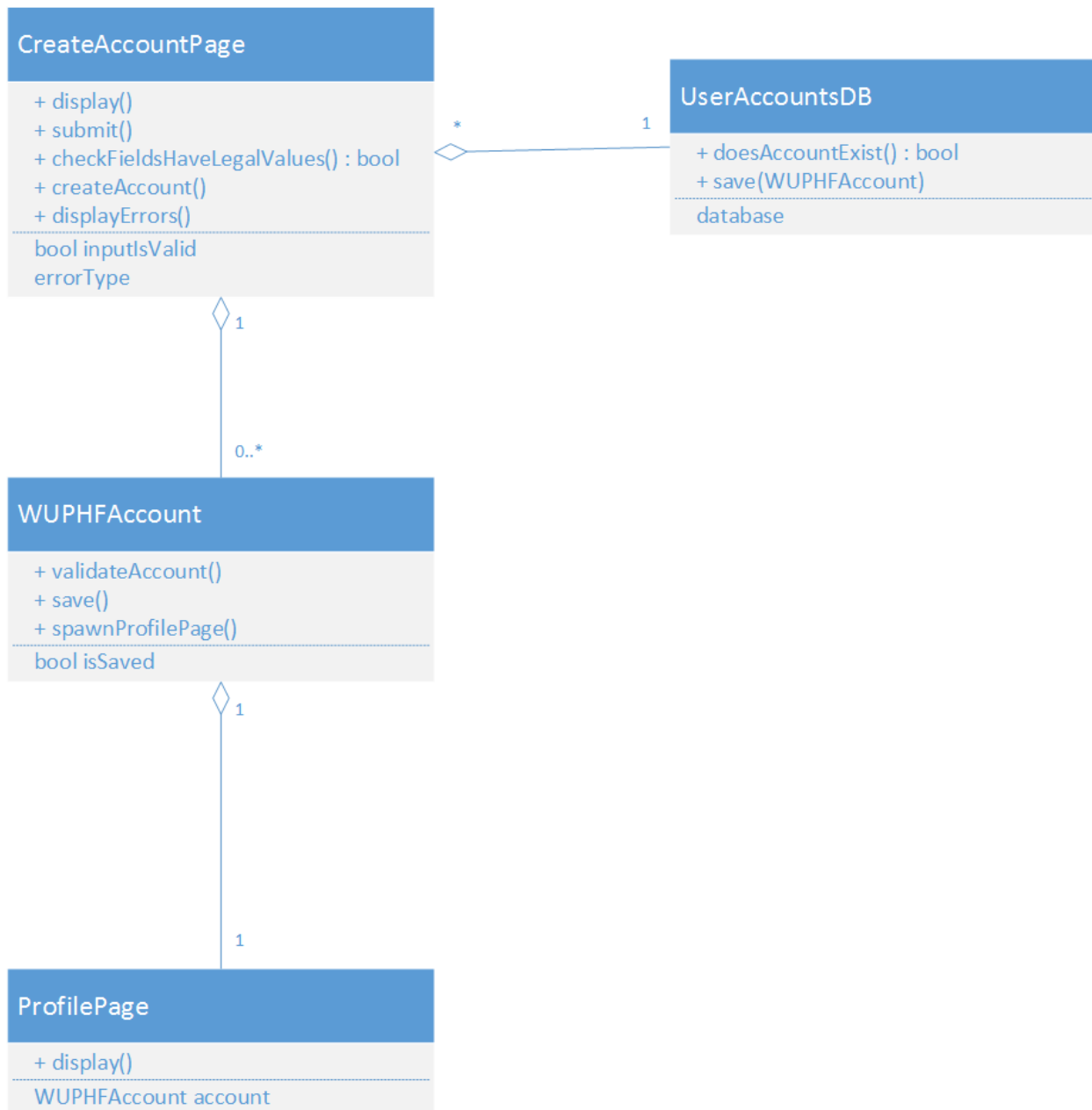
# WUPHF Project Proposal

## Sequence Diagram



# WUPHF Project Proposal

## Class Diagram



# WUPHF Project Proposal

## Wireframes

### Basic Course

#### Create Account Page

### Create Your Account

Choose Username

Choose Password  
<password requirements>

Let's WUPHF!!1!

### Alternate Course A

#### Alternate Course A

### Create Your Account

The username is already  
taken. Please choose another

Choose Username

Choose Password  
<password requirements>

Let's WUPHF!!1!

# WUPHF Project Proposal

## *Alternate Course B*

### Alternate Course B

#### Create Your Account

The username is not long enough. Please choose another.

  
  
  
<password requirements>

## *Alternate Course C*

### Alternate Course C

#### Create Your Account

The password is not long enough. Please choose another.

  
<password requirements>

## *User logs into WUPHF*

<Placeholder>

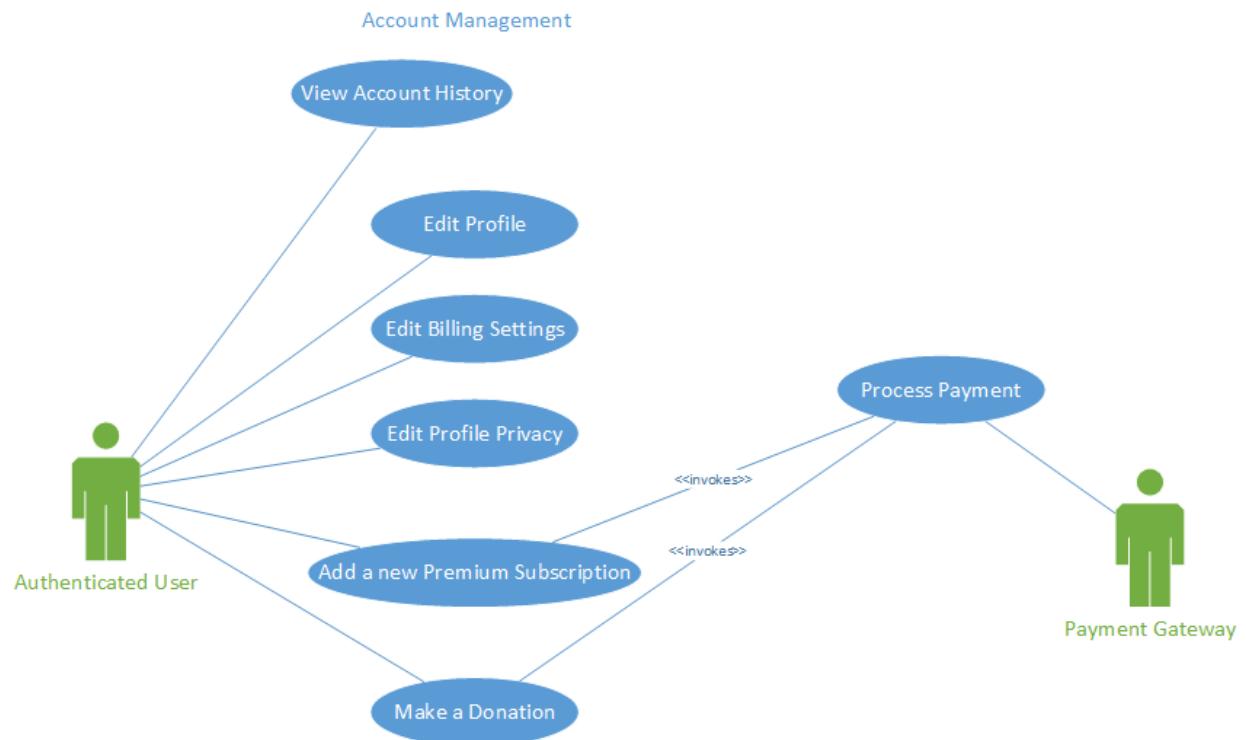
# WUPHF Project Proposal

*User recovers forgotten password*

<Placeholder>

## Account Management

This use case diagram describes the actions that a logged in, authenticated user may perform to their account while using the WUPHF Service. Most interactions occur between the authenticated user and the WUPHF Service with the exception of processing payments, which is depicted as a function between the WUPHF Service and a Payment Gateway. Any monetary transaction would invoke the process payment use case. (Traceable to requirements: FR-AF-01, FR-AF-02, FR-AC-01 - FR-AC-06)



*View Account History*

<Placeholder>

*Edit Profile*

<Placeholder>

*Edit Billing Settings*

<Placeholder>

# WUPHF Project Proposal

*Edit Profile Privacy*

<Placeholder>

*Add a new Premium subscription*

*Use Case*

*Requirements Satisfied*

FR-DH-01, FR-DH-02, FR-DH-03

*Basic Course*

The system displays the **Subscriptions Page**. The user selects a desired subscription duration, and then submits the selection. The system displays the **Billing Page**. The user supplies billing information, verifies it, and submits the selection. The system gets verification that payment was successful, updates the user account to **premium**, and sets the expiration date.

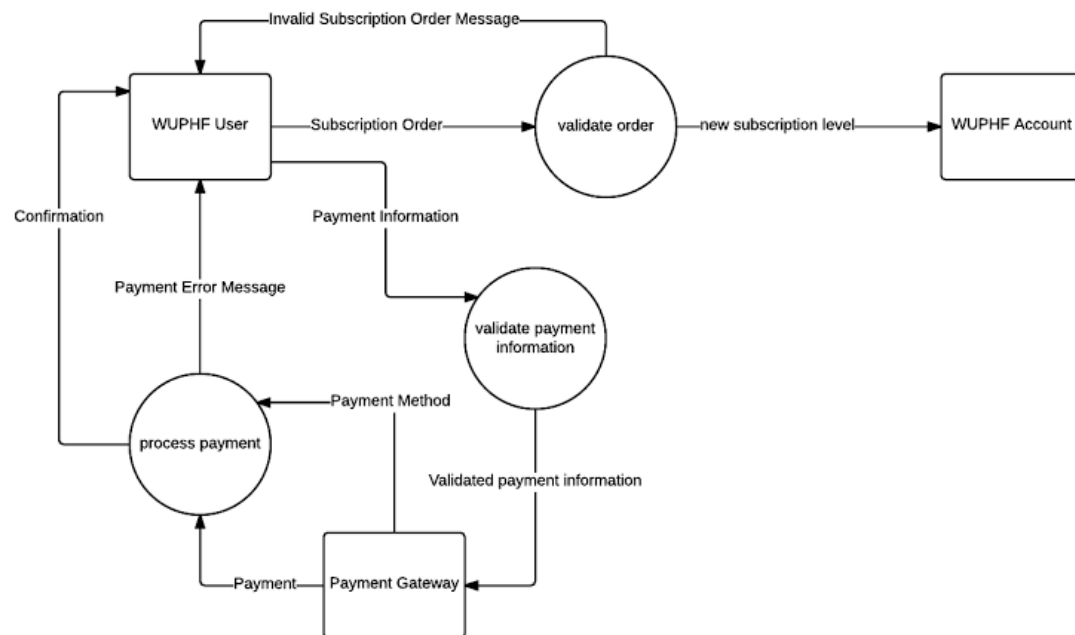
*Alternate Course A: User clicks the cancel button*

The user is returned to the **Home Page**.

