CIS 320-01

Elaboration Spec

Due Date: 12/11/17

Carlos Acevedo, Nathan Colyer, Kari Dunn, Nick Stewart

Requirements

Physician, Non-Physician clinical, interpreter, and general volunteer and Donors personal information will be entered and can be modified. Donors will be acknowledged and will have a way to share their contribution in social media. Event management will be facilitated by having an easy access to volunteer information as well as an effortless way of tracking the volunteer participation. The system will inform visitors about news and patient stories, the system will allow the visitor to translate the website to their preferred language.

Nonfunctional Requirements

1. **Operational Requirements**
   1.1 System will track volunteer dates and hours based on sign in sign out time.
   1.2 System will allow uploading of pdf files.

Functional Requirements

1. **Manage Medical Volunteer Information**
   1.1 The system will enable to enter Physician personal information.
   1.2 The system will enable to modify the Physician personal information.
   1.3 The system will enable to delete the Physician personal information.
   1.4 The system will enable to enter Non- Physician Clinical personal information.
   1.5 The system will enable to modify the Non- Physician Clinical personal information.
   1.6 The system will enable to delete the Non- Physician Clinical personal information.
   1.7 The system will allow the interpreter to enter their personal information.
   1.8 The system will enable to modify the interpreter personal information.
   1.9 The system will enable to delete the interpreter personal information.

2. **Manage Non-Medical Information**
   2.1 The system will allow non-Clinical volunteer to enter their personal information.
   2.2 The system will enable to modify the non-Clinical volunteer personal information.
   2.3 The system will enable to delete the non-Clinical volunteer personal information.

3. **Manage Donor Information**
   3.1 Donors will enter in their personal information.
   3.2 Donors will enter in a specific donation amount, recurring or nonrecurring.
   3.3 The system may allow donors to cancel a donation.
   3.4 The system may produce an automated receipt.
   3.5 The system may automate thank you to donors.
   3.6 The system may allow donors to sign up to a newsletter.
   3.7 The system may enable users to create data reports.

3.8 The system may enable the donor to share their donation status to social media.

4. Search and Browse

4.1 The system will allow the user to search for upcoming events.
4.2 The system will allow the user to search for partner clinic locations.
4.3 The system will allow the user to browse S.O.S. news.
4.4 The system will allow the user to browse patient stories.

5. Event Time Management

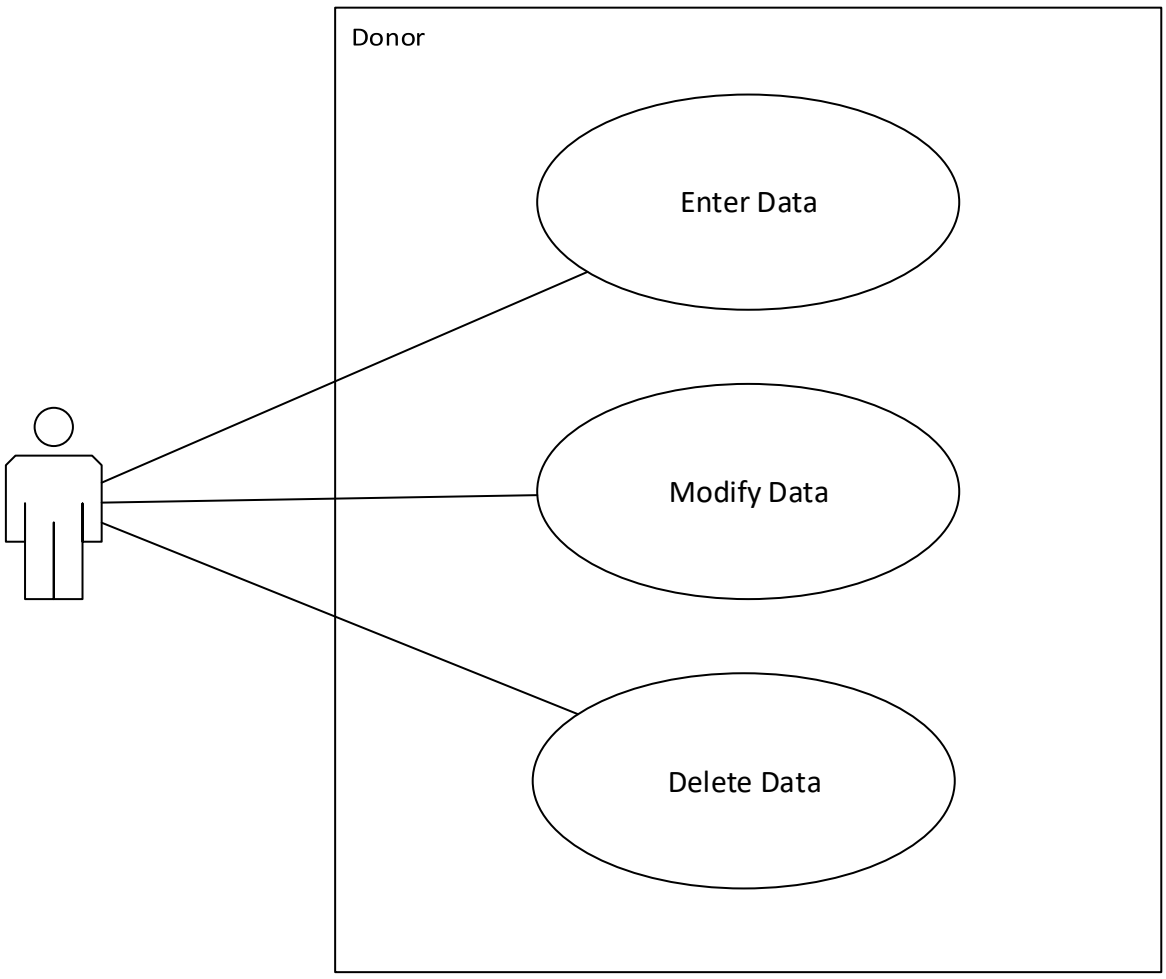
5.1 Administrator will allow access to event log in/out form with password
5.2 Volunteers will sign in to an event.
5.3 Volunteers will sign out of an event.

6. Language Change

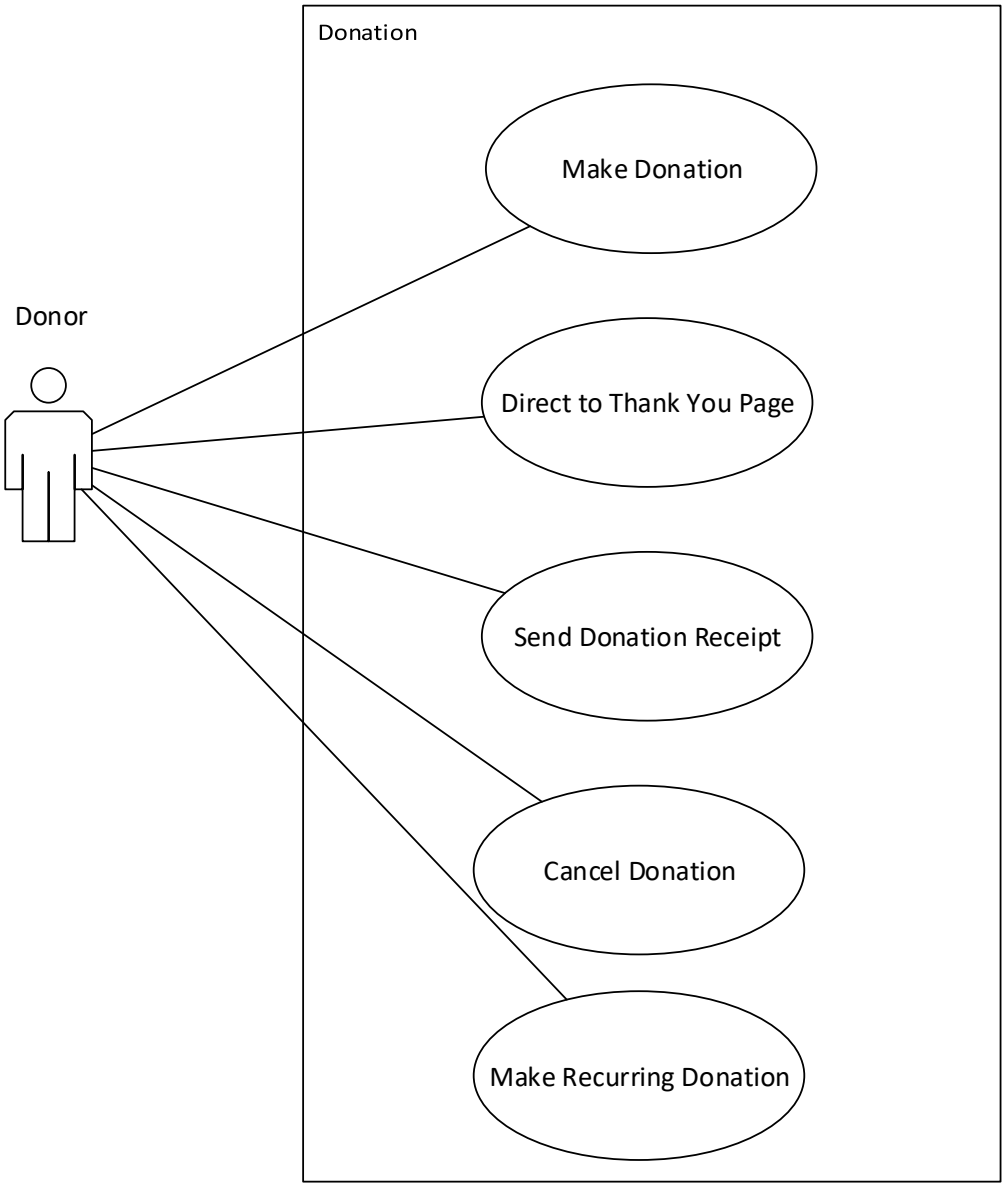
6.1 The system will allow the user to translate the website to Spanish.

Use Case Diagrams

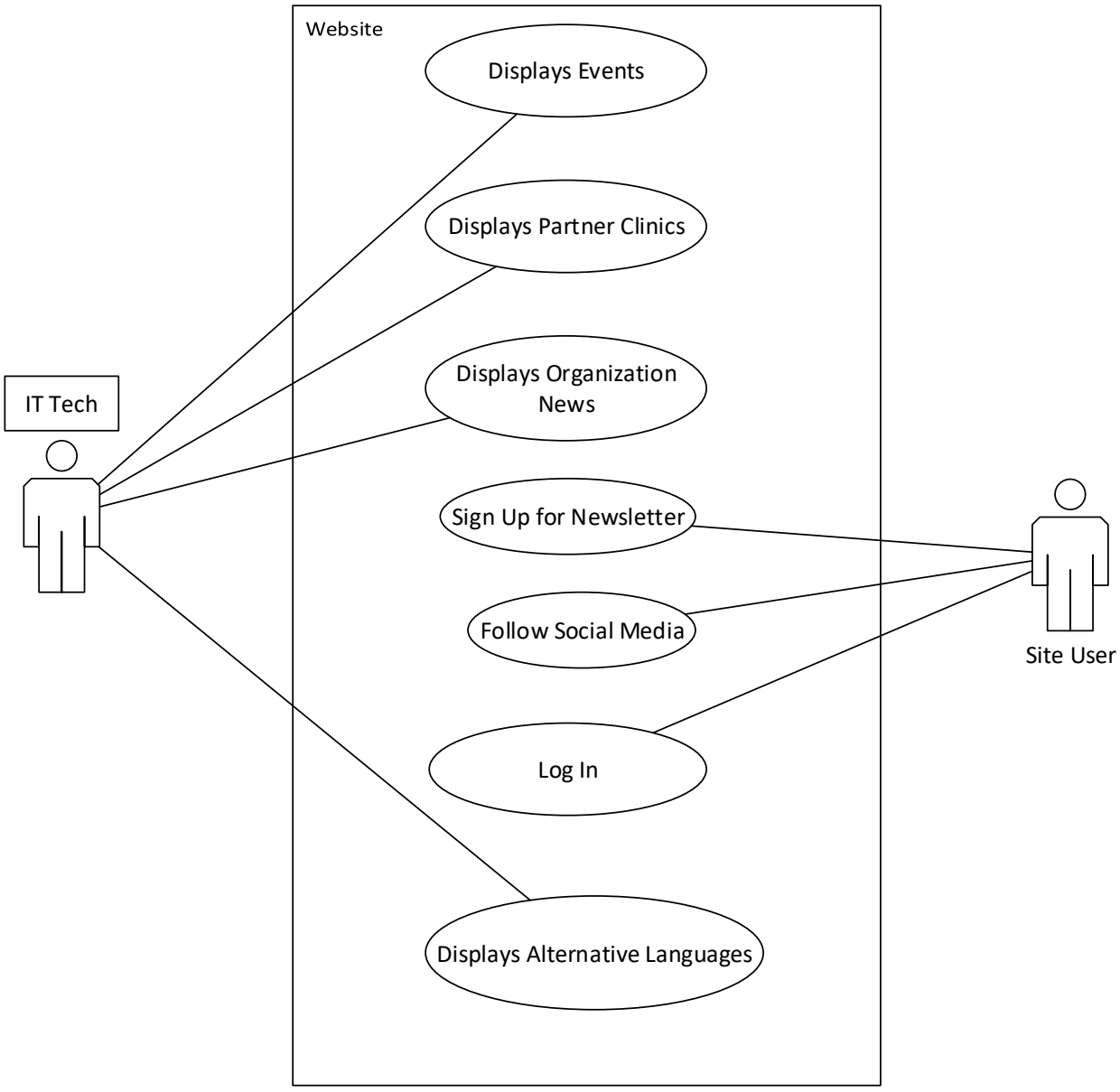
This use case diagram depicts the interaction between the donor and the system when the donor enters, modifies or deletes their data.



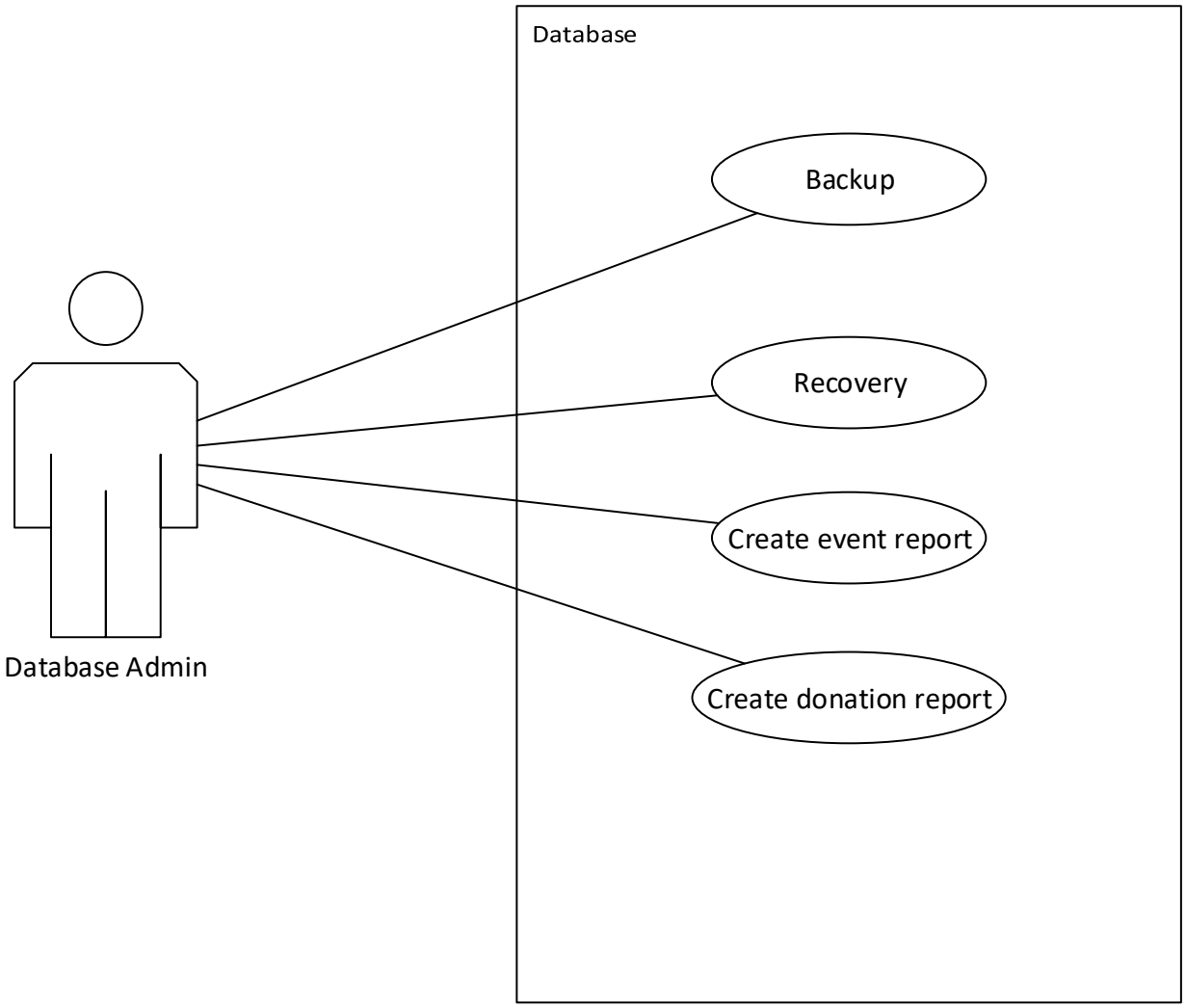
This use case diagram depicts the interaction between the donor and the system when the donor makes a donation, is sent to the thank you page and a receipt is sent, or when a donor cancels a donation.



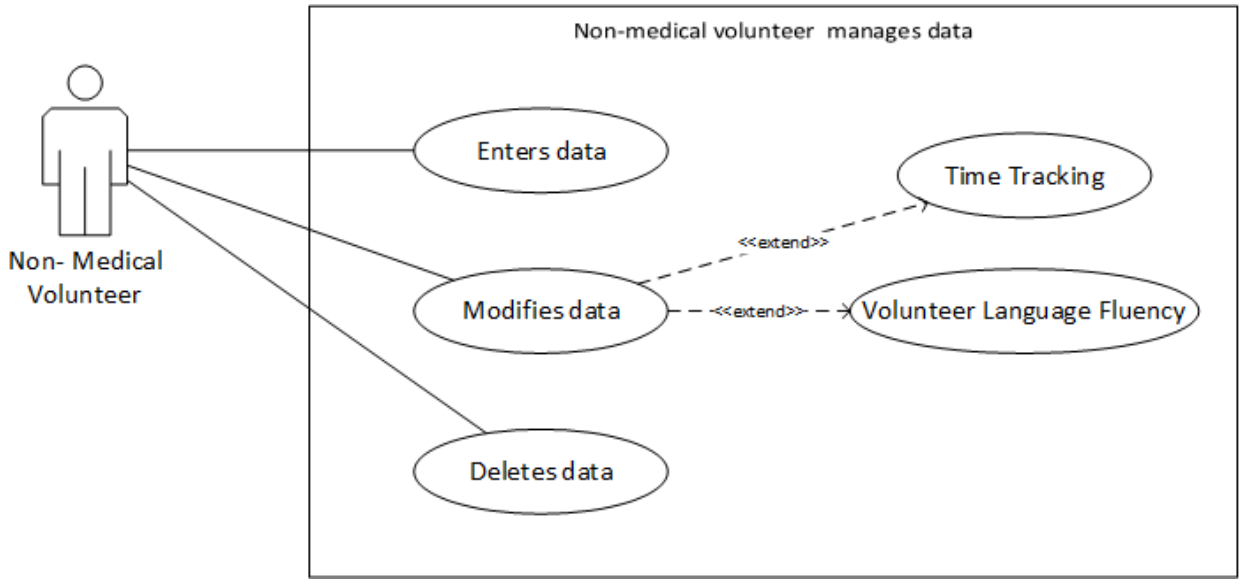
This use case depicts the relationship between the IT tech and the features of the website as well as a site user or visitor. The website displays events, partner clinics, organization news and alternative languages. The user may also log in, follow the organization on social media, or sign up for the newsletter.



This is a use case diagram showing the relationship between the database admin and the system in backing up data, recovery of the data, and creating reports from the data.



This use case diagram depicts the interaction between the system and the non-medical volunteer when the non-medical volunteer enters, modifies, and deletes their data. This also includes updating time and their language.



Trace Matrix

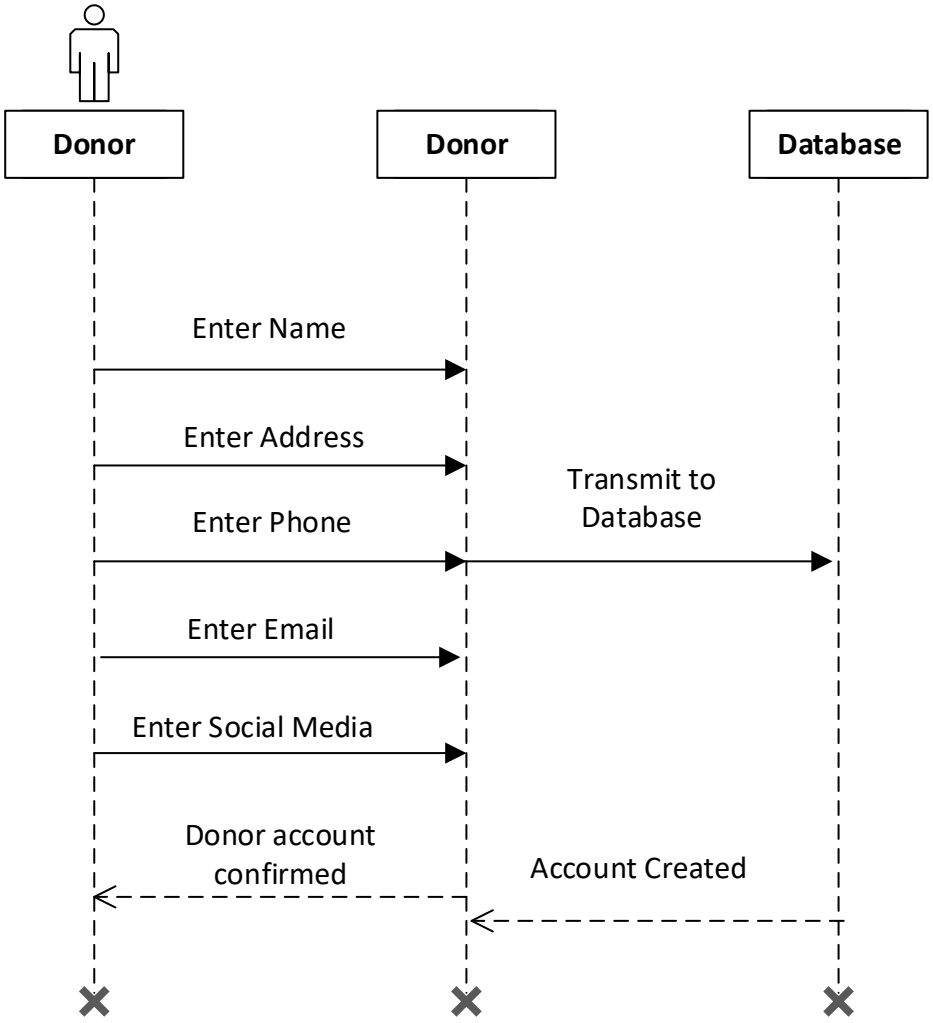
A trace matrix is a graphical representation of the relationship between the use cases and entities.

Related Use Case	Nurse	Doctor	Volunteer	Medical Volunteer	Donor	SOS Staff	Database	Events	System	Website
System time tracking	x	x	x	x		x		x		
Sign In	x	x	x	x		x		x		
Sign Out	x	x	x	x		x		x		
Enters Data	x	x	x	x		x				
Modifies Data	x	x	x	x		x				
Deletes Data	x	x	x	x		x				
Make Donation					x					
Cancel Donation					x					
Create Report						x	x		x	
Share Social Media Contact	x	x	x	x	x					
Upload pdf Files	x	x	x	x		x				
Display Upcoming Events										x
Display Partner Clinics										x
S.O.S Newsletter										x
Patient stories										x
Translate Website										x
Send donation reciept									x	
Direct to Thank you page										x
Backup									x	

Sequence Diagrams

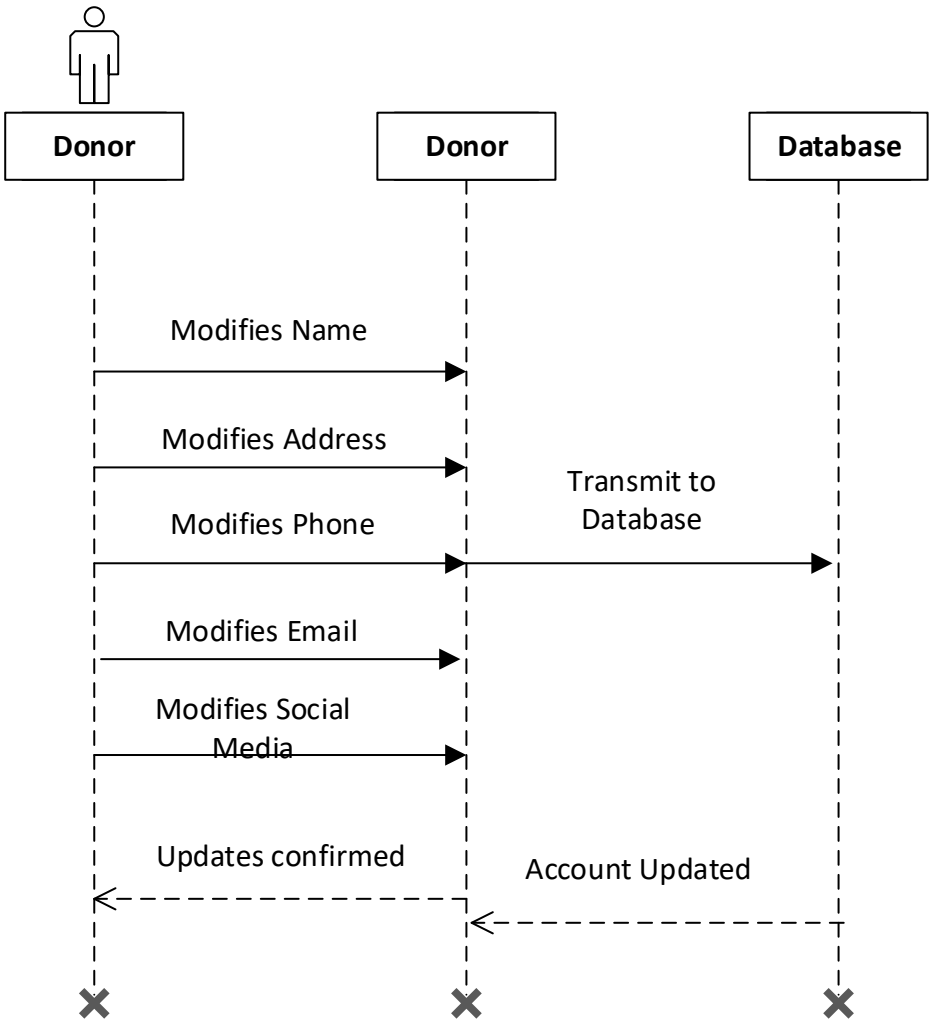
This diagram shows the sequence of events for a donor to enter information.

Donor Enters Data



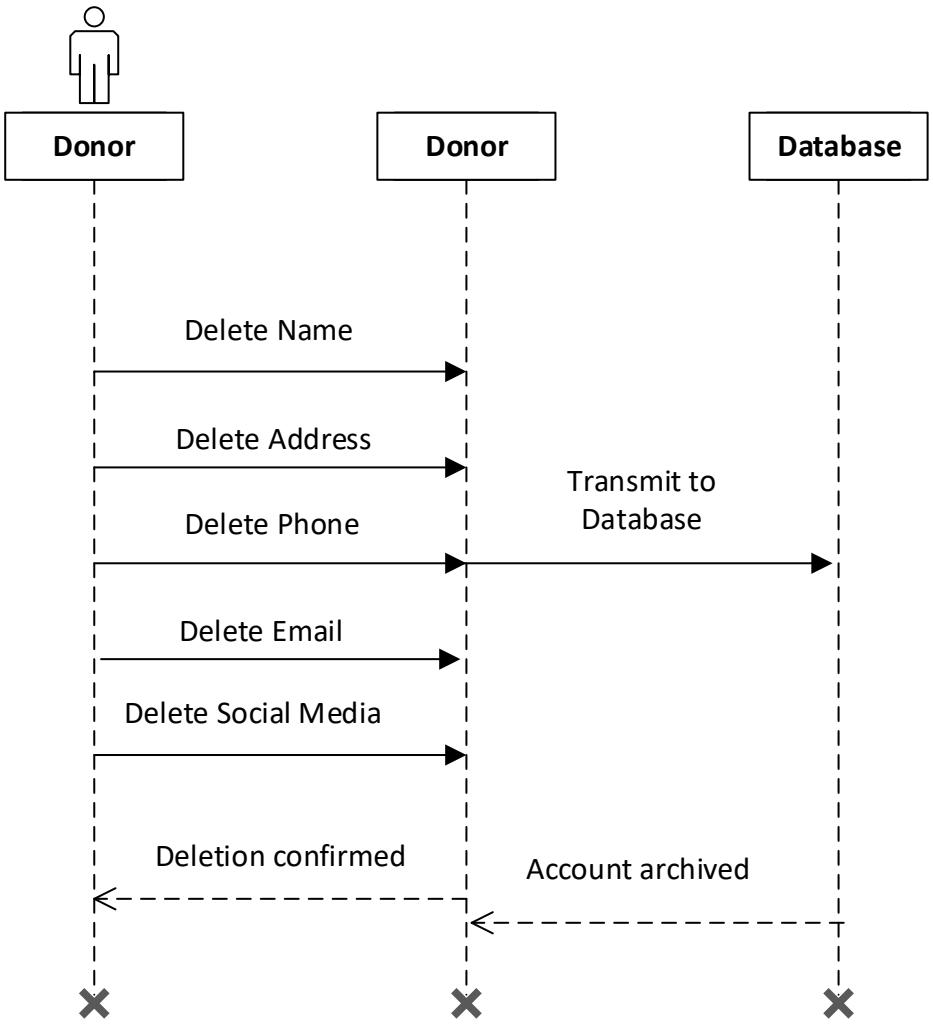
This diagram shows the sequence of events for a donor to modify information.

Donor Modifies Data



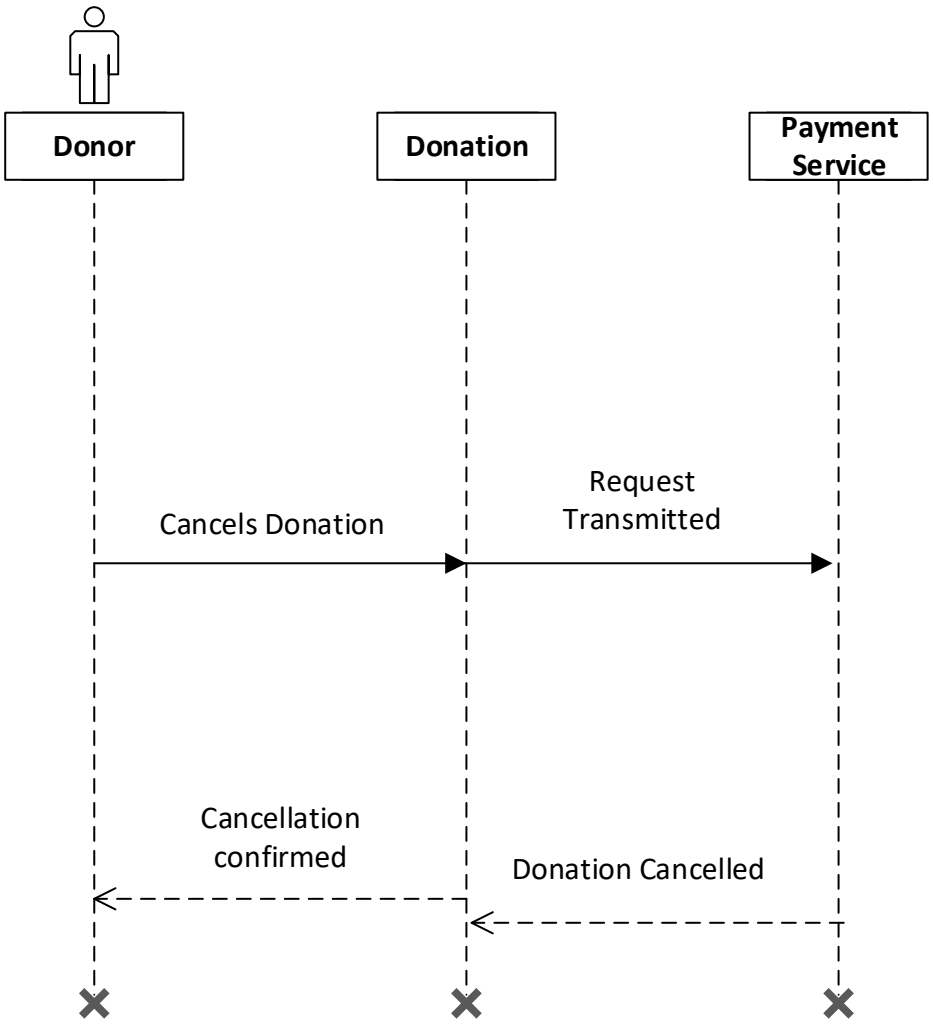
This diagram shows the sequence of events for a donor to delete information.