*Alternate Course B: Payment method declined*

The **Billing Page** is redisplayed with the warning that the billing transaction was declined and the user is asked to use an alternate **Payment Method**.

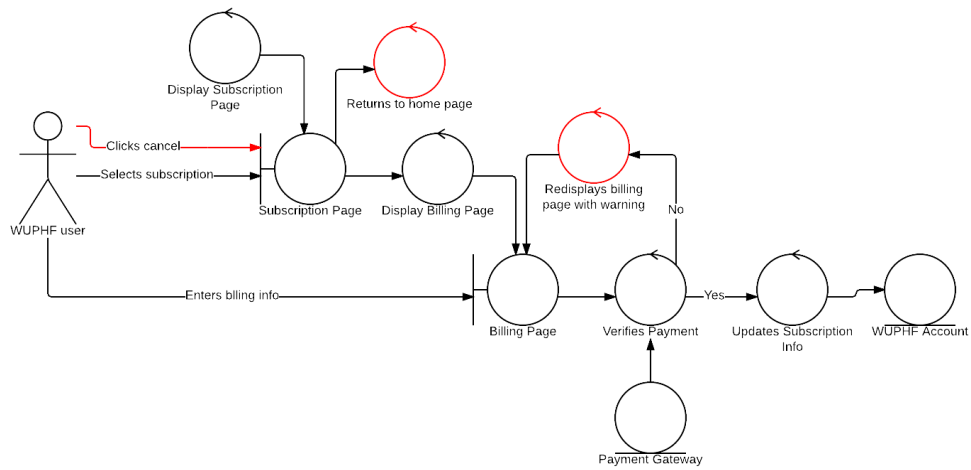
*Data Flow Diagram*



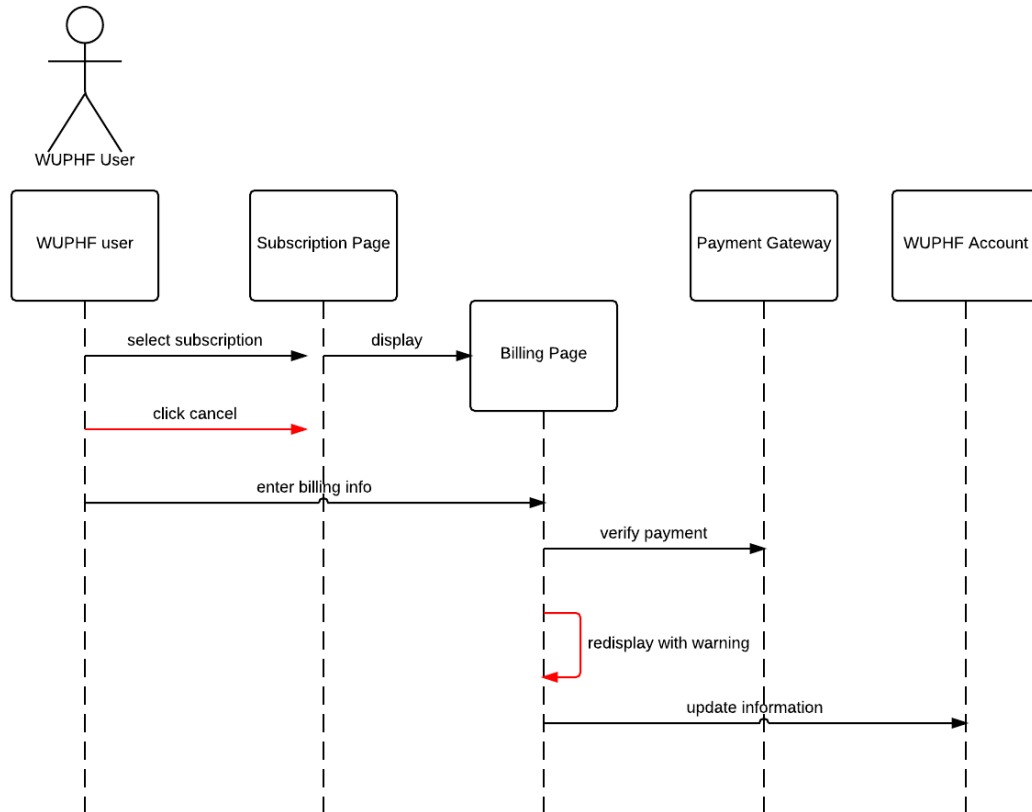


# WUPHF Project Proposal

## Robustness Analysis

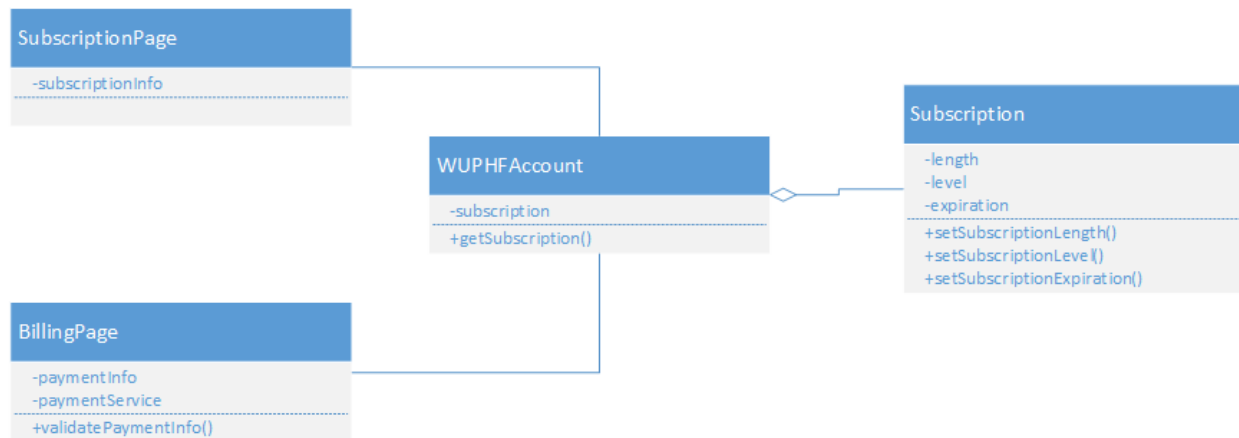


## Sequence Diagram



# WUPHF Project Proposal

## Class Diagram



## Wireframes

### Subscription Page Wireframe

### Choose Subscription

Please Select Subscription Level

Basic ▼

Please Select Subscription Duration

1 year ▼

Submit

# WUPHF Project Proposal

## Billing Page Wireframe

### Billing Page

Please select payment method

Credit Card ▼

Please Enter Billing Info

Please Enter Payment Amount

Submit

## Make a Donation

<Placeholder>

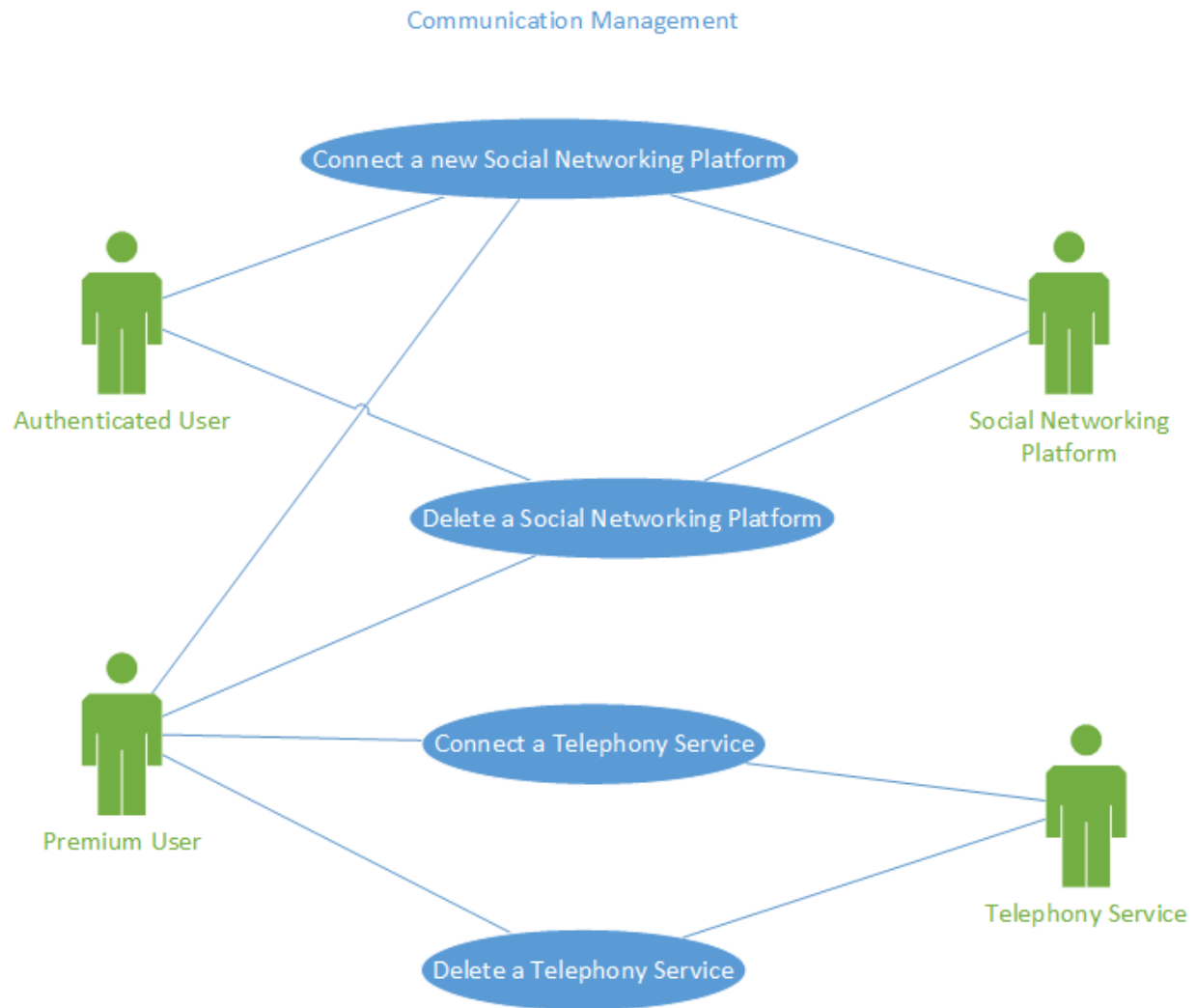
## Process Payment

<Placeholder>

## Communication Management

This use case diagram describes configuration of a WUPHF User's available **Communication Services**. All WUPHF Users can connect, activate, deactivate, and disconnect social network platforms. Only a premium user can connect, activate, deactivate, and disconnect telephony services. (Traceable to requirements: FR-BC-02, FR-BC-05)

# WUPHF Project Proposal



## *Connect a new Social Networking Platform*

### *Use Case*

#### *Requirements Satisfied*

FR-BB-01, FR-BB-02, FR-BB-03

#### *Basic Course*

The user clicks the add network button, the **WUPHF Service** displays the add network page. The user chooses a **social networking platform** to add by clicking on it; the **WUPHF Service** displays the appropriate login for the **social networking platform**. The user enters their credentials and clicks to allow WUPHF to access the platform; the **social networking platform** verifies the user's credentials and passes the results to the **WUPHF Service**. The **WUPHF Service** adds the **social networking platform** to the list of **social networking platforms** for this user and displays a success message.

# WUPHF Project Proposal

## *Alternate Course A: The User Decides Not to Add Social Network*

The **WUPHF Service** returns the user to the page where the add network button was clicked without adding a **social networking platform**.

## *Alternate Course B: User's Session Has Expired*

The **WUPHF Service** displays the login page; the user enters their credentials. The **WUPHF Service** verifies the user's credentials, then displays the add network page.

## *Alternate Course C: User's Social Network Credentials Are Invalid*

The **WUPHF Service** displays an error message allowing the user to try again or cancel. The user re-enters their credentials or clicks cancel.

## *Alternate Course D: Communication Services Database is Unavailable*

The **WUPHF Service** displays an error message stating that the social network will be added as soon as the storage is available. No further action is necessary from the user.

## *Alternate Course E: Social Networking Platform is Unavailable*

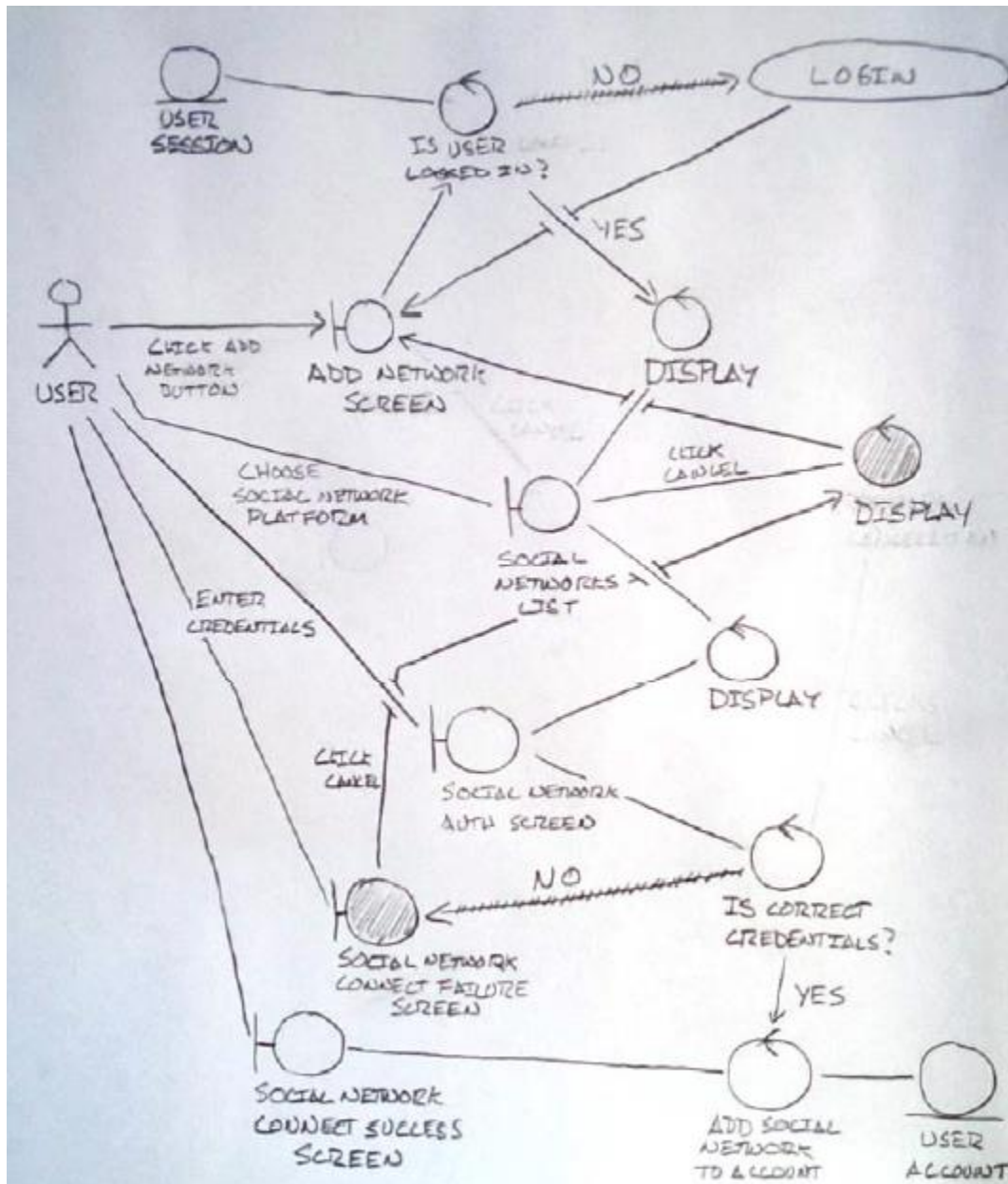
The **WUPHF Service** displays a message stating that **the social networking platform** is unavailable and that the user will need to try again later.