Donor Deletes Data



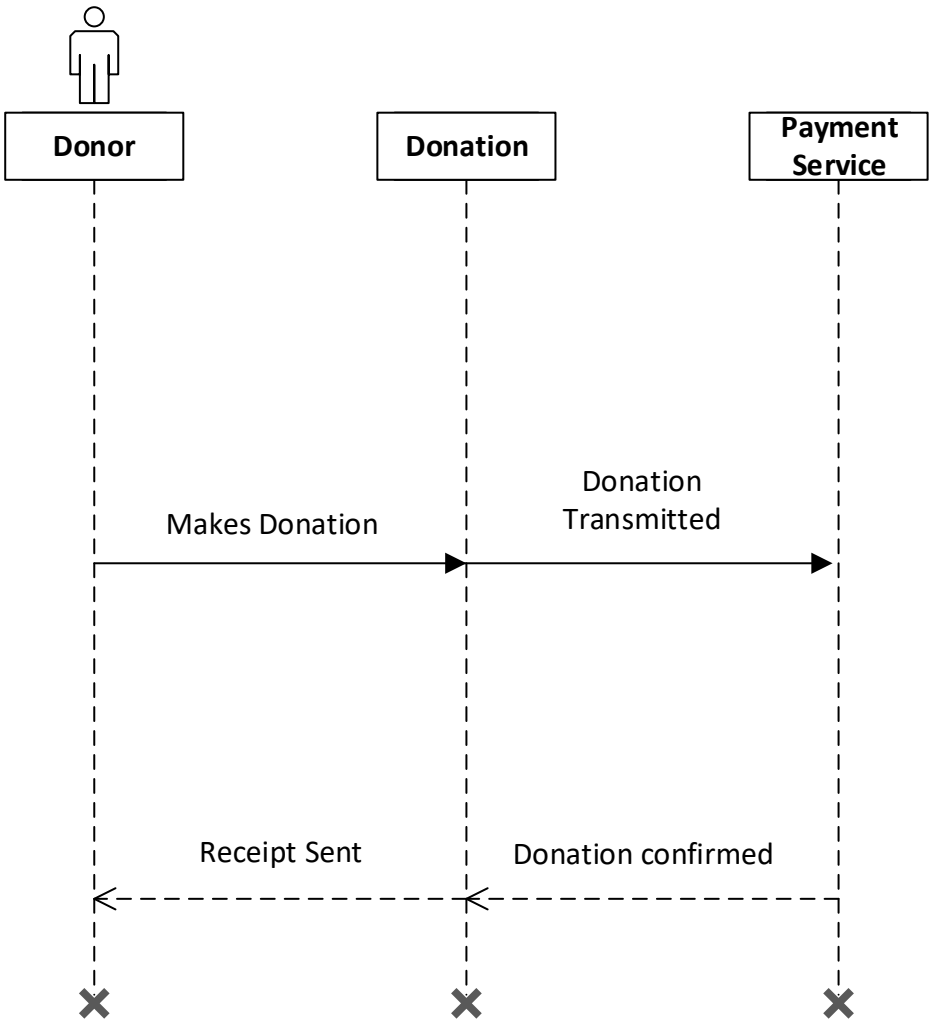
This diagram shows the sequence of events for a donor to cancel a donation.

Donor Cancels Donation



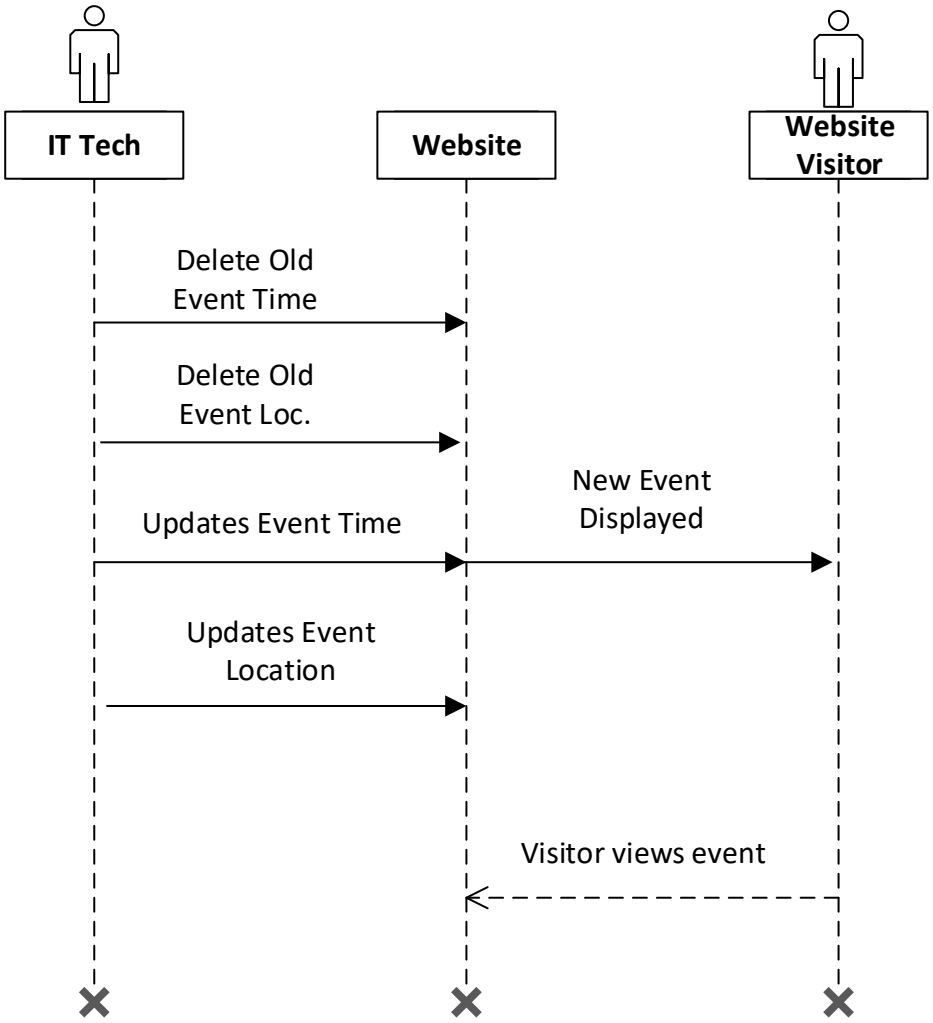
This diagram shows the sequence of events to send a receipt to donor.

Donation Receipt Sent



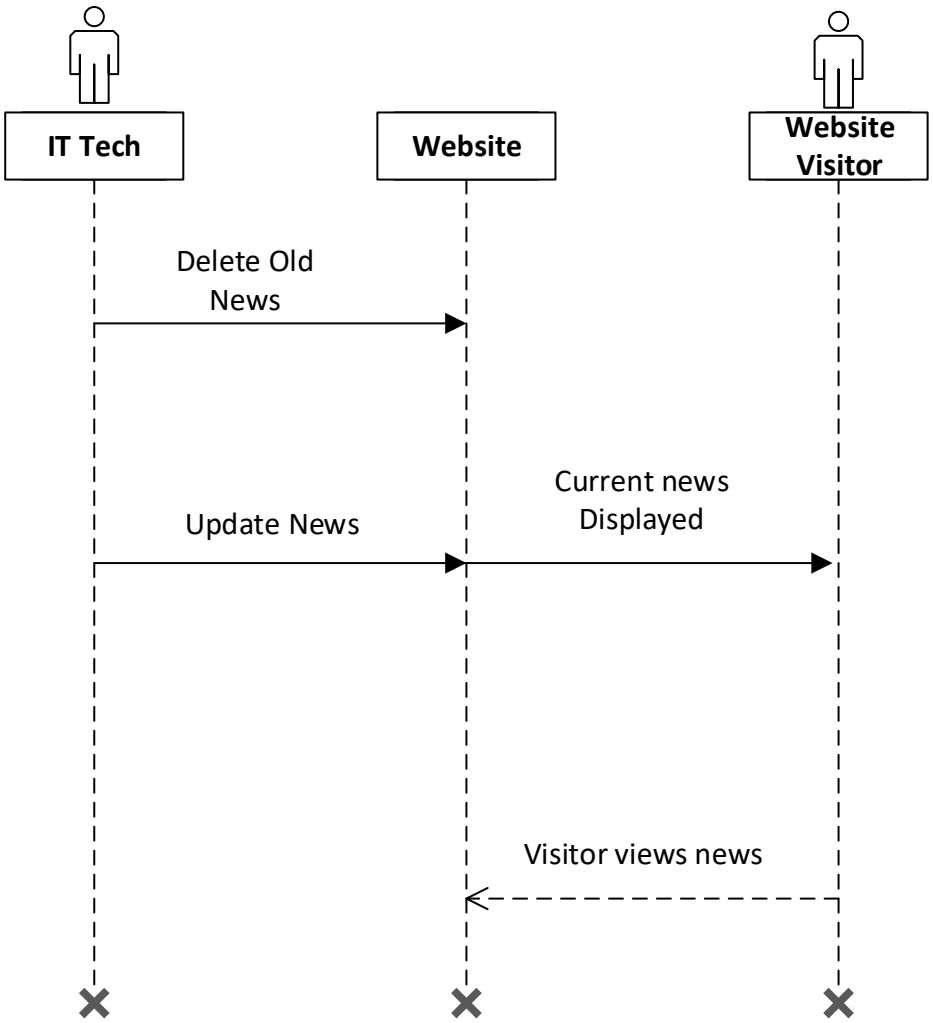
This diagram shows the sequence of events to display upcoming events on the website.

Display Events



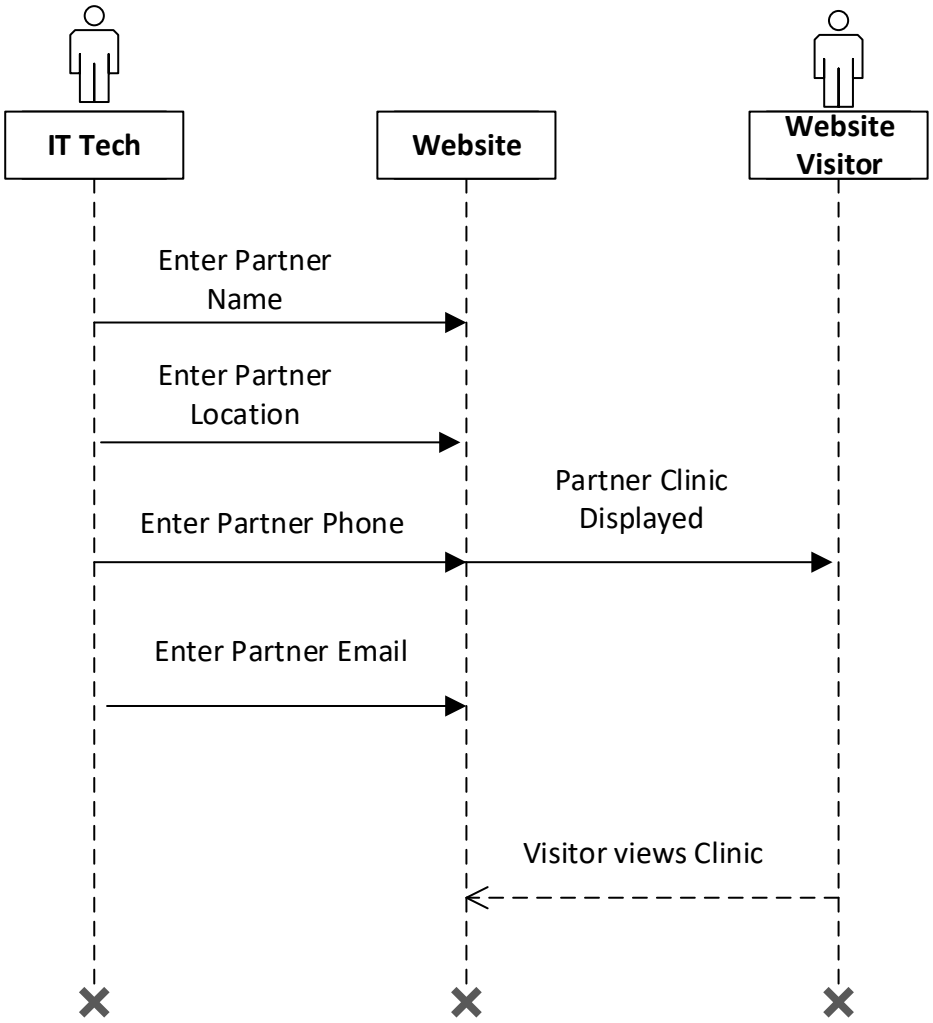
This diagram shows the sequence of events to display organization news on the website.

Display News

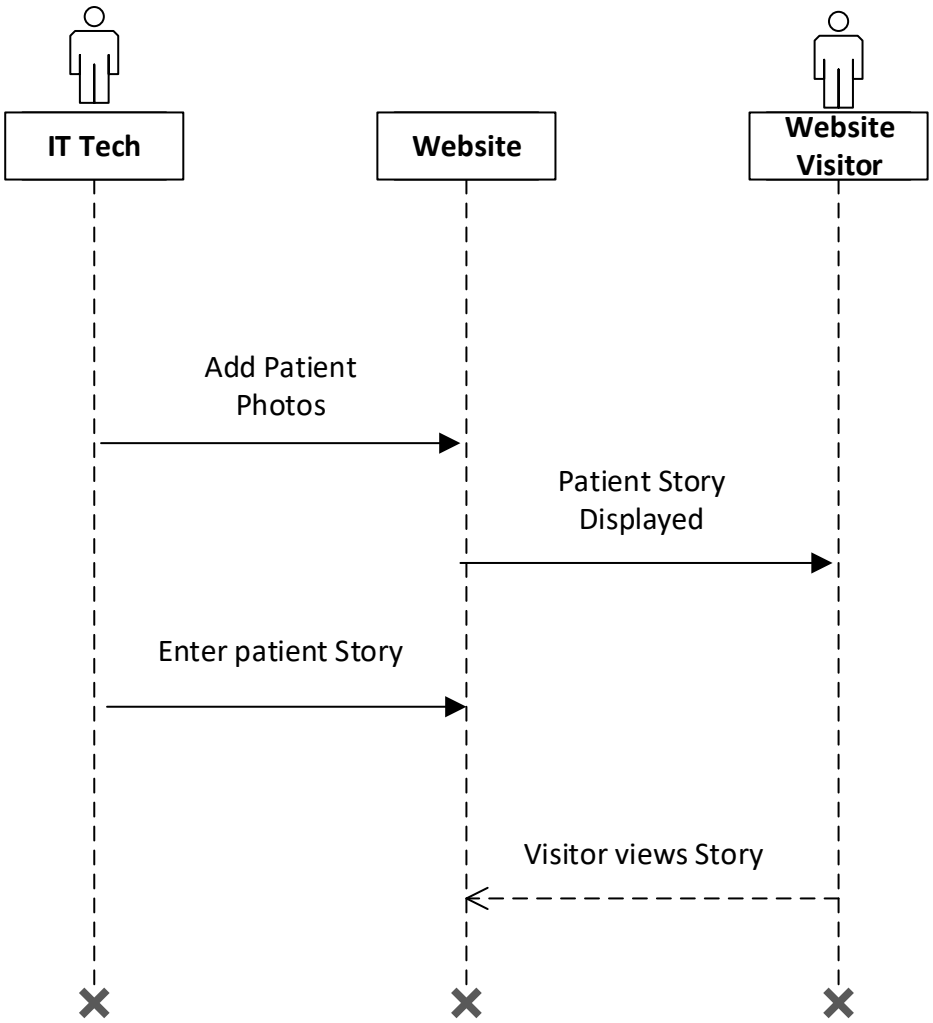


This diagram shows the sequence of events to display partner clinics on the website.

Display Partner Clinics

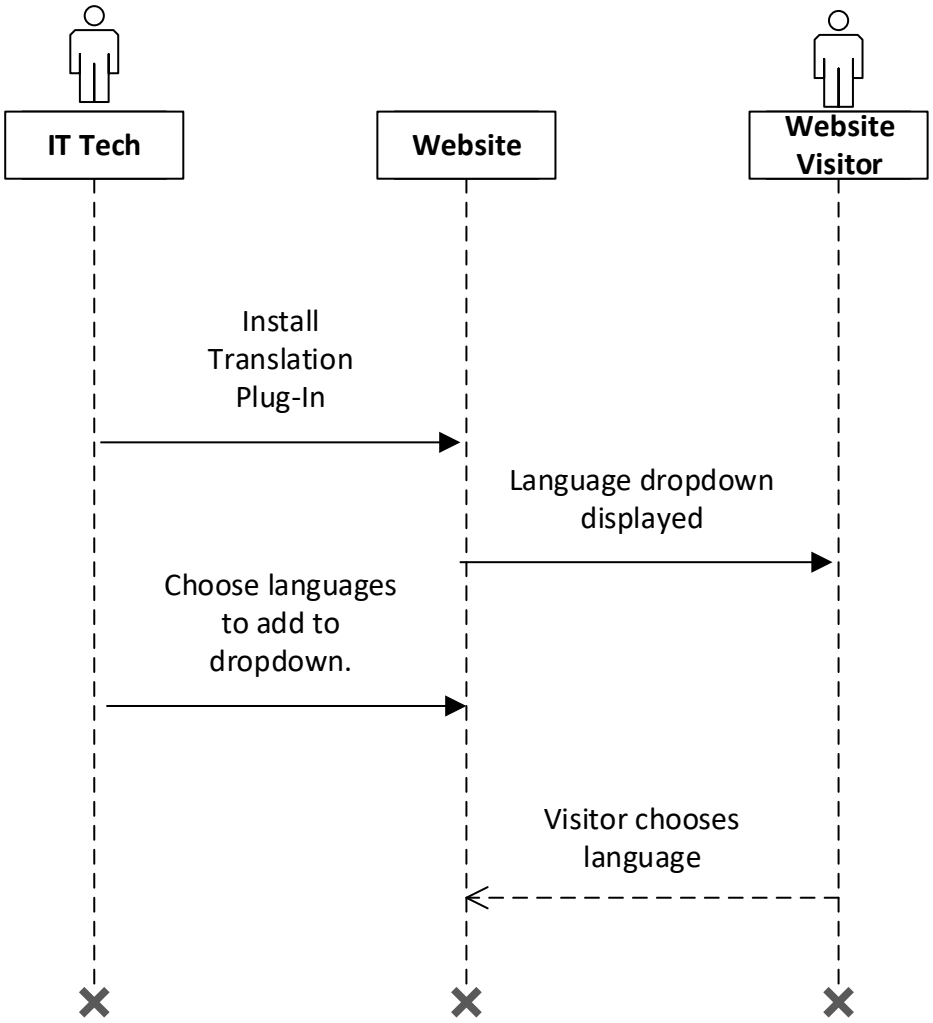


This diagram shows the sequence of events to display patient stories on the website.