## *Data Flow Diagram*

<Placeholder>

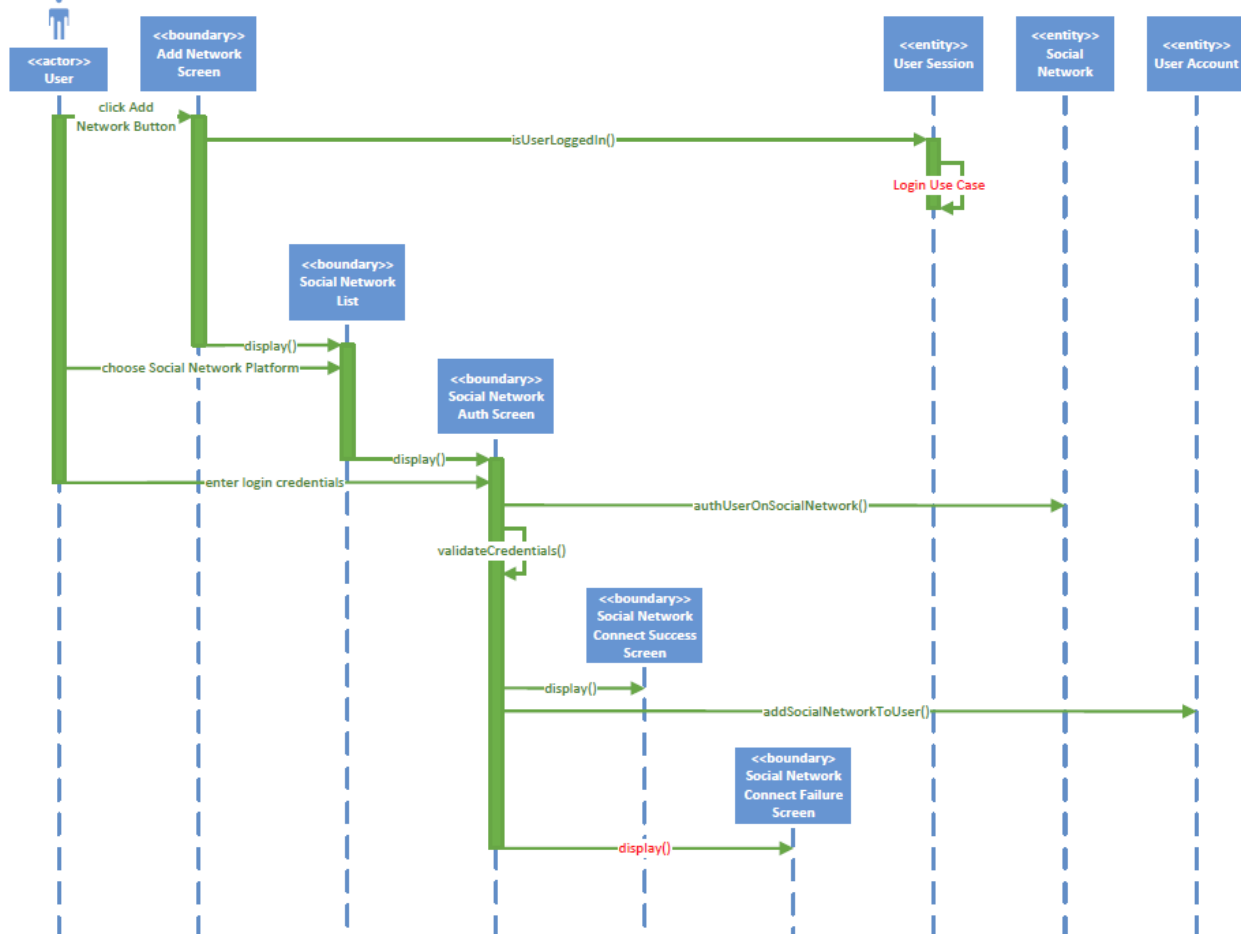
# WUPHF Project Proposal

## Robustness Analysis



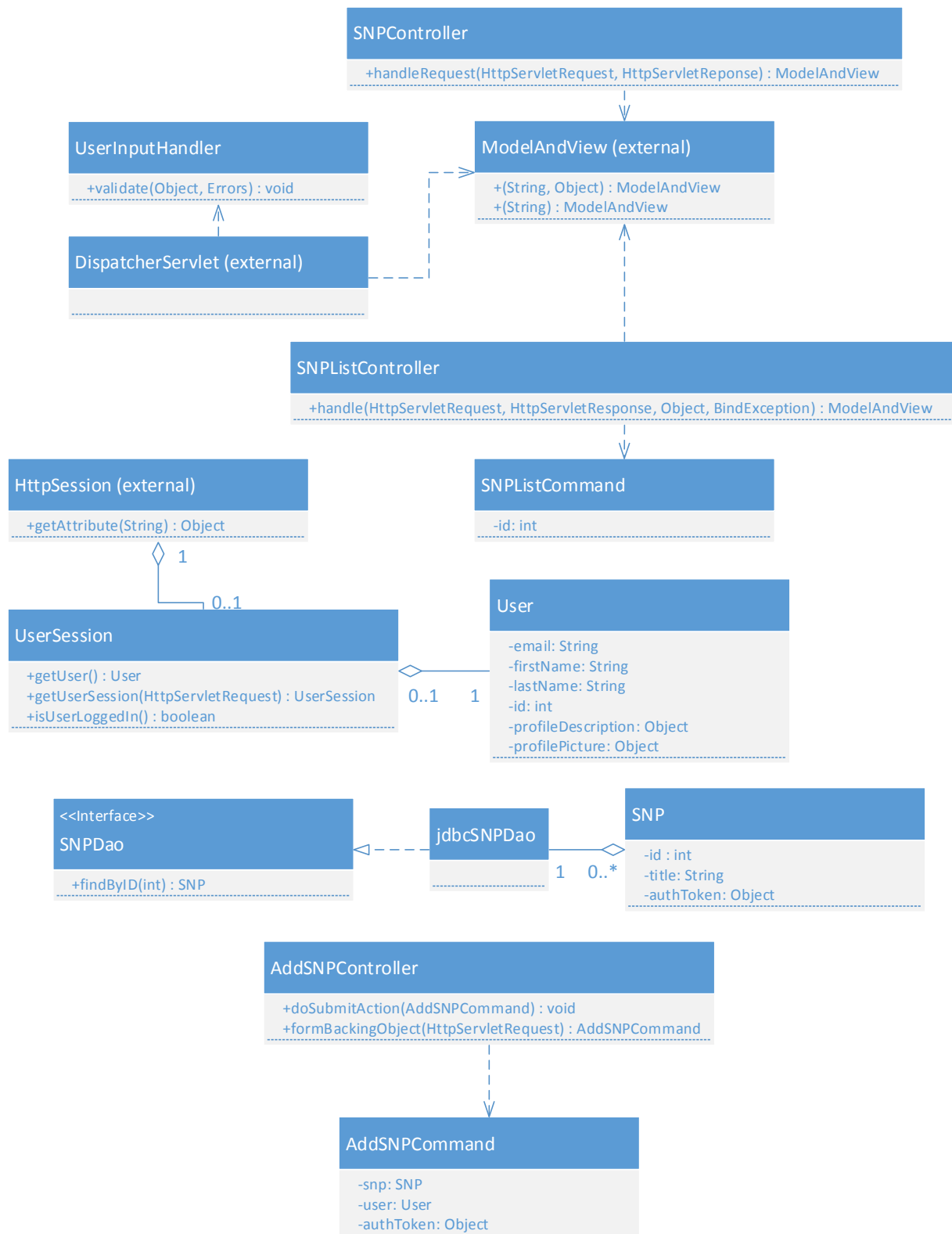
# WUPHF Project Proposal

## Sequence Diagram



# WUPHF Project Proposal

## Class Diagram





# WUPHF Project Proposal

## Wireframes

### Use Case: Connect a new Social Networking Platform

#### User Action:

The user clicks the add network button.

#### System Reaction

The WUPHF Service displays the add network page.

Slide ID: UC-CSM-01



### Use Case: Connect a new Social Networking Platform

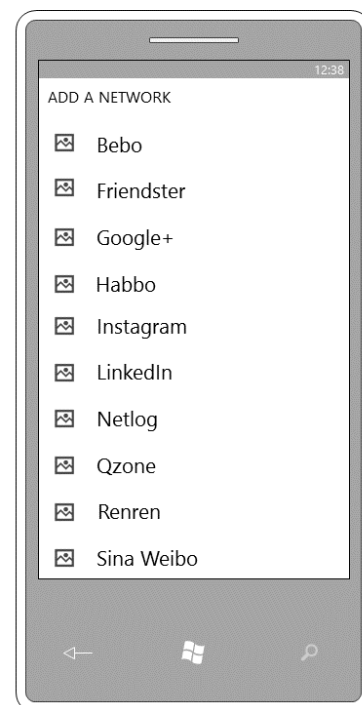
#### User Action:

The user chooses a social networking platform to add by clicking on it.

#### System Reaction

The WUPHF Service displays a confirmation message. (revised)

Slide ID: UC-CSM-02



# WUPHF Project Proposal

## Use Case: Connect a new Social Networking Platform

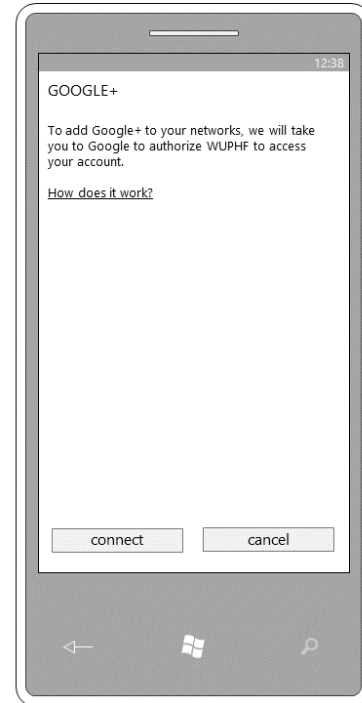
### User Action:

The user confirms the association between WUPHF and the specified social networking platform. (revised)

### System Reaction

The WUPHF Service displays the appropriate login for the social networking platform.

Slide ID: UC-CSM-03



## Use Case: Connect a new Social Networking Platform

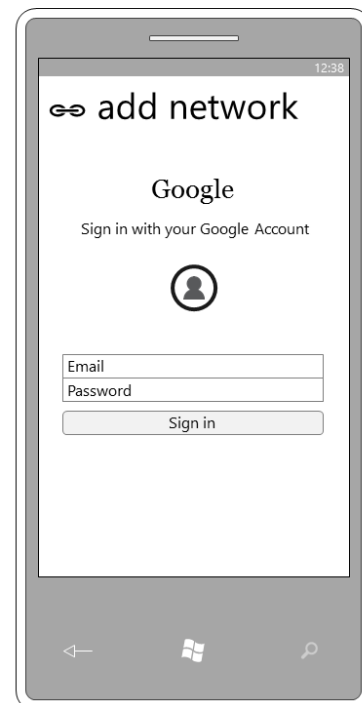
### User Action:

The user enters their credentials and clicks to allow WUPHF to access the platform.

### System Reaction

The WUPHF Service transmits the credentials to the specified social networking platform. (revised)

Slide ID: UC-CSM-04



# WUPHF Project Proposal

## Use Case: Connect a new Social Networking Platform

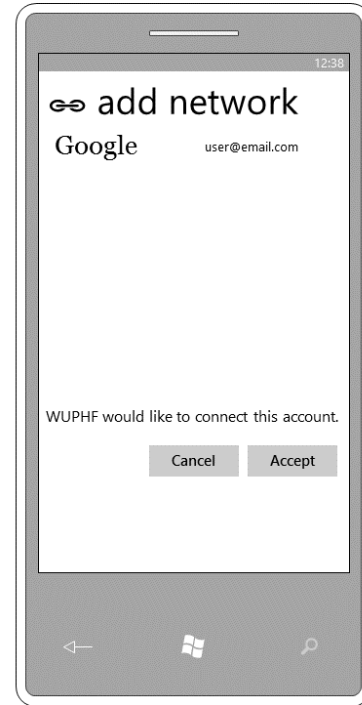
### User Action:

The user may need to confirm the association between WUPHF and the specified social networking platform. (revised)

### System Reaction

The WUPHF Service adds the social networking platform to the list of social networking platforms for this user and displays a success message.

Slide ID: UC-CSM-05



## Use Case: Connect a new Social Networking Platform

### User Action:

### System Reaction

Slide ID: UC-CSM-06



*Delete a Social Networking Platform*

<Placeholder>

# WUPHF Project Proposal

## *Connect a Telephony Service*

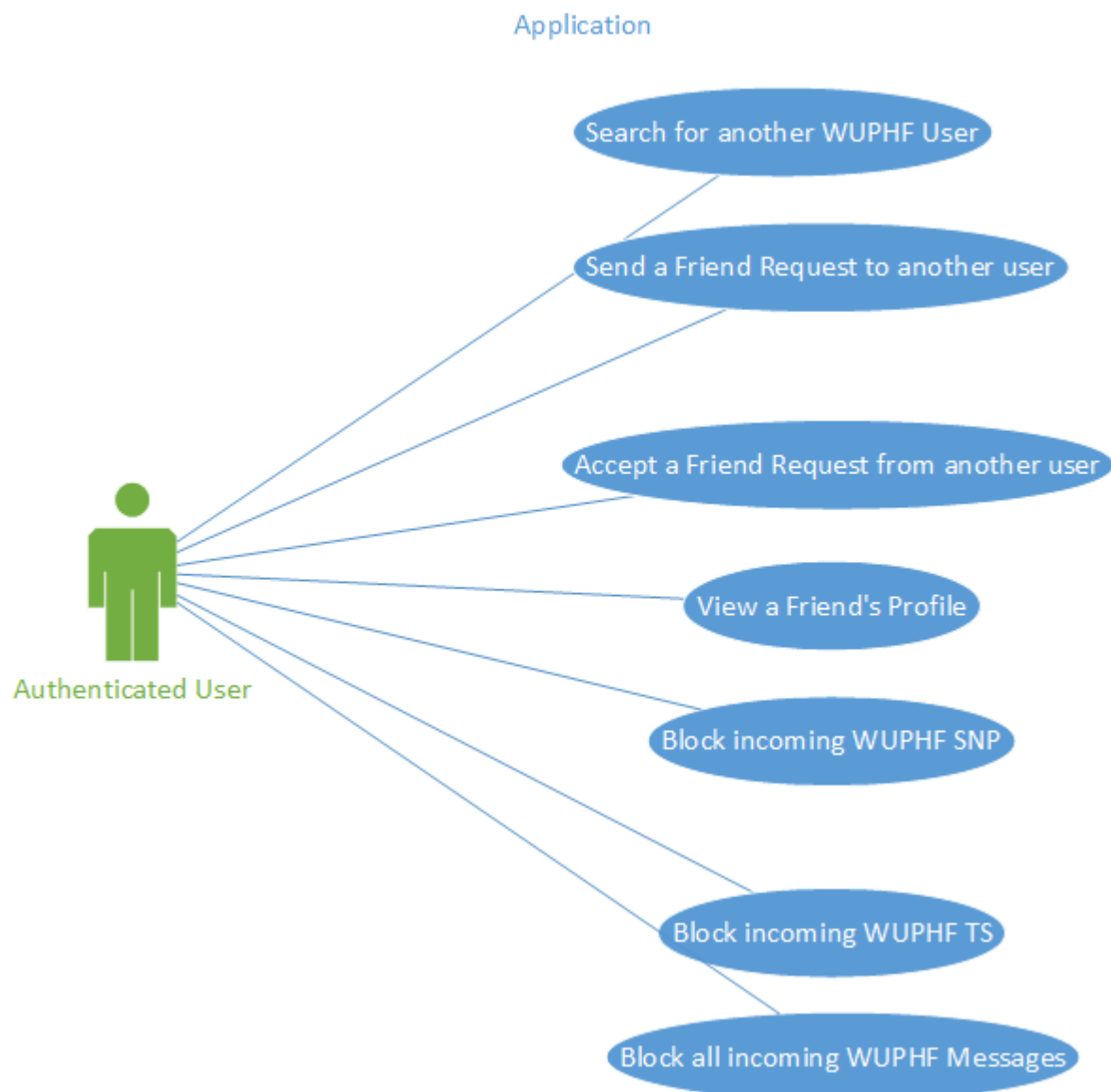
<Placeholder>

## *Delete a Telephony Service*

<Placeholder>

## Application

This use case diagram describes the functionality that a WUPHF User would encounter as part of basic activities relating to adding, viewing, and blocking interactions from other WUPHF Users. (Traceable to requirements: FR-DB-01, FR-DB-02)



# WUPHF Project Proposal

## *Search for another WUPHF User*

### *Use Case*

Use Case ID: 042

### *Requirements Satisfied*

FR-DB-01, FR-DB-02

### *Basic Course*

The user clicks the search artifact (box, button, glyph, hieroglyph, etc.) and begins entering the name or user name of the person they wish to find. Once the user has supplied at least one character, the system begins querying the database for possible matches for the user's entered terms. The system displays a certain number of relevant matches and updates these matches as the user continues typing. The user clicks on the desired user to perform the context-appropriate action.

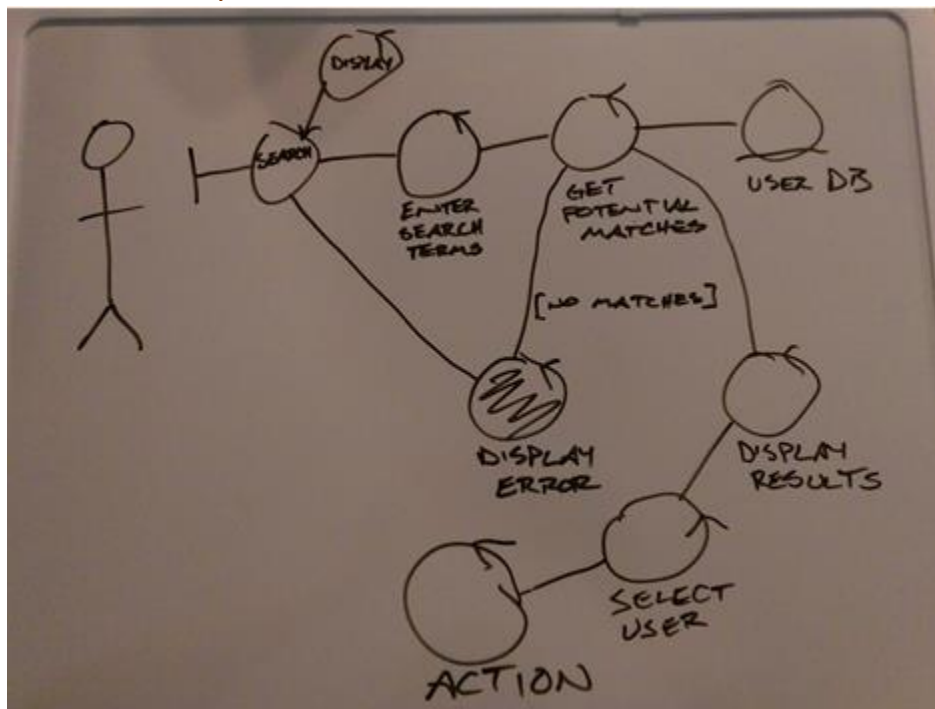
### *Alternate Course A: No Relevant Matches*

If no relevant matches are found based on the user input, a message indicating this is displayed.

### *Data Flow Diagram*

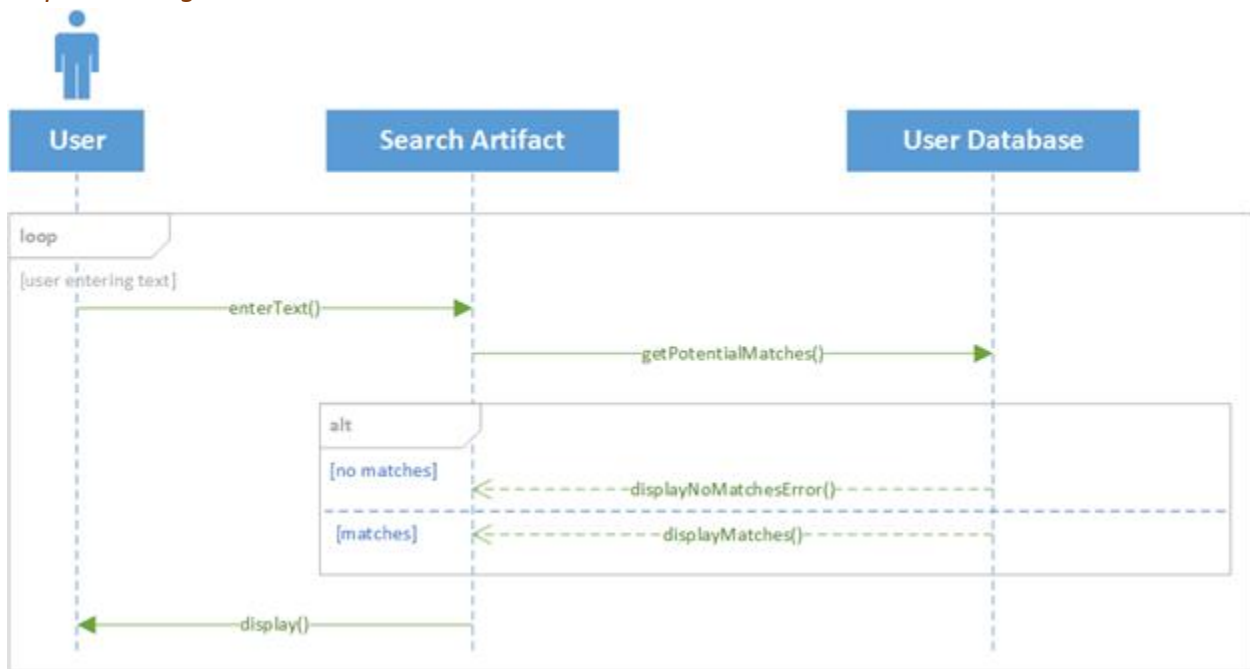
<Placeholder>

### *Robustness Analysis*

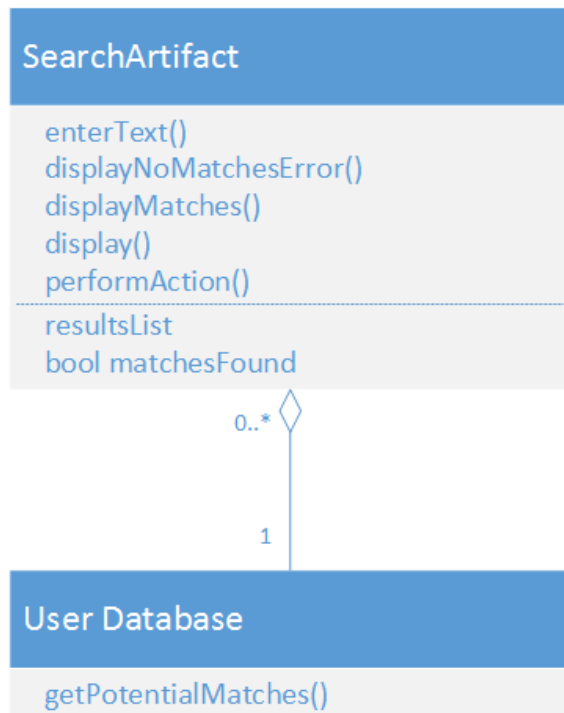


# WUPHF Project Proposal

Sequence Diagram




Class Diagram




# WUPHF Project Proposal

## *Wireframes*

### *Matches Found*

John Sm		
	John Smith	
	John Small	
	John Smattergrung	

### *No Matches Found*

Asfdgir;k		
	No Matches Found	

## *Send a Friend Request to another user*

<Placeholder>

## *Accept a Friend Request from another user*

<Placeholder>

## *View a Friend's Profile*

<Placeholder>

## *Block incoming WUPHF SNP*

<Placeholder>

## *Block incoming WUPHF TS*

<Placeholder>

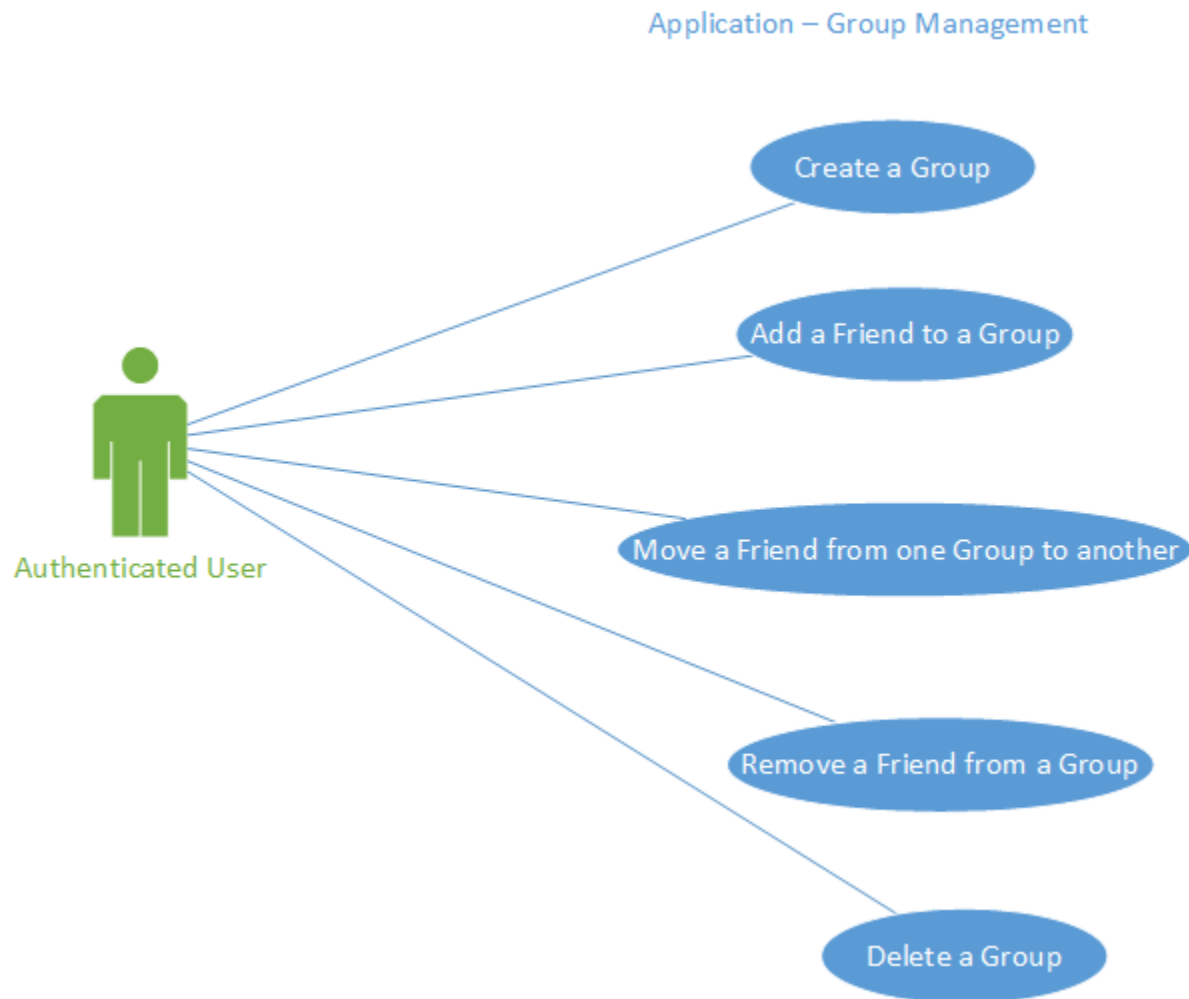
## *Black all incoming WUPHF Messages*

<Placeholder>

# WUPHF Project Proposal

## Application - Group Management

This use case diagram describes the interaction of all use cases related to a **WUPHF User** managing their **Groups**. (Traceable to requirements: FR-DD-02 - FR-DD-06)



### Create a Group

*Requirements Satisfied*

FR-DD-02

### Use Case

#### Basic Course

The system displays the **Friends Page**. The user selects a button to add a new group. The system provides a method to enter in a group title. The user fills out the form and submits the information. The system displays the **Friends Page** with the new group added.