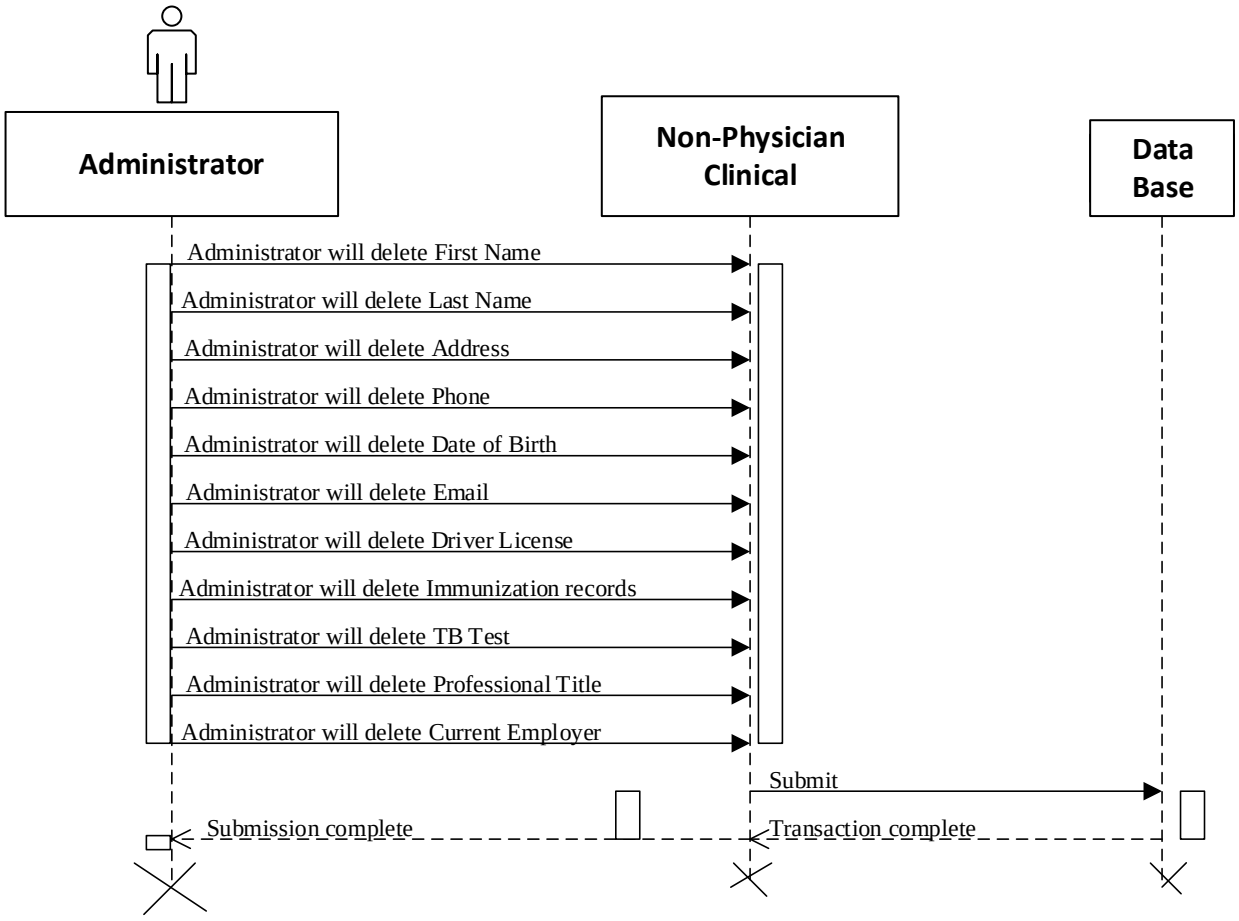


This diagram shows the sequence of events when the website is translated into another language.

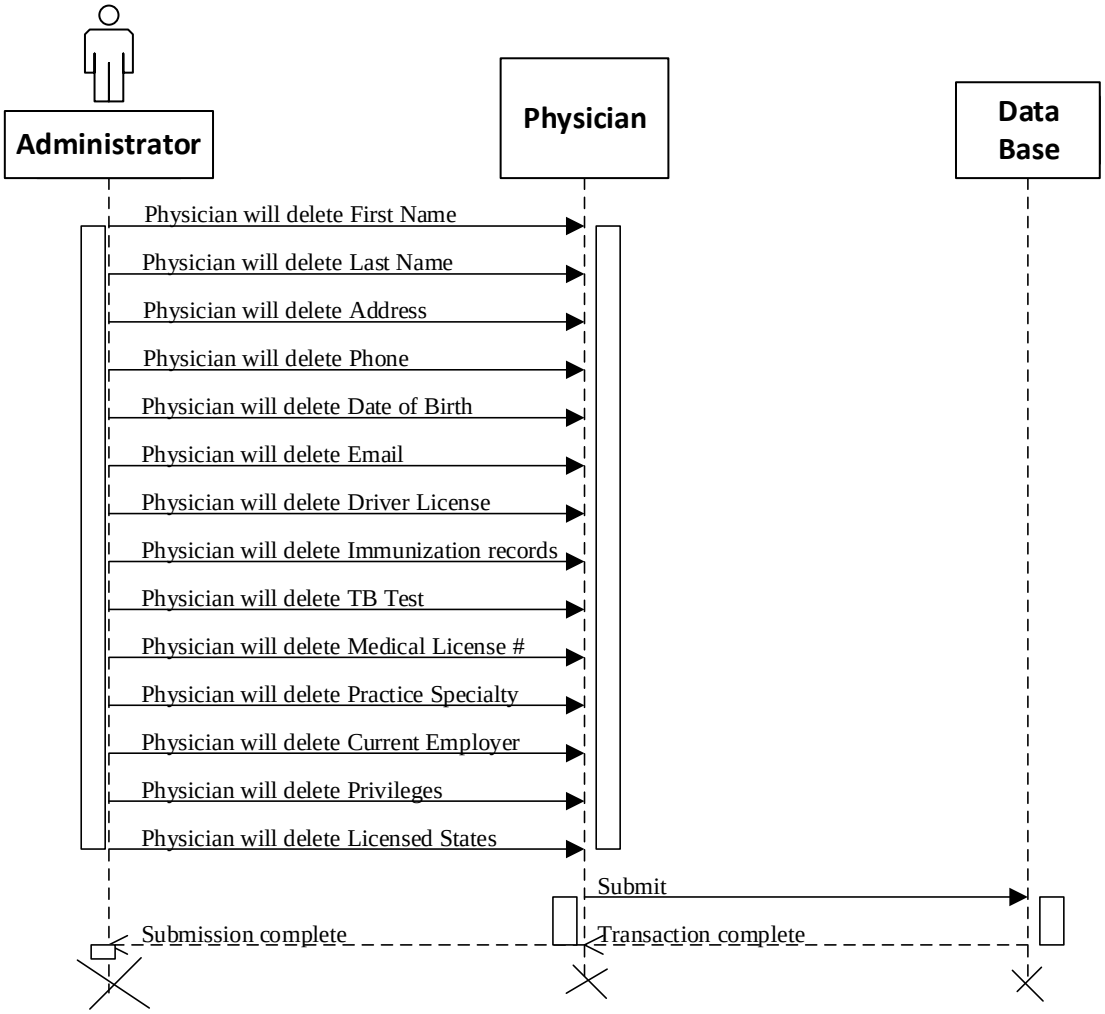
Display Translated Website



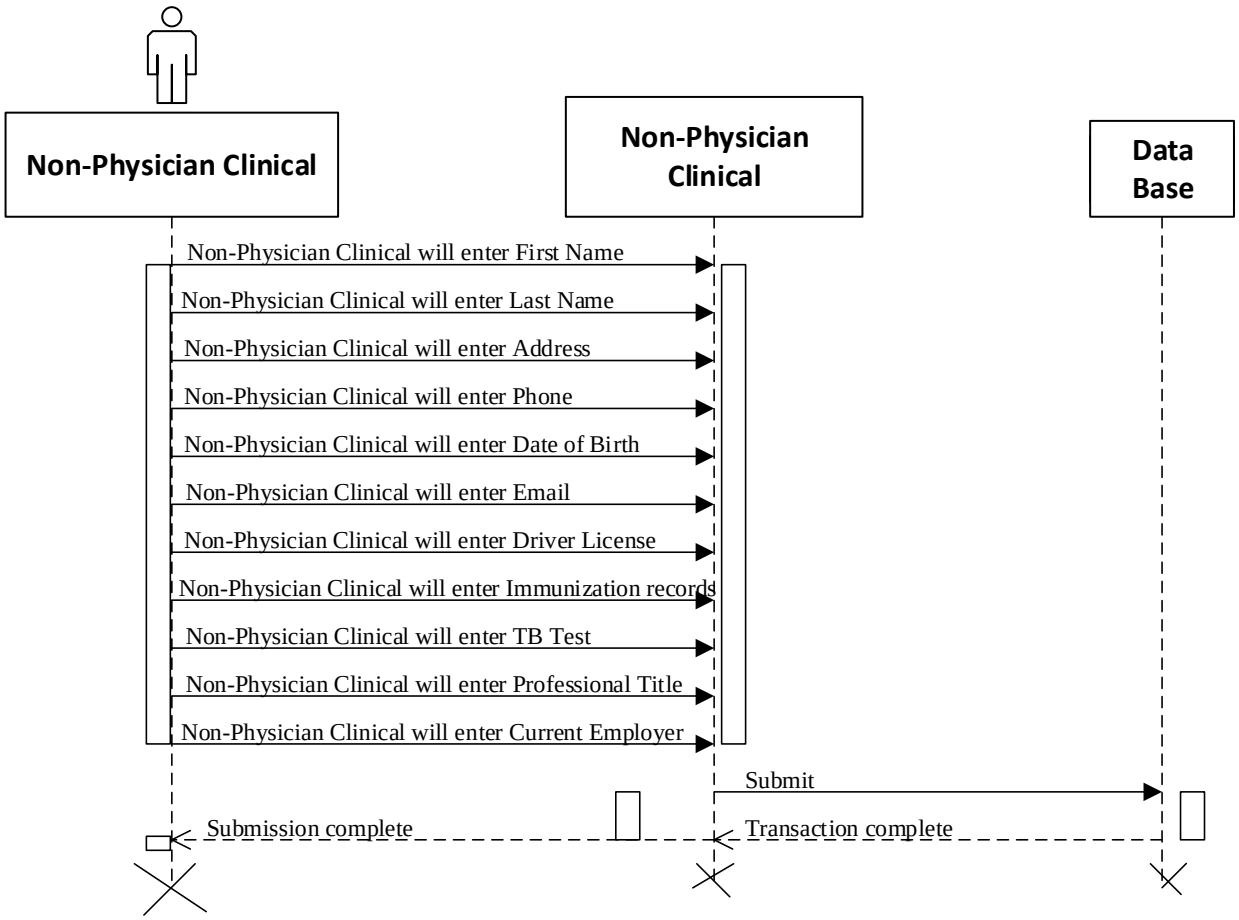
Delete Non-Physician Clinical Data



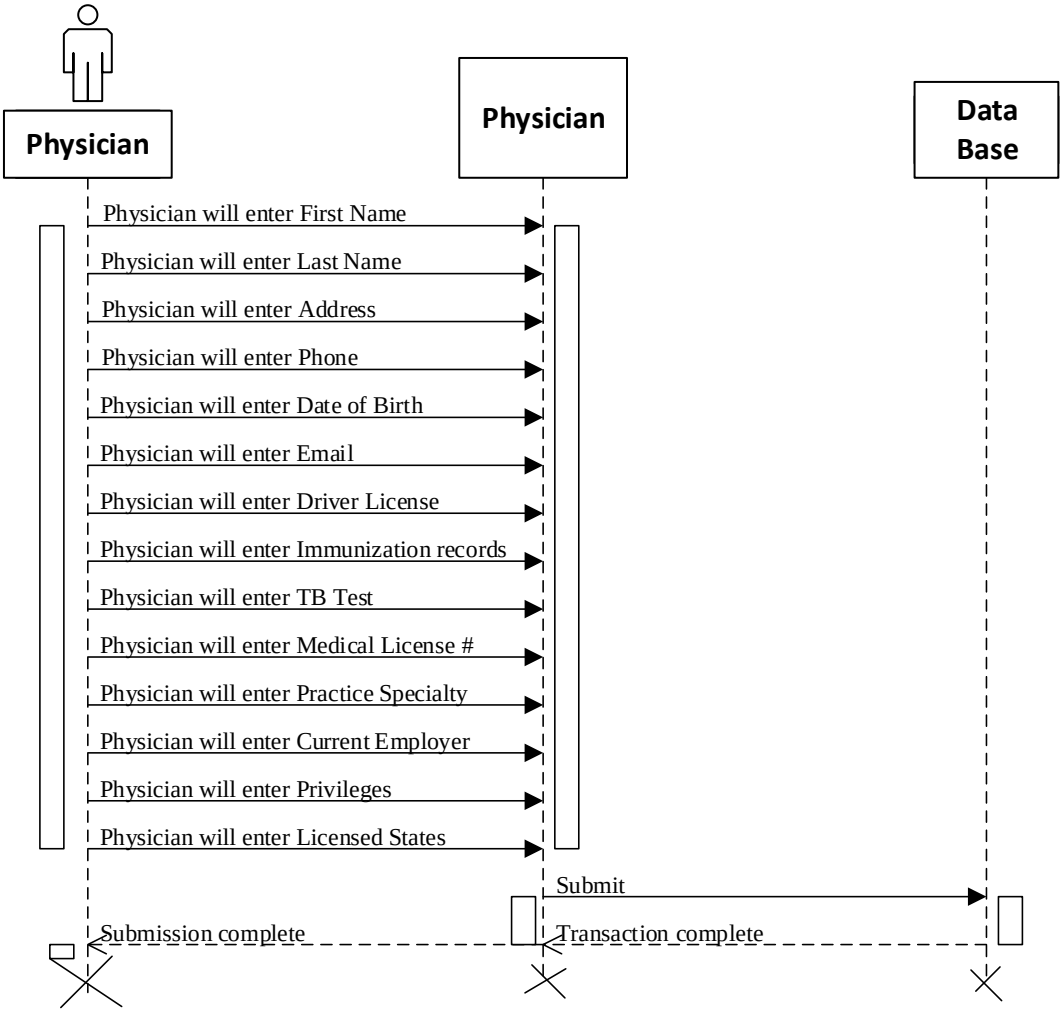
Delete Physician Data



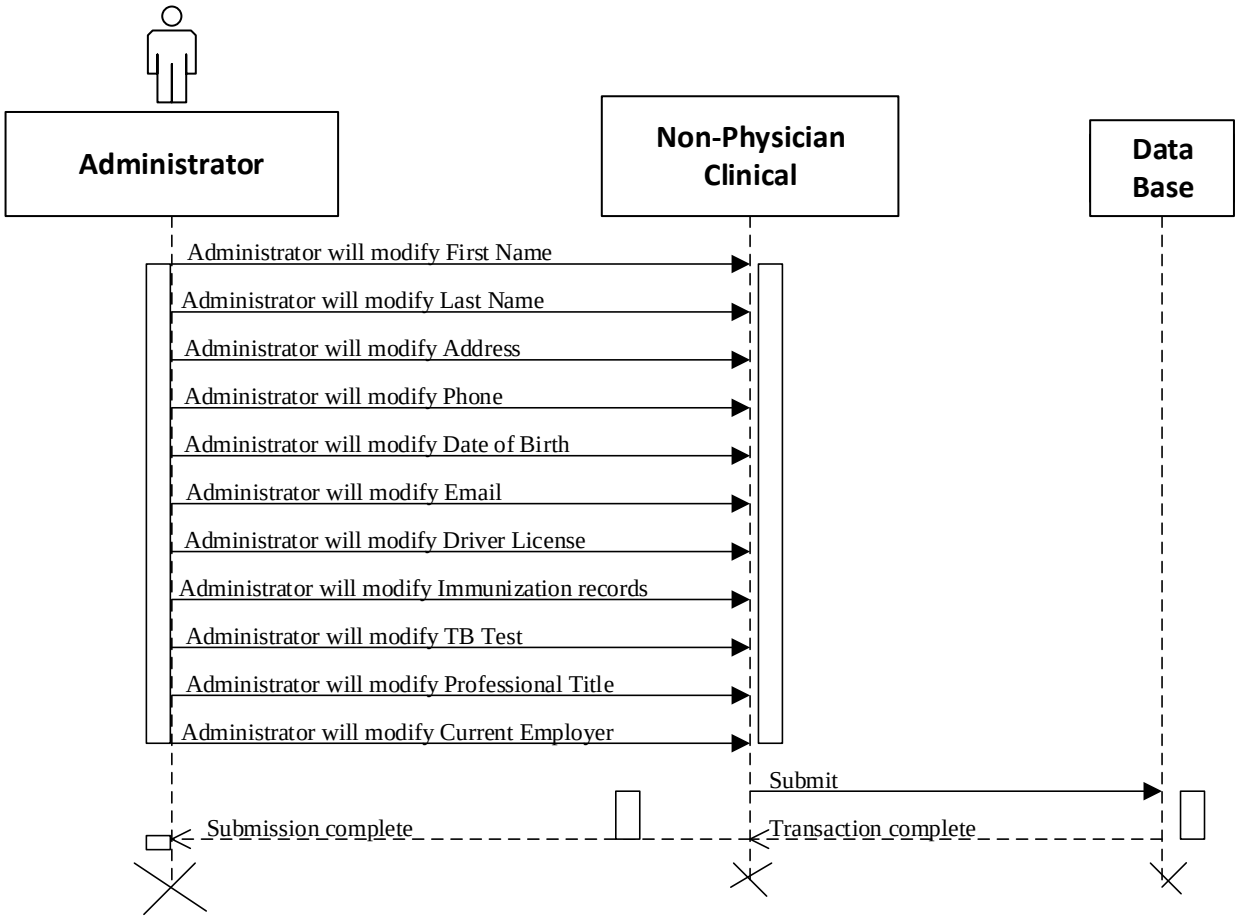
Enter Non- Physician Clinical Data



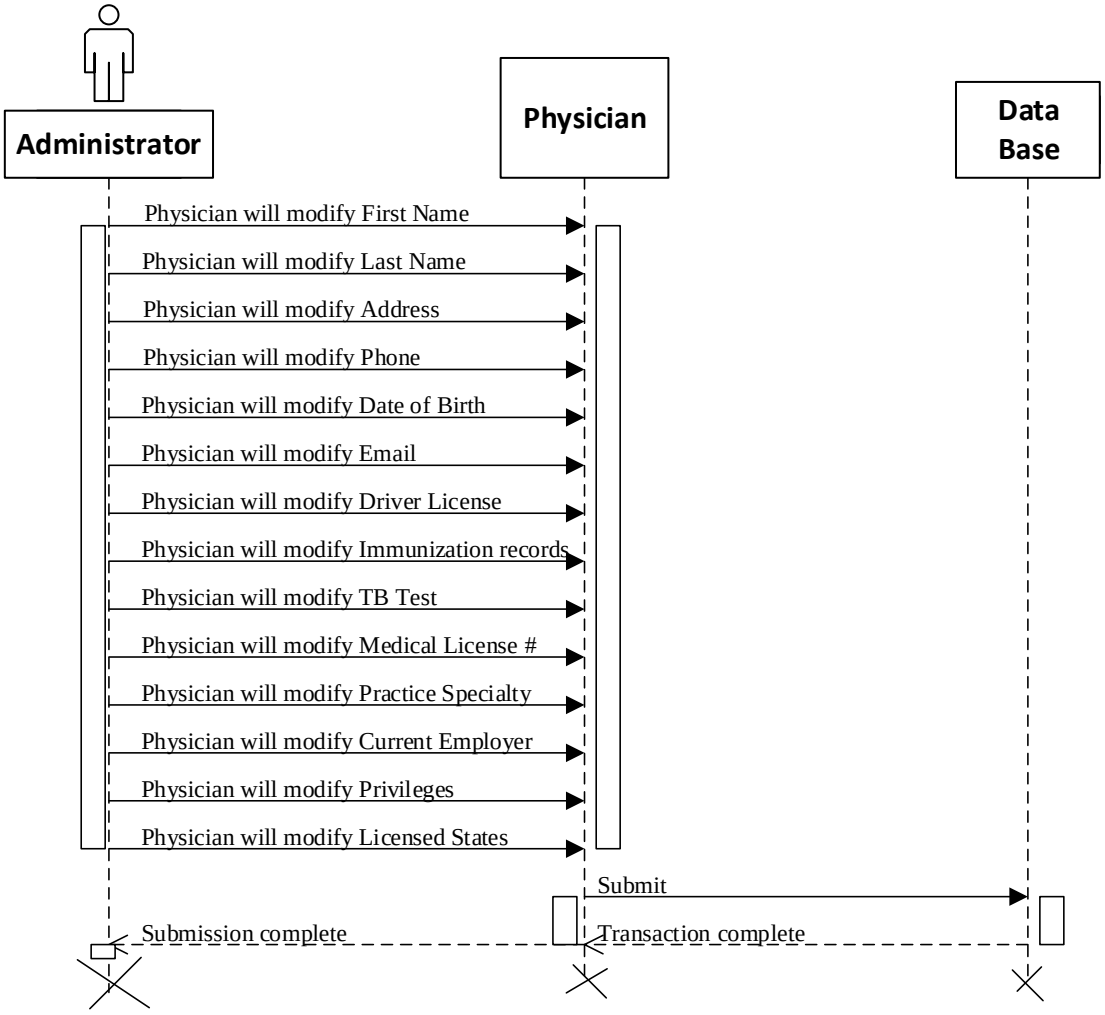
Enter Physician Data



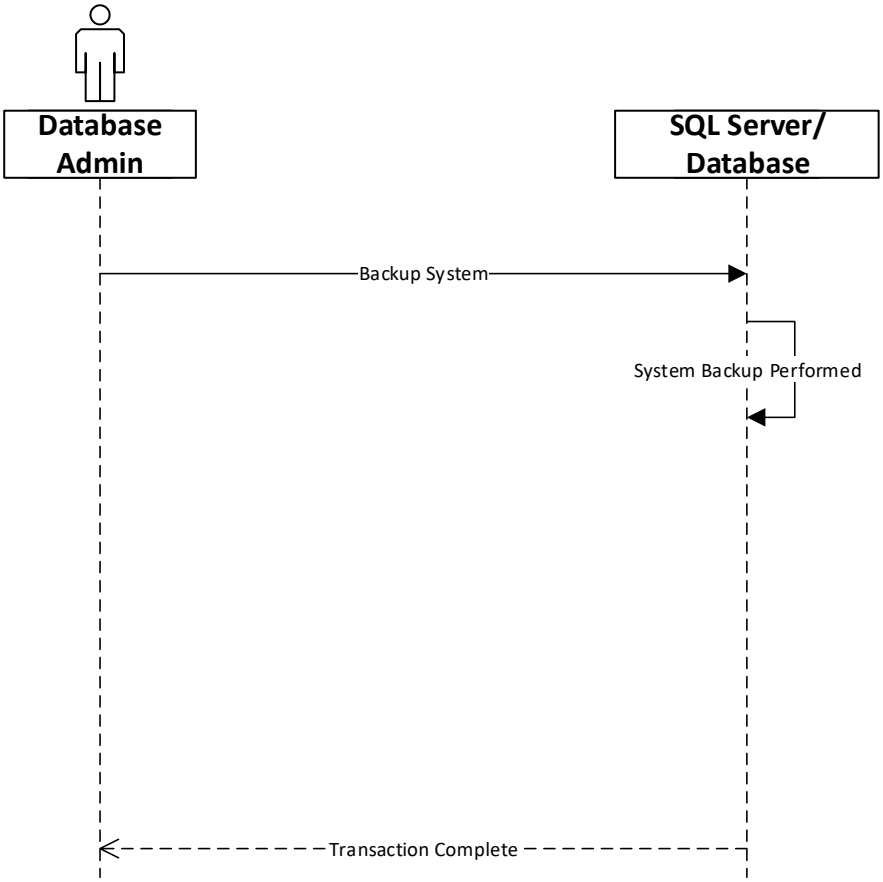
Modification of Non-Physician Clinical Data



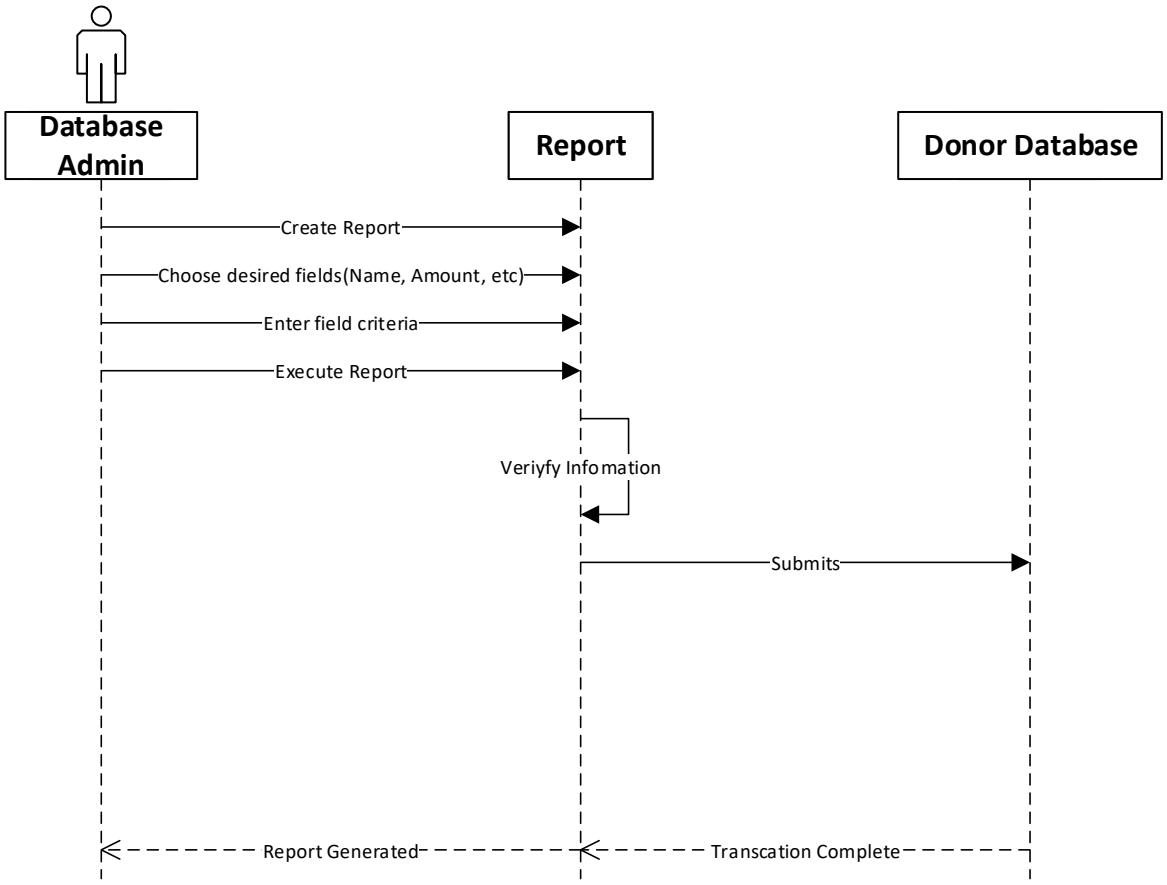
Modification of Physician Data



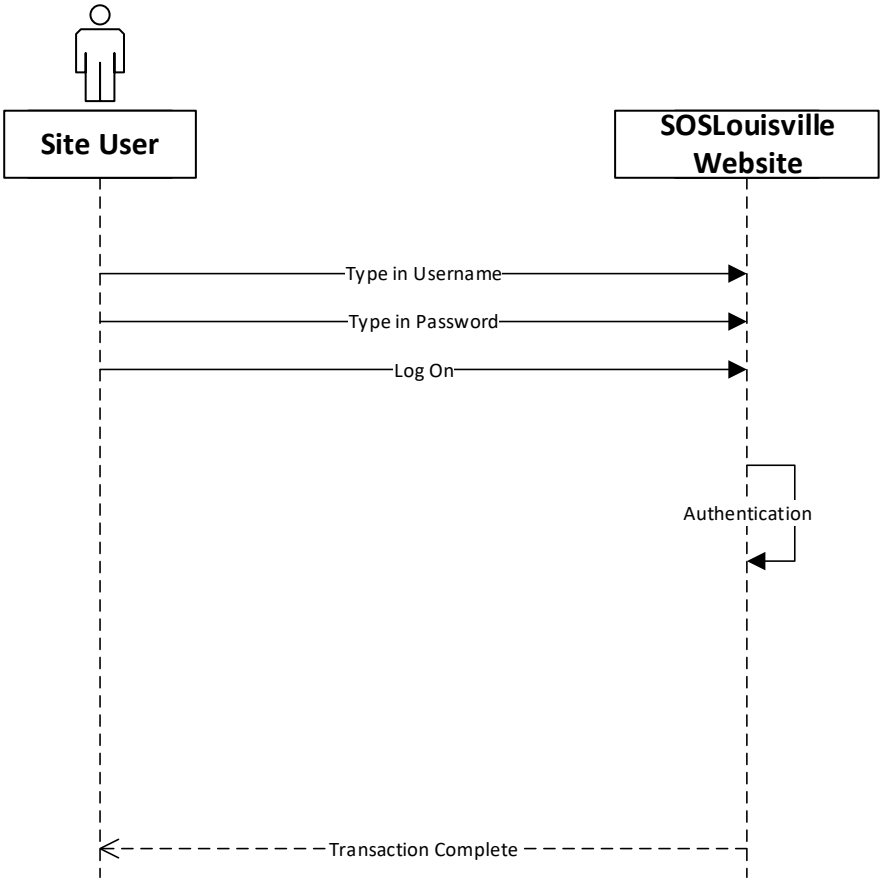
Backup


Database Admin
SQL Server/ Database
Backup System
System Backup Performed
Transaction Complete

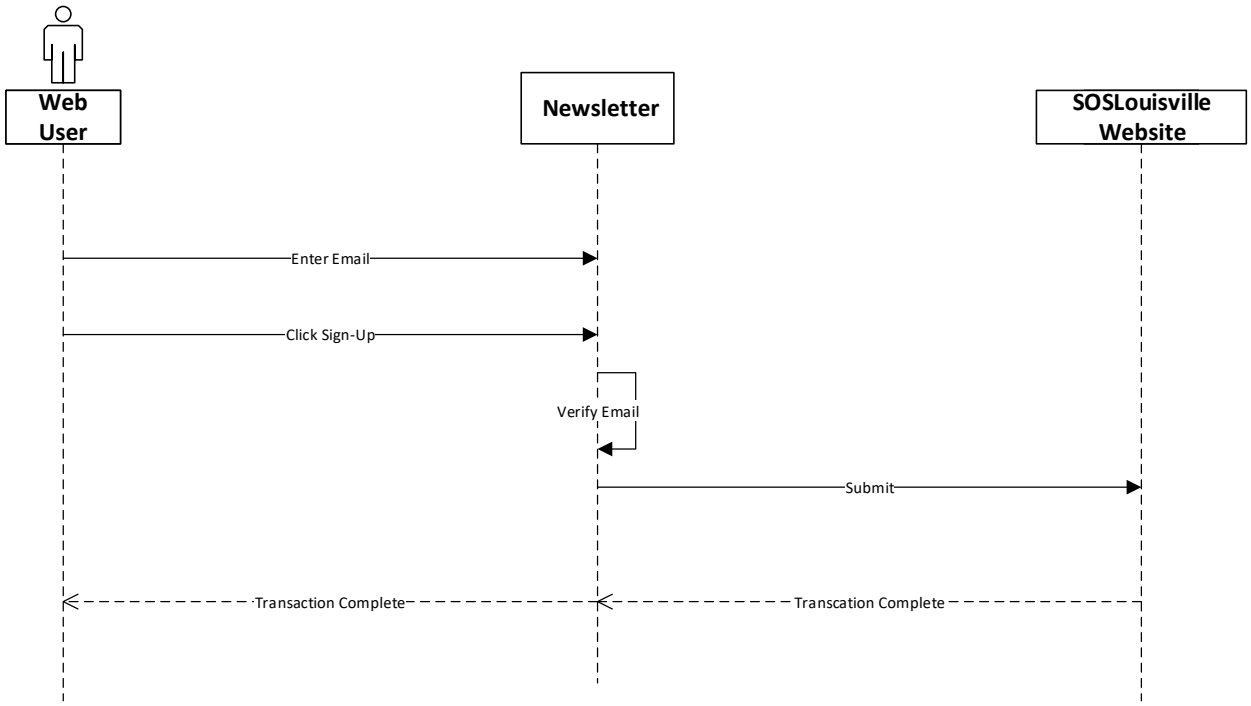
Donation Report



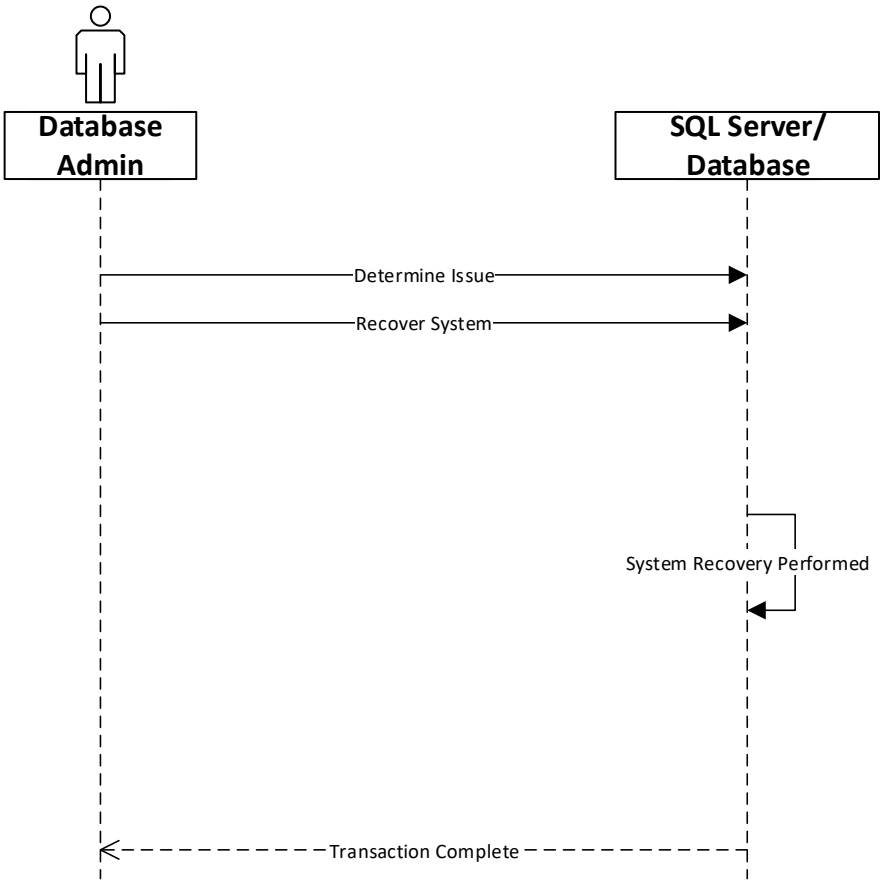
Log In


Site User
SOSLouisville Website
Type in Username
Type in Password
Log On
Authentication
Transaction Complete