# WUPHF Project Proposal

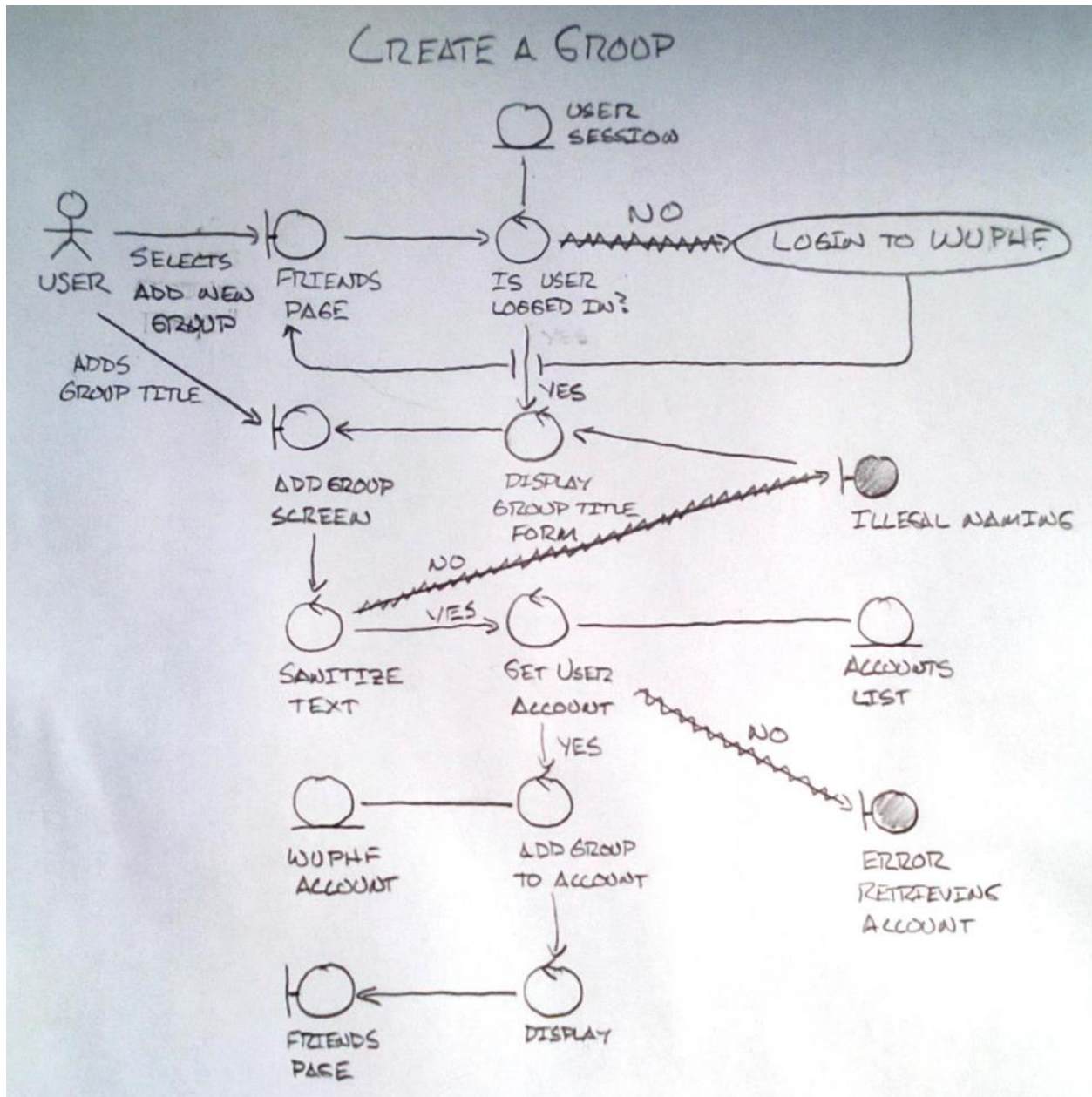
## Alternate Course

Group title failed validation: The user is warned that illegal characters were detected or an unauthorized title was used, and returned to the add group screen.