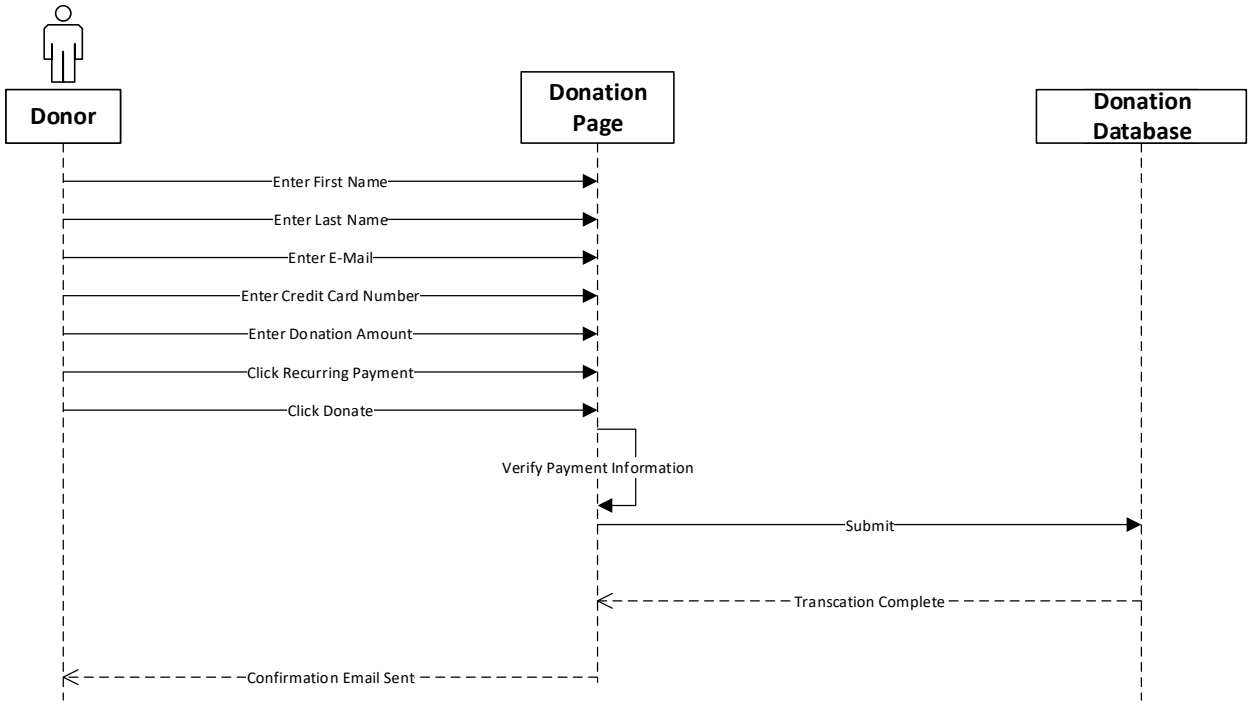
Newsletter


Web User
Newsletter
SOSLouisville Website
Enter Email
Click Sign-Up
Verify Email
Submit
Transaction Complete
Transcation Complete

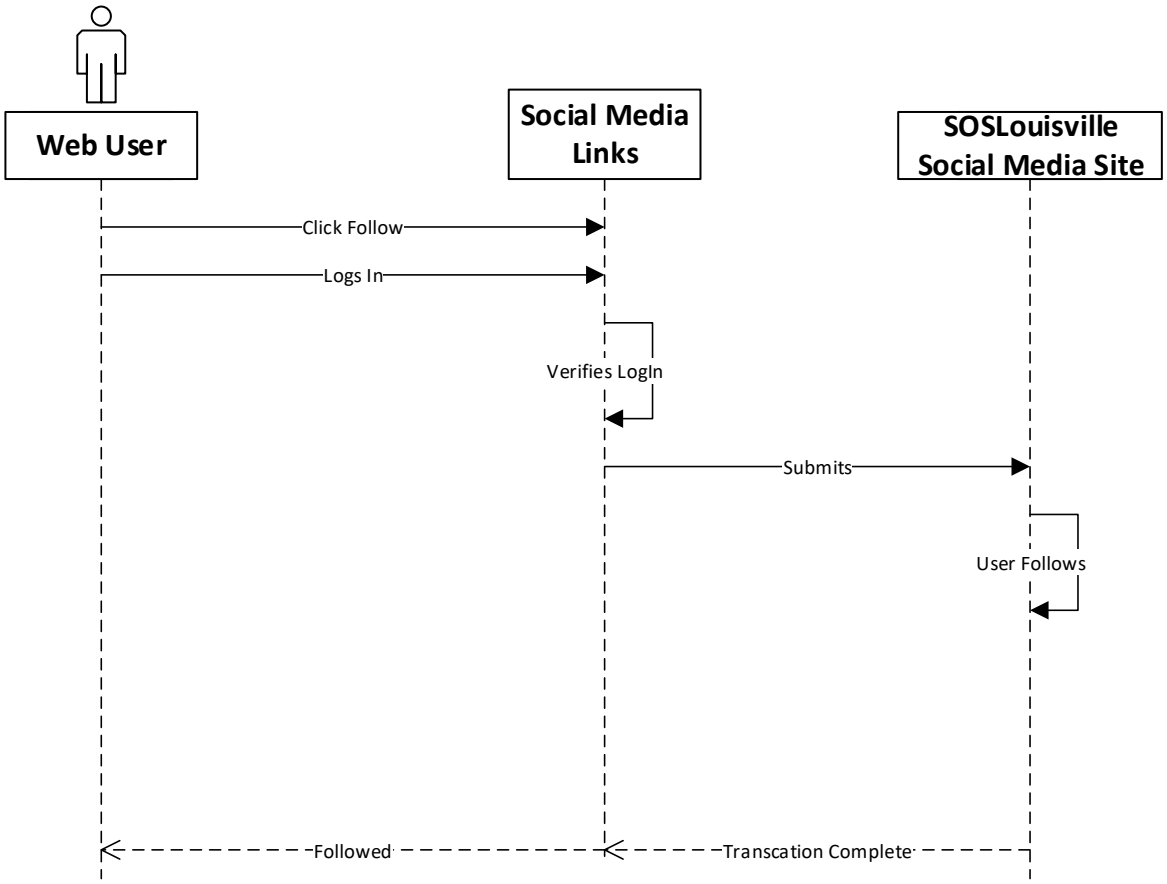
Recovery


Database Admin
SQL Server/ Database
Determine Issue
Recover System
System Recovery Performed
Transaction Complete

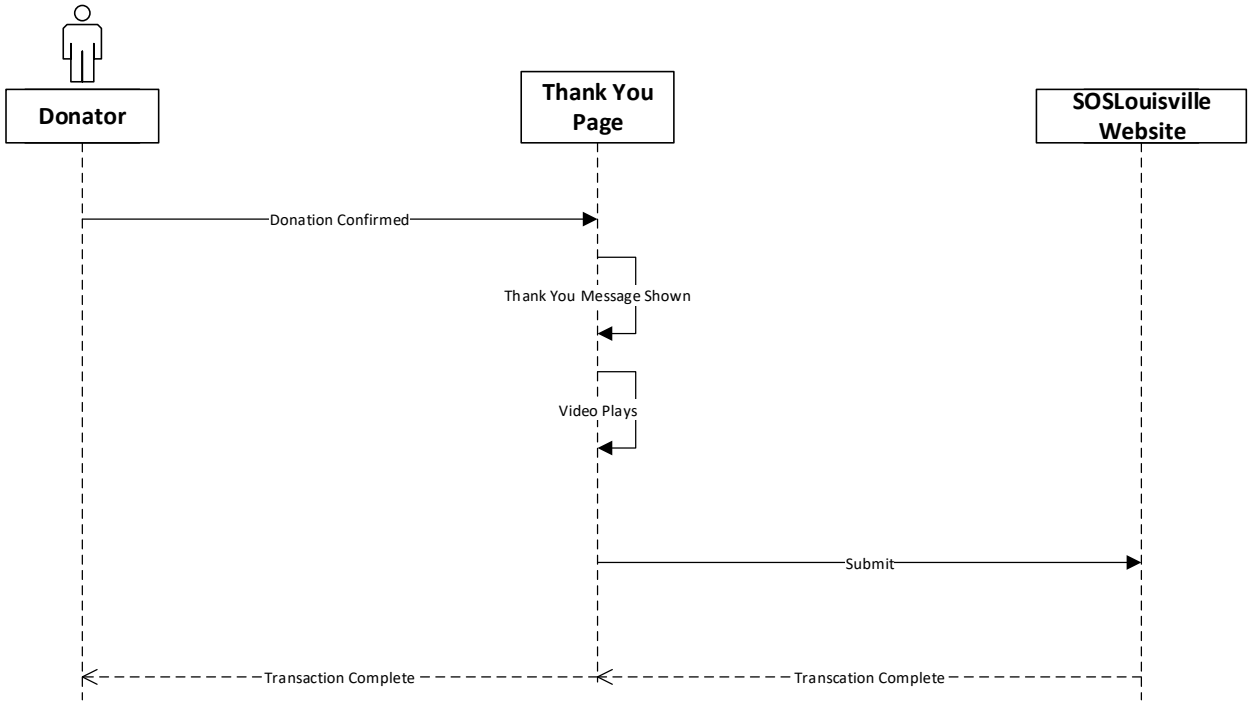
Recurring Donation



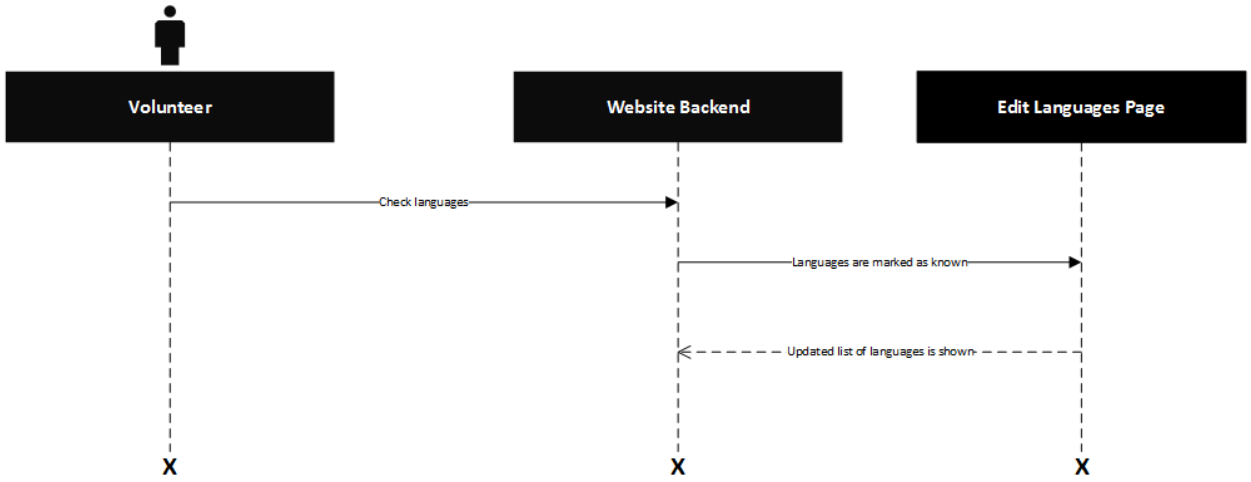
Social Media



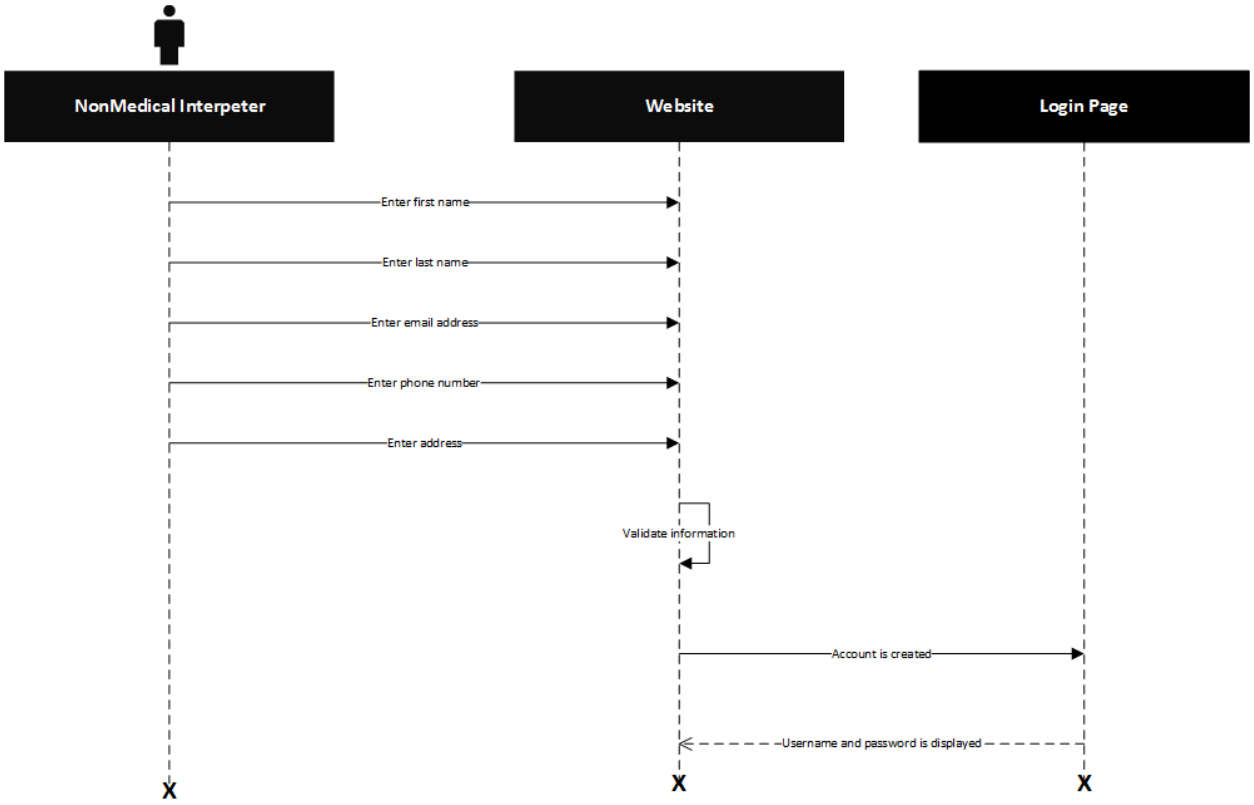
Thanking Donor



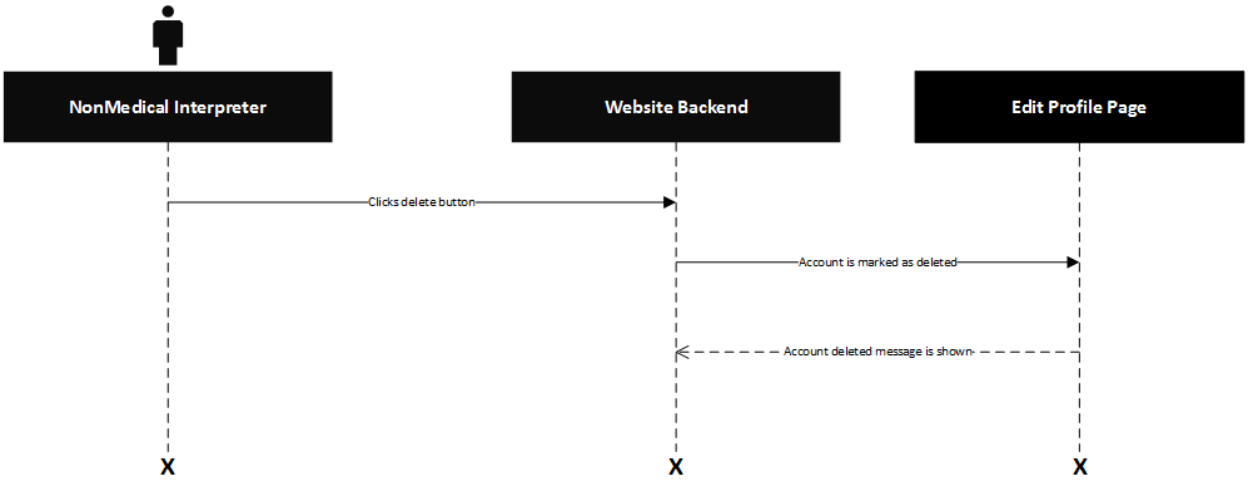
Language Translation



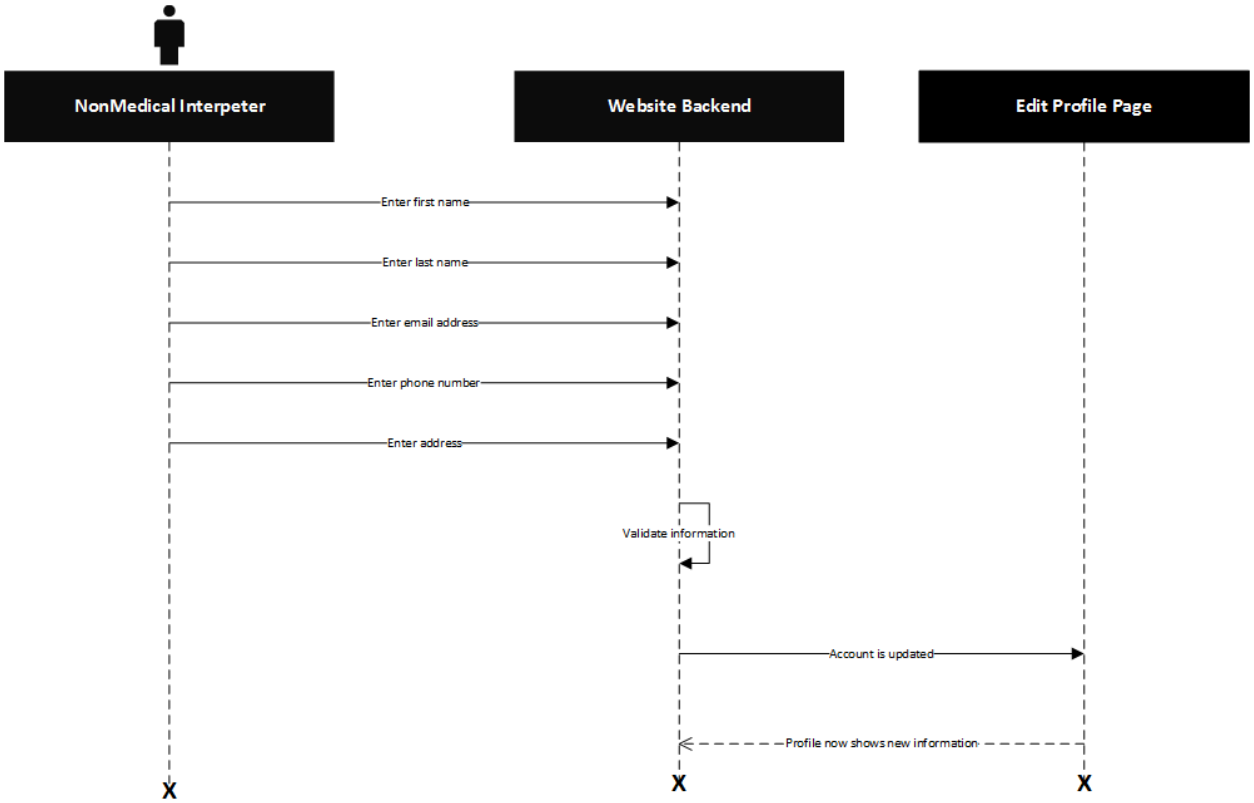
Non-Medical Interpreter Enters Data



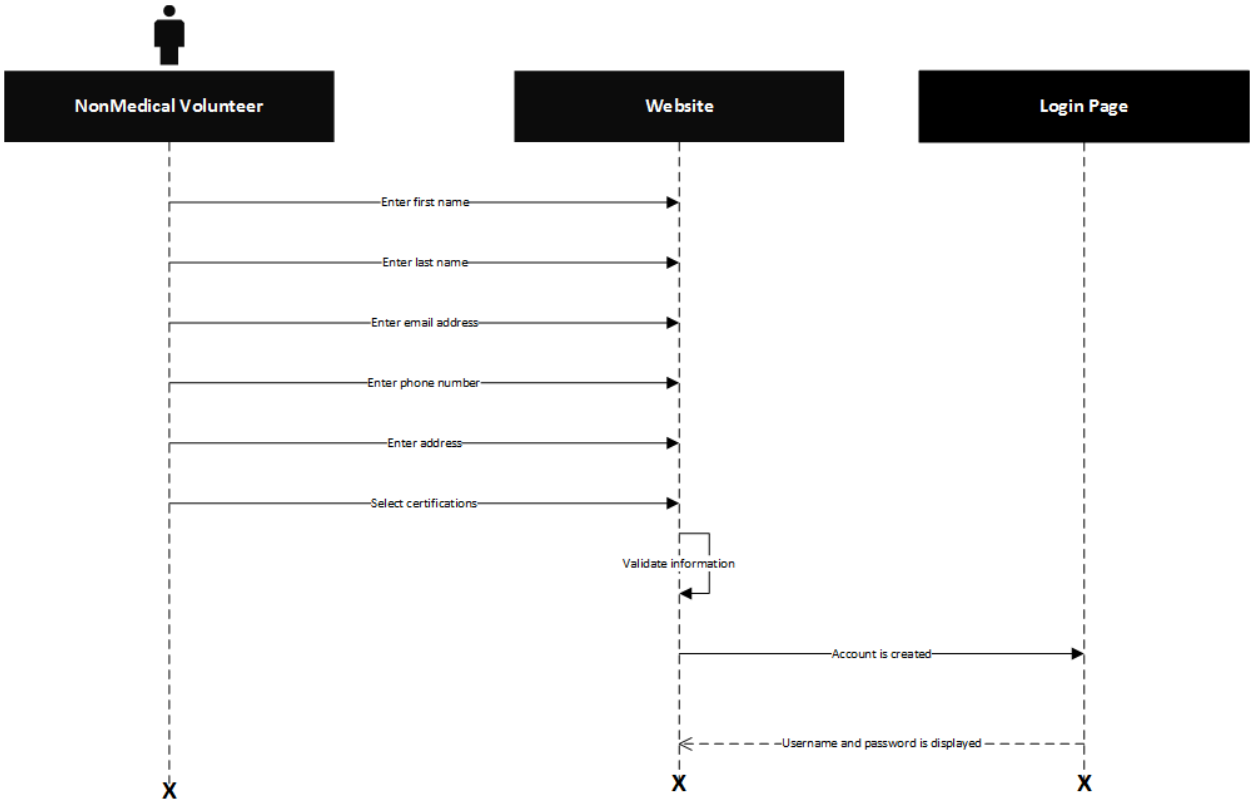
Non-Medical Interpreter Deletes Data



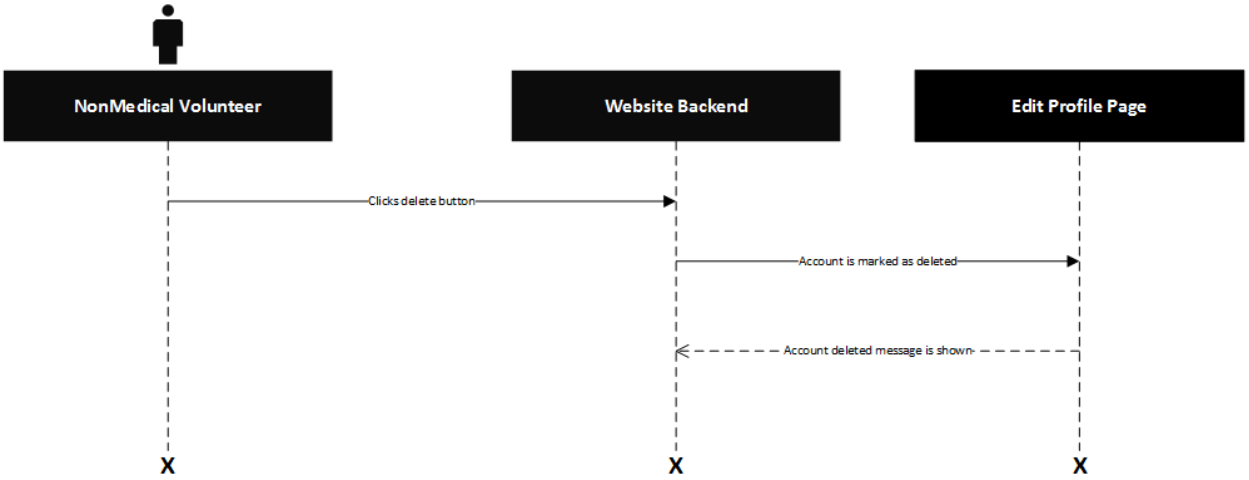
Non-Medical Interpreter Edits Data



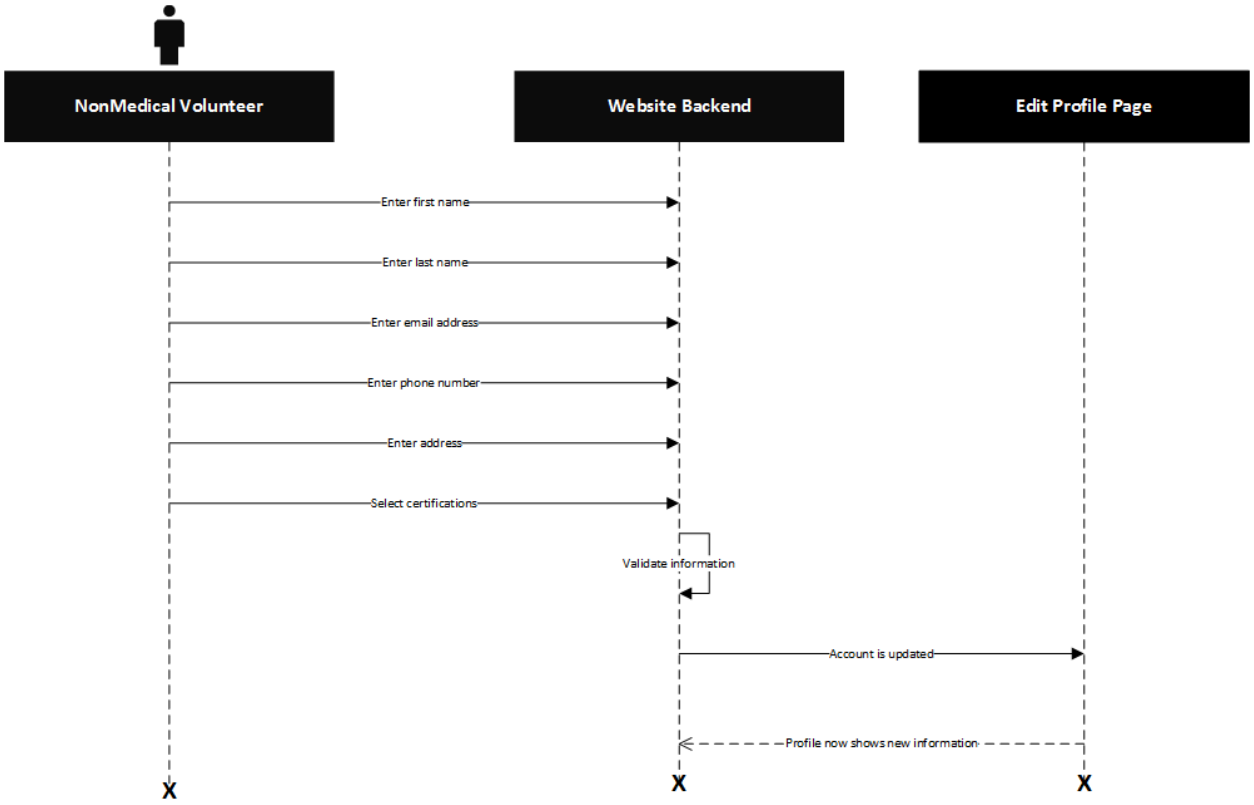
Non-Medical Volunteer Edits Data



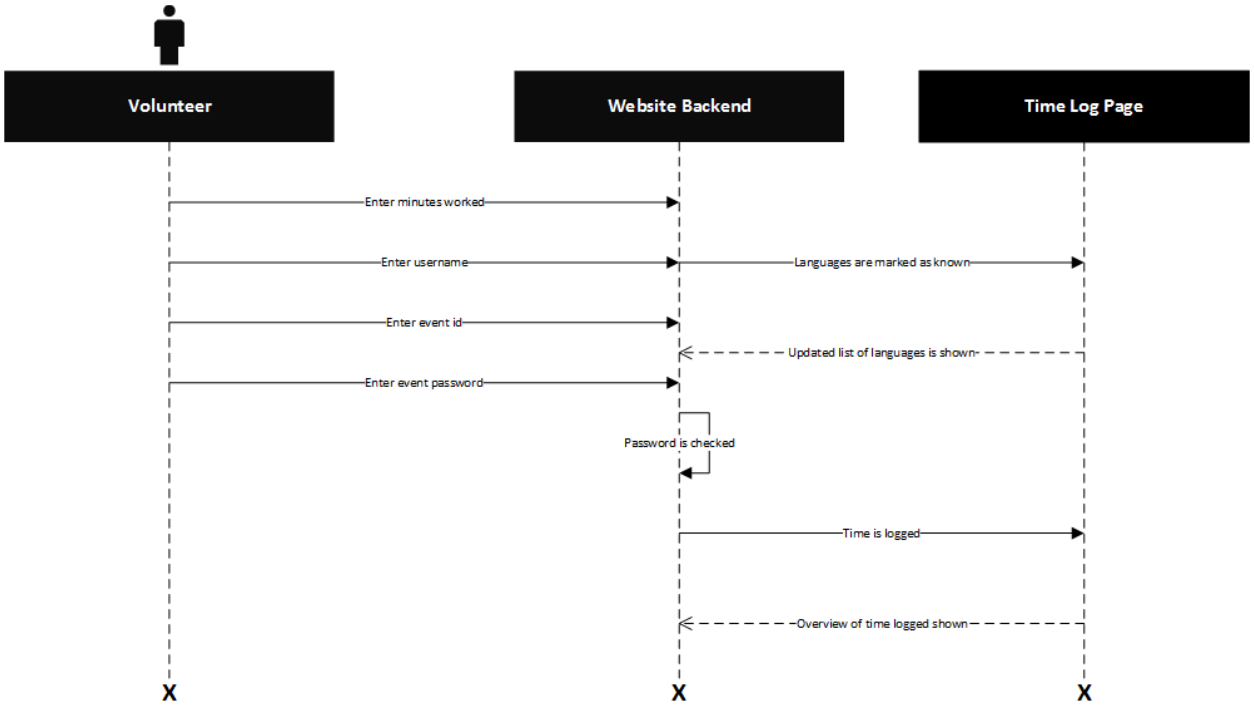
Non-Medical Volunteer Deletes Data



Non-Medical Volunteer Edits Data

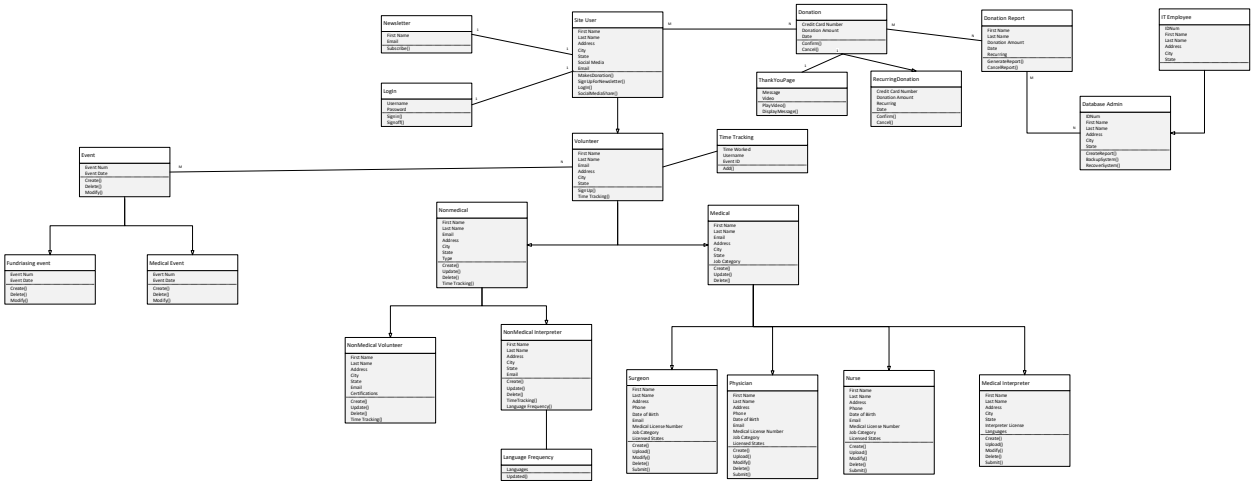


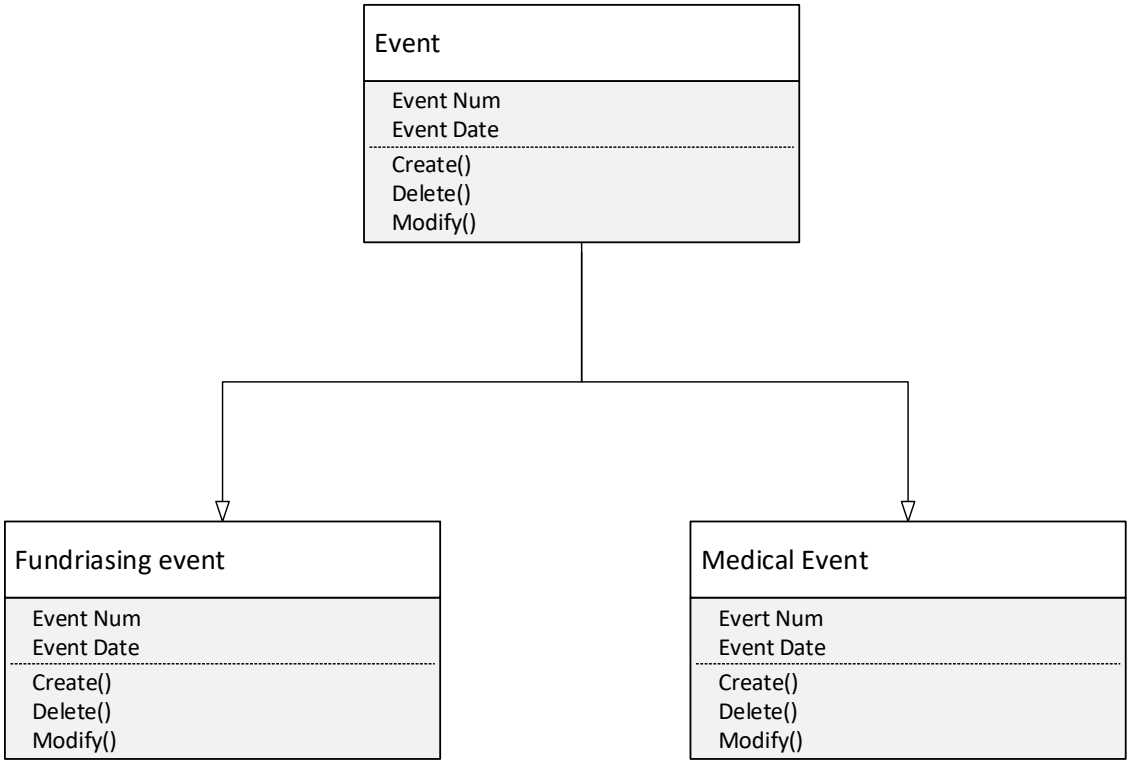
Volunteer Enters Time

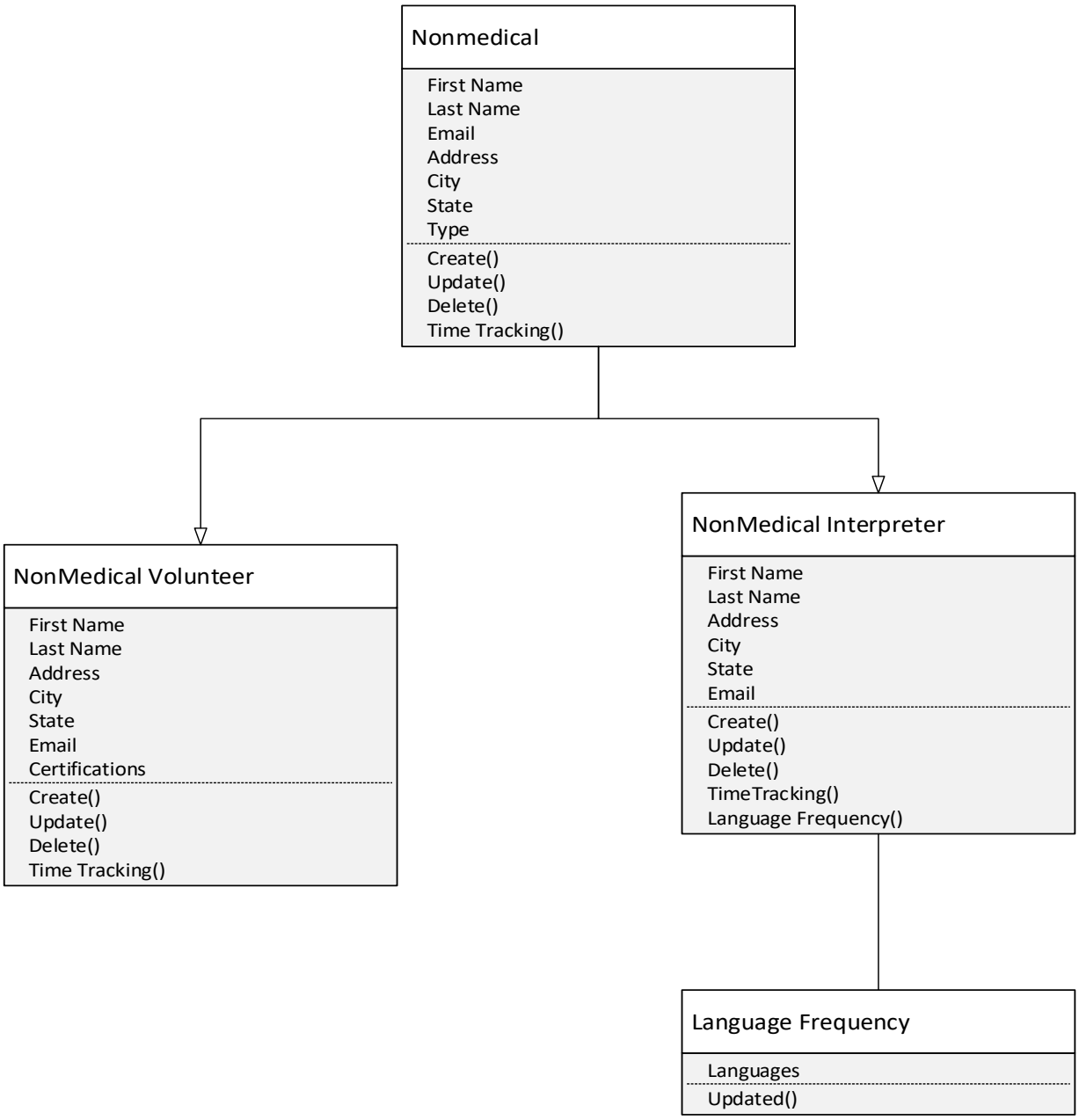


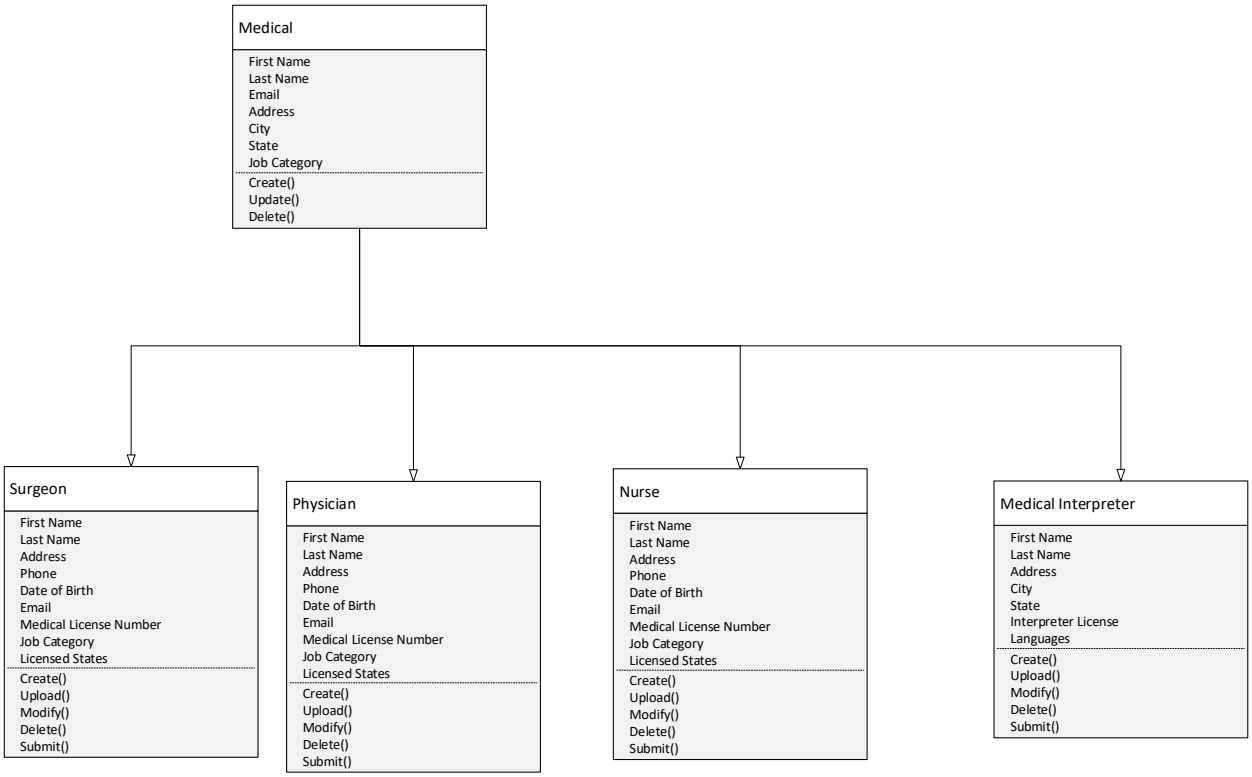
Class Diagram