## Data Flow Diagram

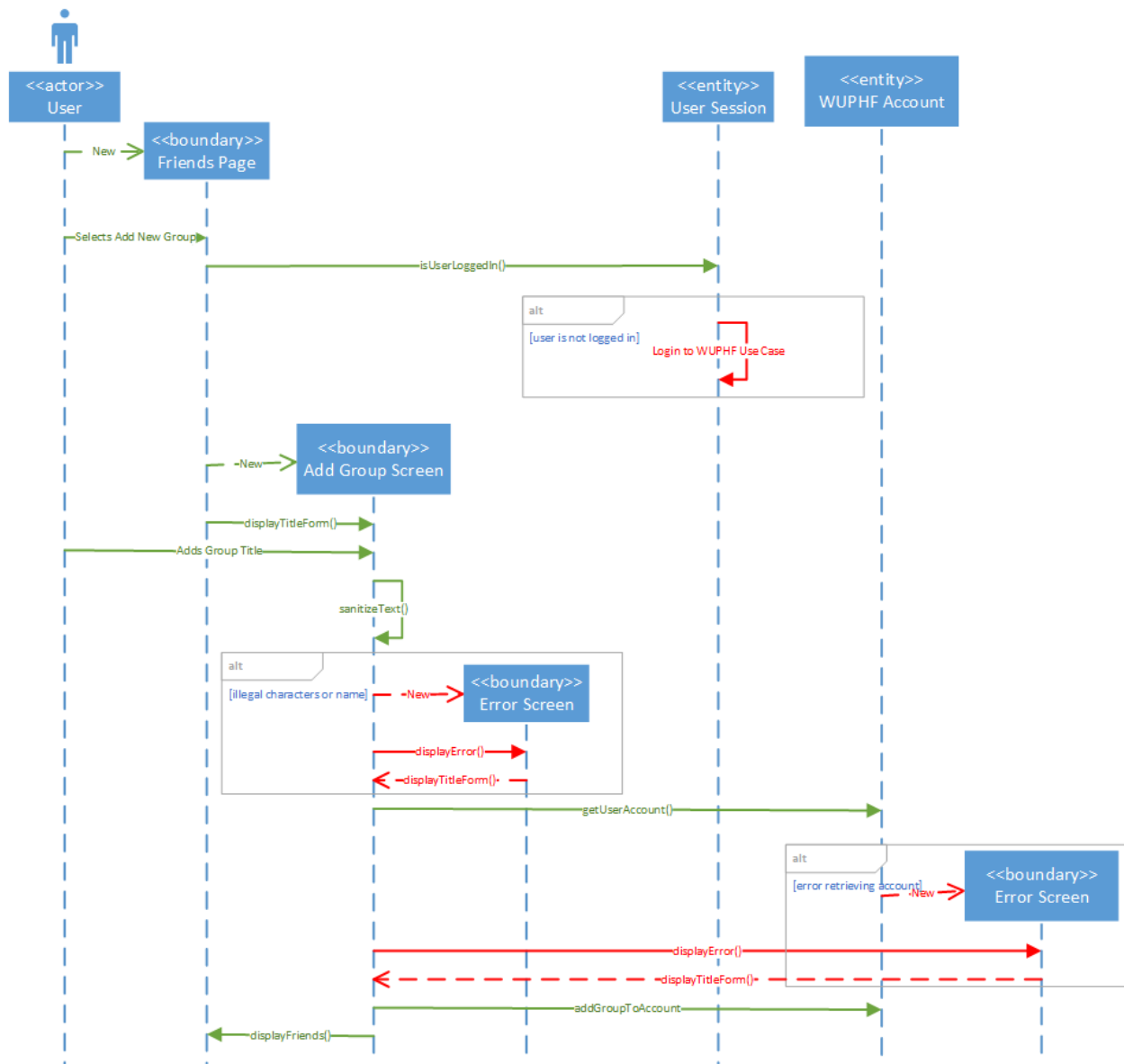
<Placeholder>

## Robustness Analysis



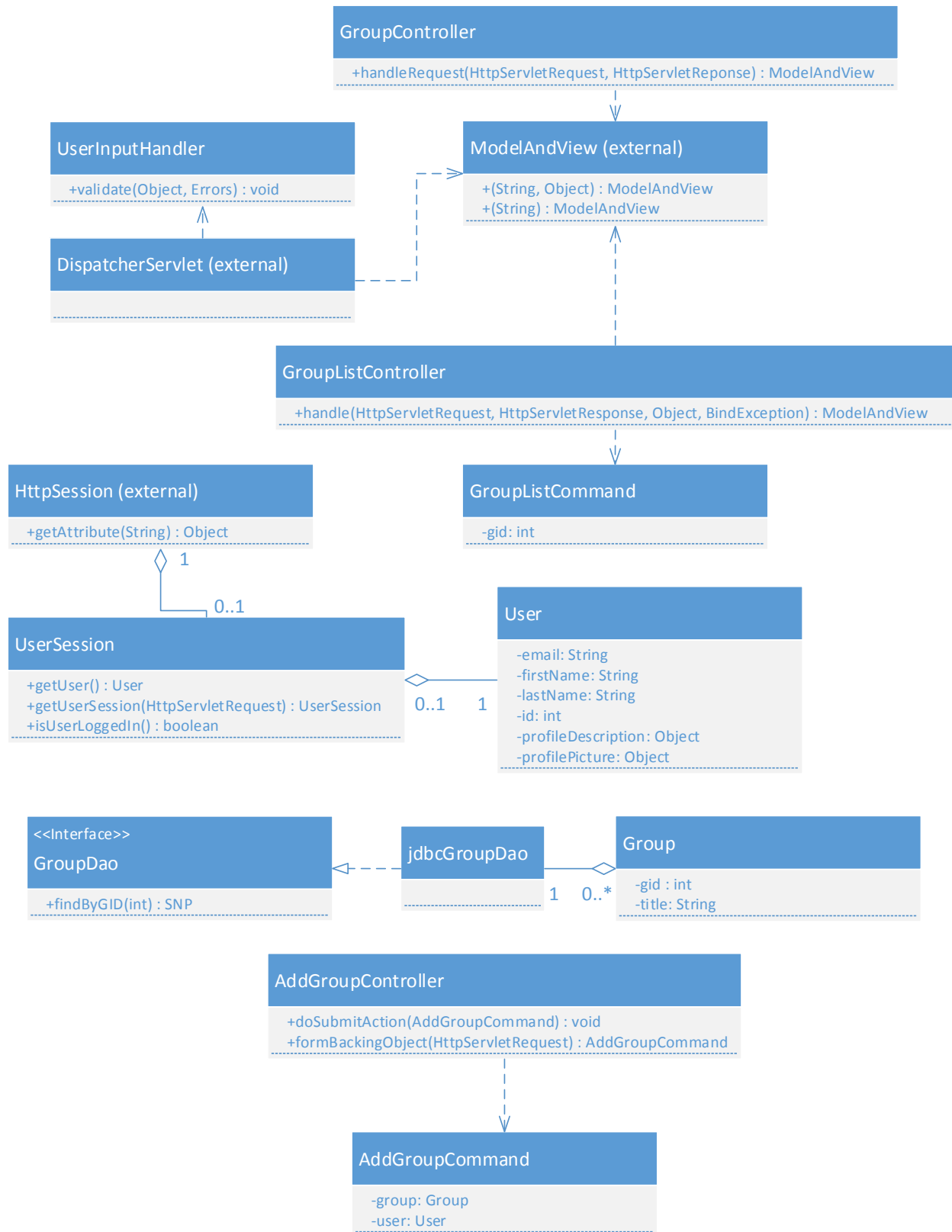
# WUPHF Project Proposal

## Sequence Diagram



# WUPHF Project Proposal

## Class Diagram



# WUPHF Project Proposal

## Wireframes

### Use Case: Create a Group

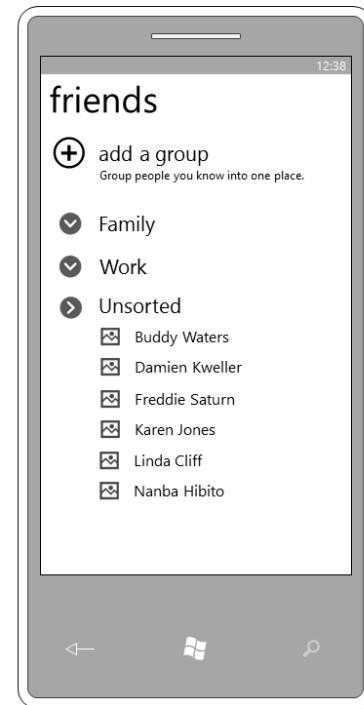
#### User Action:

The user selects a button to add a new group.

#### System Reaction

The system provides a method to enter in a group title.

Slide ID: UC-AGM-01



### Use Case: Create a Group

#### User Action:

The user fills out the form and submits the information.

#### System Reaction

The system displays the Friends Page with the new group added.

Slide ID: UC-AGM-02



# WUPHF Project Proposal

## Use Case: Create a Group

### User Action:

The user fills out the form and submits the information.

### System Reaction

The system displays the Friends Page with the new group added.

Slide ID: UC-AGM-03

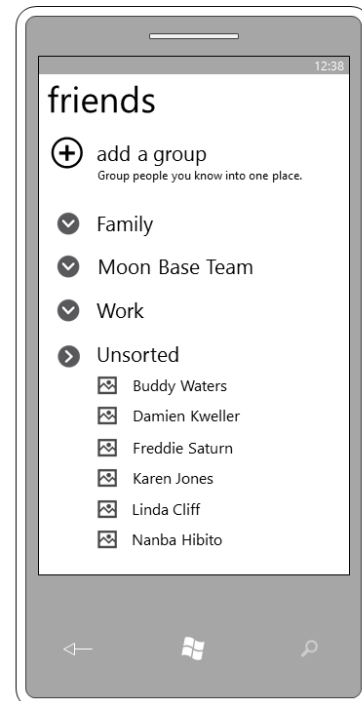


## Use Case: Create a Group

### User Action:

### System Reaction

Slide ID: UC-AGM-04



*Add a Friend to a Group*

<Placeholder>

# WUPHF Project Proposal

*Move a Friend from one Group to another*

<Placeholder>

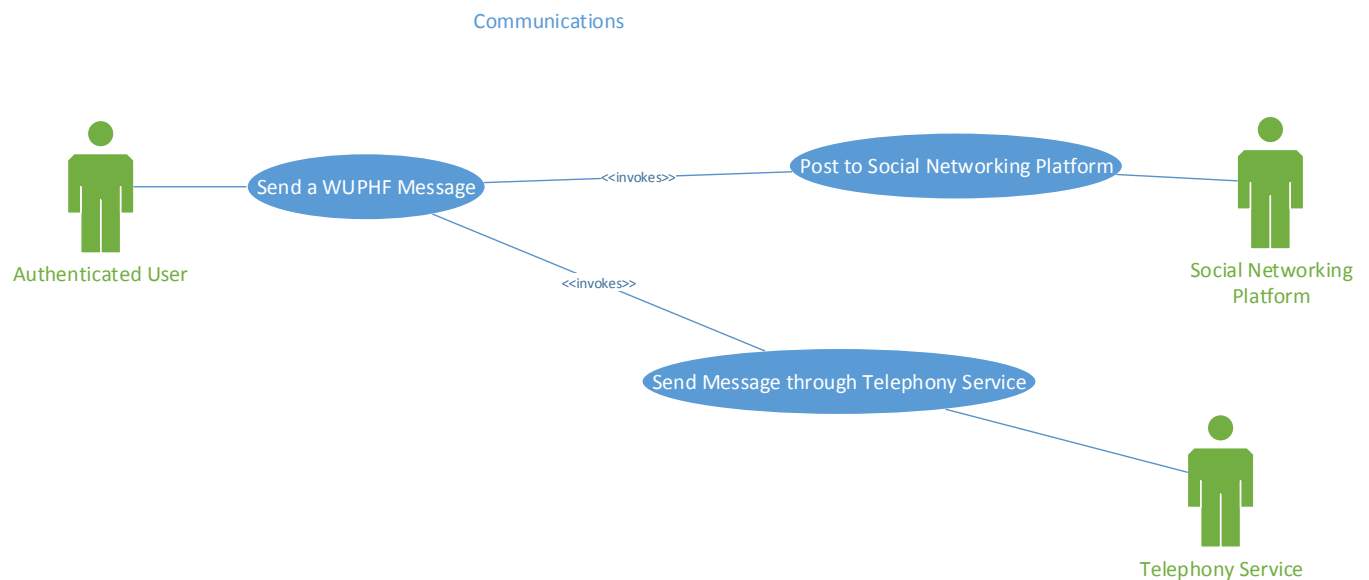
*Remove a Friend from a Group*

<Placeholder>

*Delete a Group*

<Placeholder>

## Communications



*Send a WUPHF Message*

This use case diagram details sending a **WUPHF Message**. (Traceable to requirements: FR-DG-01, FR-DG-02)

### Use Case

#### Basic Course

The WUPHF user clicks the new message artifact, and the system displays the new message page. The user selects the WUPHF friend they wish to message from the recipient selection artifact, and the system displays the WUPHF friend in the recipient selection artifact. The user enters their message as text into the compose message artifact, and the system displays the message in the compose message

# WUPHF Project Proposal

artifact. The WUPHF user clicks the send WUPHF message artifact, and the system sends the message to all of the communication mediums linked with the WUPHF friend recipient.

## *Alternate Course*

**The user clicks the send message artifact without adding any text to the compose message artifact:**

The system displays the error message, "The message does not contain any text. The message was not sent."

**The user clicks the send message artifact without selecting a recipient in the select recipient artifact:**

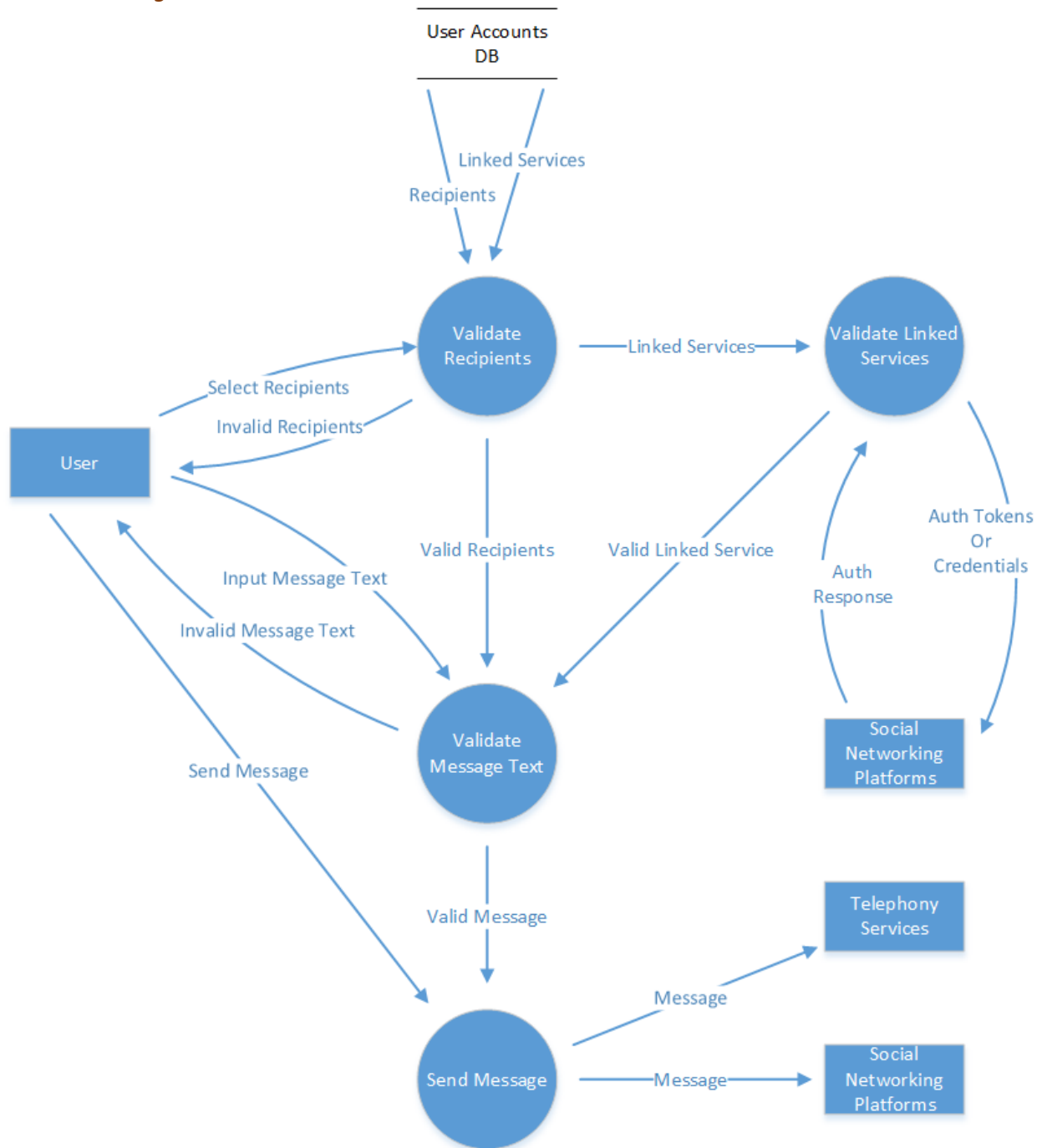
The system displays the error message, "Please select a recipient. The message was not sent."

**The user clicks the send message artifact while the WUPHF application is not connected to the**

**internet:** The system displays the error message, "The message was not sent. WUPHF is not connected to the internet"

# WUPHF Project Proposal

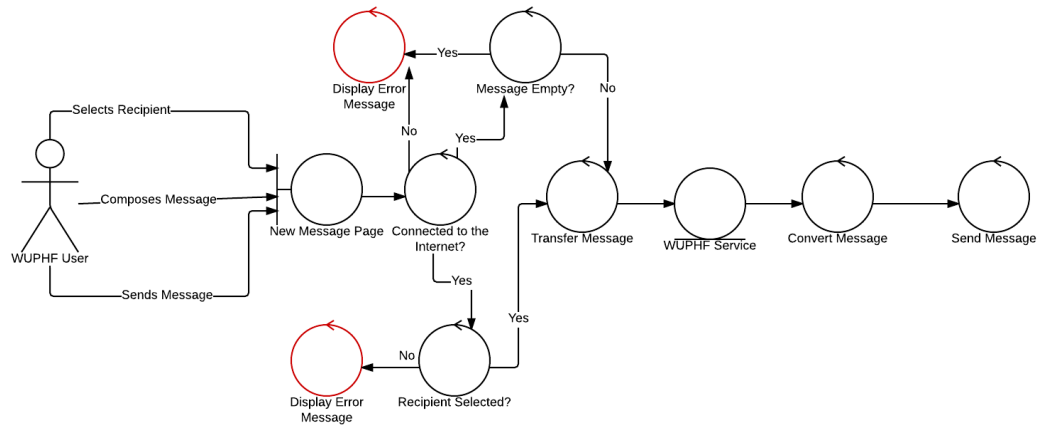
*Data Flow Diagram*





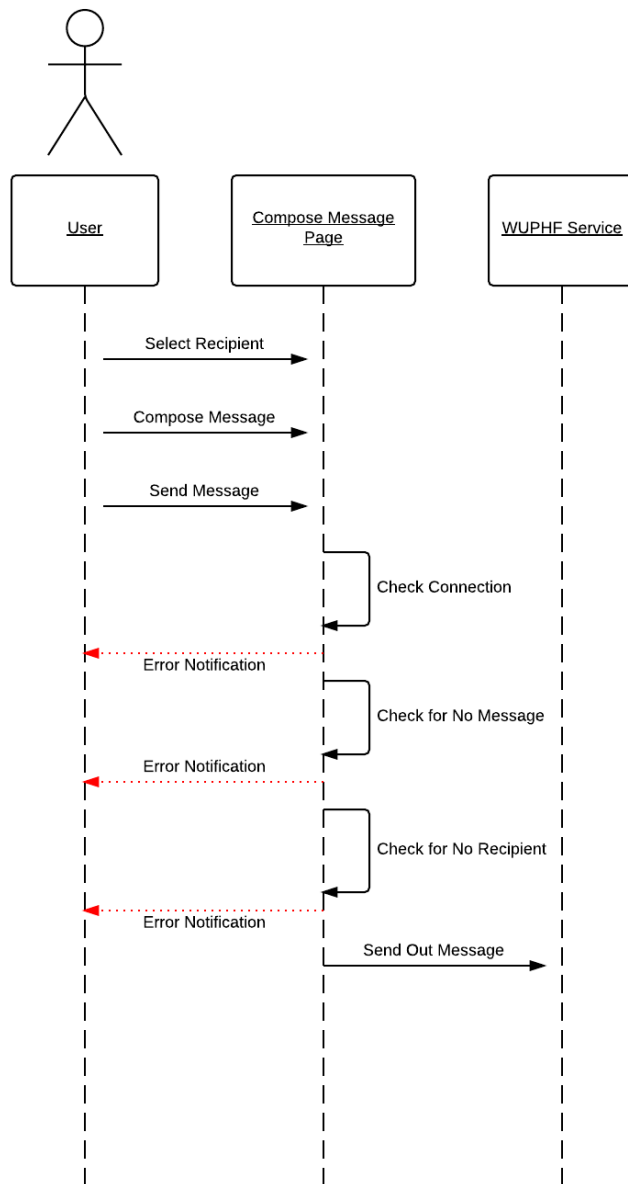
# WUPHF Project Proposal

## Robustness Analysis



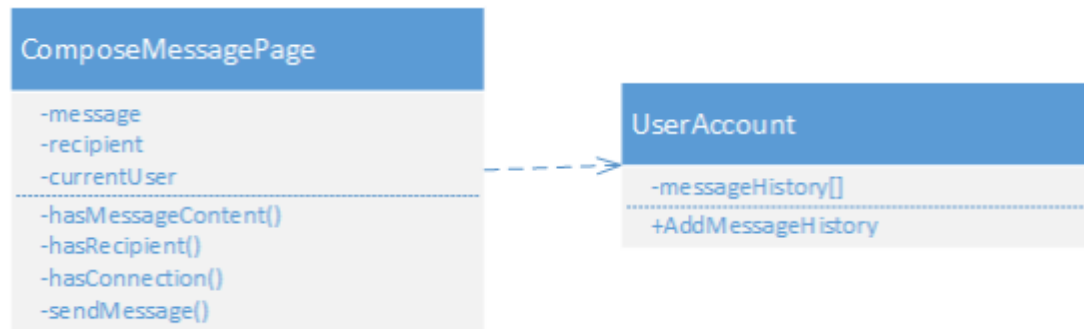
# WUPHF Project Proposal

## Sequence Diagram



# WUPHF Project Proposal

## Class Diagram



## Wireframes

### New Message Page

New Message

Recipient

Message

Send

### Post to Social Networking Platform

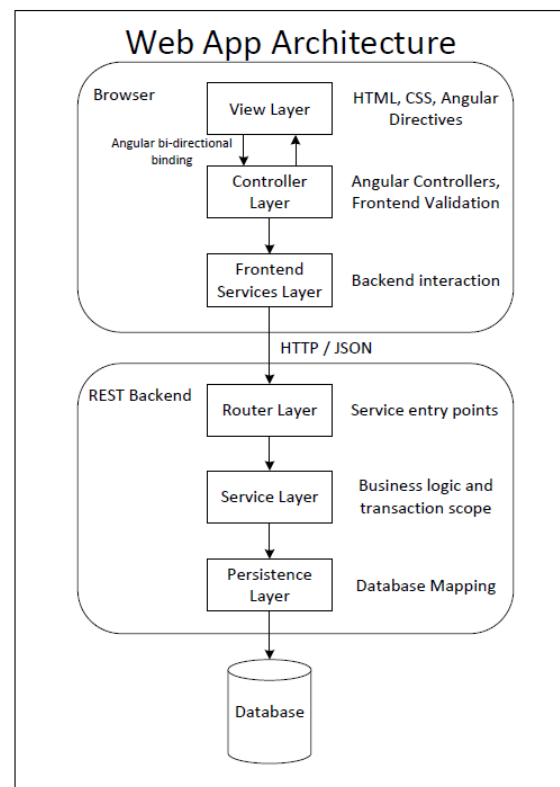
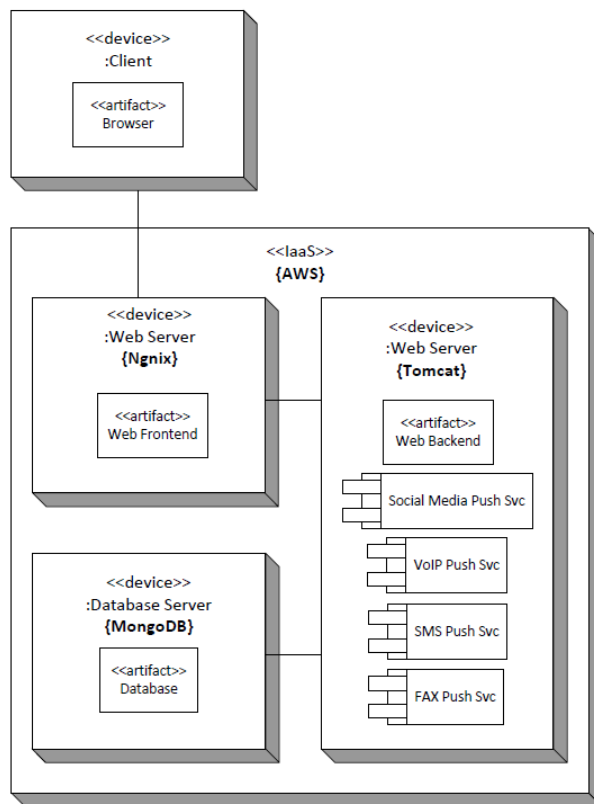
<Placeholder>

### Send Message through Telephony Service

<Placeholder>

# WUPHF Project Proposal

## Technical Architecture



As a form intensive web application, The WUPHF Service will be designed using Spring MVC and Angular JS together to build a productive and appealing frontend development stack. The UI will reside as a single page app on top of a RESTful API for a scalable web service. A Java frontend and Java backend make for a simplified, productive workflow.

The client contains all presentation logic with only JavaScript Object Notation (JSON) data transmitting between client and server. The server contains the domain model using a Domain-driven Design (DDD) approach where Domain Transfer Objects (DTOs) go by, but not on the domain model.

A responsibility of the controller is to perform frontend validations for user convenience (e.g., a user field is required). For security reasons, frontend validations need to be repeated on the backend service layer. The REST services should be minimally stateless to avoid sending credentials for each request.

## Specification Release Organization

### Release 1

Milestone 1 – Basic account functionality

- FR-AA-01
- FR-AA-02

# WUPHF Project Proposal

- FR-AA-03
- FR-AA-04
- FR-AA-05
- FR-AA-09
- FR-DA-01
- FR-DA-02

## Milestone 2 – Account maintenance functions

- FR-AA-07
- FR-AC-01
- FR-AC-02
- FR-AC-03
- FR-AC-05
- FR-AB-01
- FR-AB-02

## Milestone 3 – User searching, grouping, and friend management

- FR-DB-01
- FR-DB-02
- FR-DC-01
- FR-DC-02
- FR-DC-03
- FR-DE-01
- FR-DD-01

## Milestone 4 – Managing social network platforms (SNP)

- FR-BA-01
- FR-BB-01
- FR-BB-02
- FR-BB-03
- FR-BB-04
- FR-BB-06

## Milestone 5 – WUPHF Messaging via SNP

- FR-DG-01
- FR-DG-02

## Milestone 6 – Subscription and donation management

- FR-AE-01
- FR-AE-02
- FR-AF-01
- FR-AG-01
- FR-AG-02
- FR-DH-02
- FR-DH-03

## Release 2

### Milestone 1 – Advanced communication management

# WUPHF Project Proposal

- FR-BB-05
- FR-BC-04
- FR-BC-05

## Milestone 2 – Advanced user management

- FR-DF-01
- FR-DF-02
- FR-DF-03
- FR-AD-01

## Milestone 3 – Advanced group management

- FR-DD-02
- FR-DD-03
- FR-DD-04
- FR-DD-05
- FR-DD-06

## Milestone 4 – Enhanced profile management

- FR-AA-06
- FR-AC-04
- FR-AF-02

## Milestone 5 – Managing telephony services

- FR-BA-03
- FR-BC-01
- FR-BC-02
- FR-BC-03
- FR-BC-06

## Milestone 6 – Localization and additional language support

- FR-AA-10
- FR-AC-06