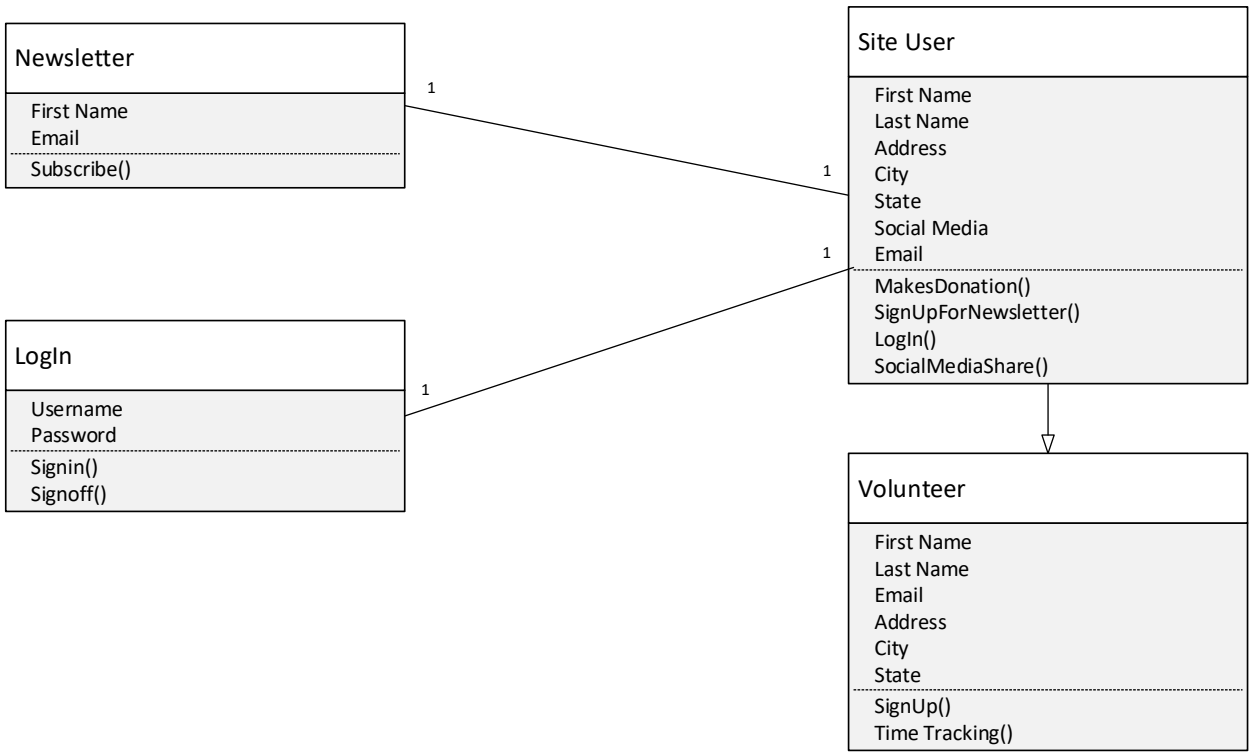
The class diagram shows the relationship between all the elements of the system and the actions that each element is capable of. The class diagram was derived using verb-noun analysis. The nouns are the elements and the verbs are the actions that the elements perform. The size of the database does not allow it to be shown very legibly in its entirety, so the first image will be followed by larger images of individual sections.

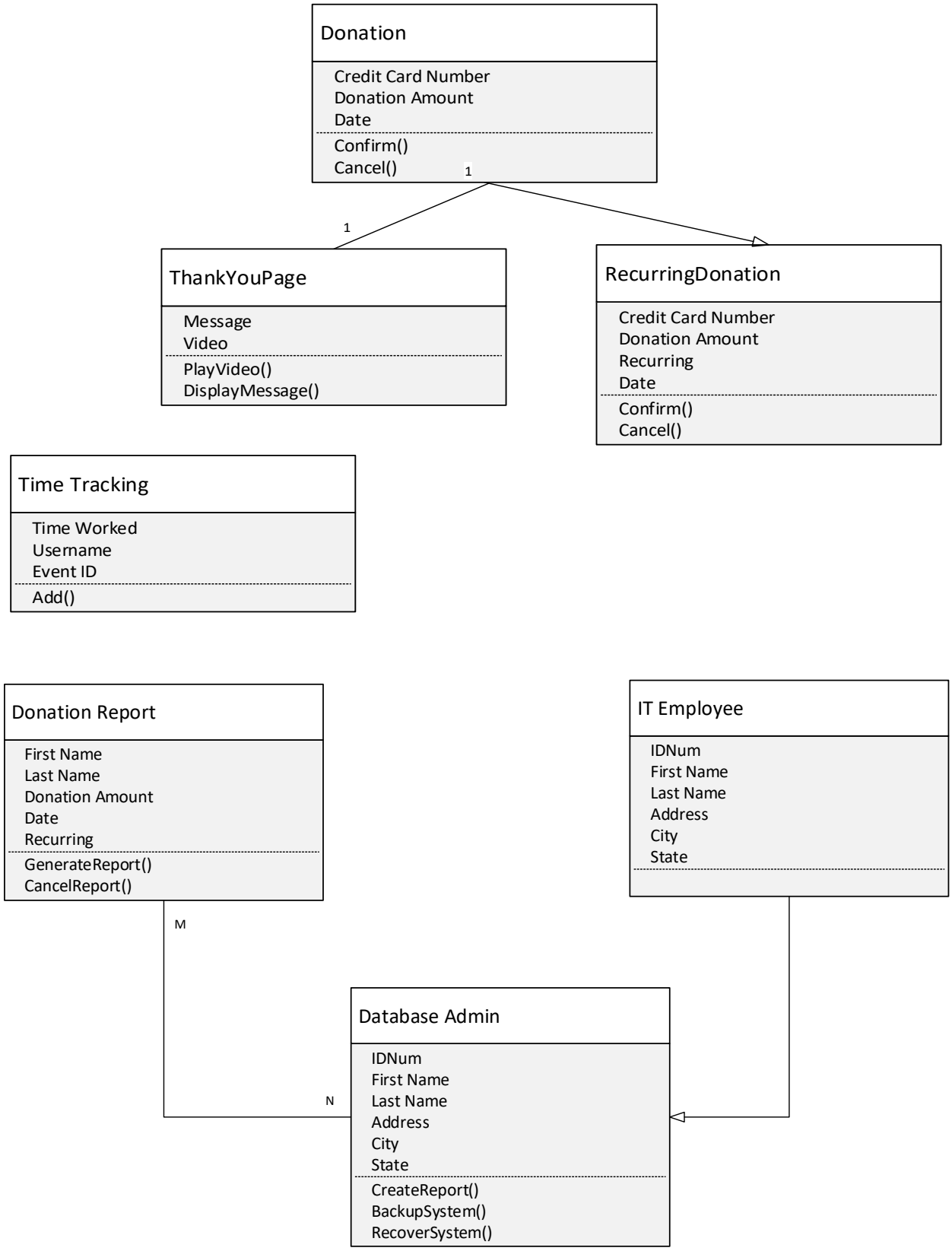





Nonmedical
First Name
Last Name
Email
Address
City
State
Type
Create()
Update()
Delete()
Time Tracking()
NonMedical Volunteer
First Name
Last Name
Address
City
State
Email
Certifications
Create()
Update()
Delete()
Time Tracking()
NonMedical Interpreter
First Name
Last Name
Address
City
State
Email
Create()
Update()
Delete()
TimeTracking()
Language Frequency()
Language Frequency
Languages
Updated()

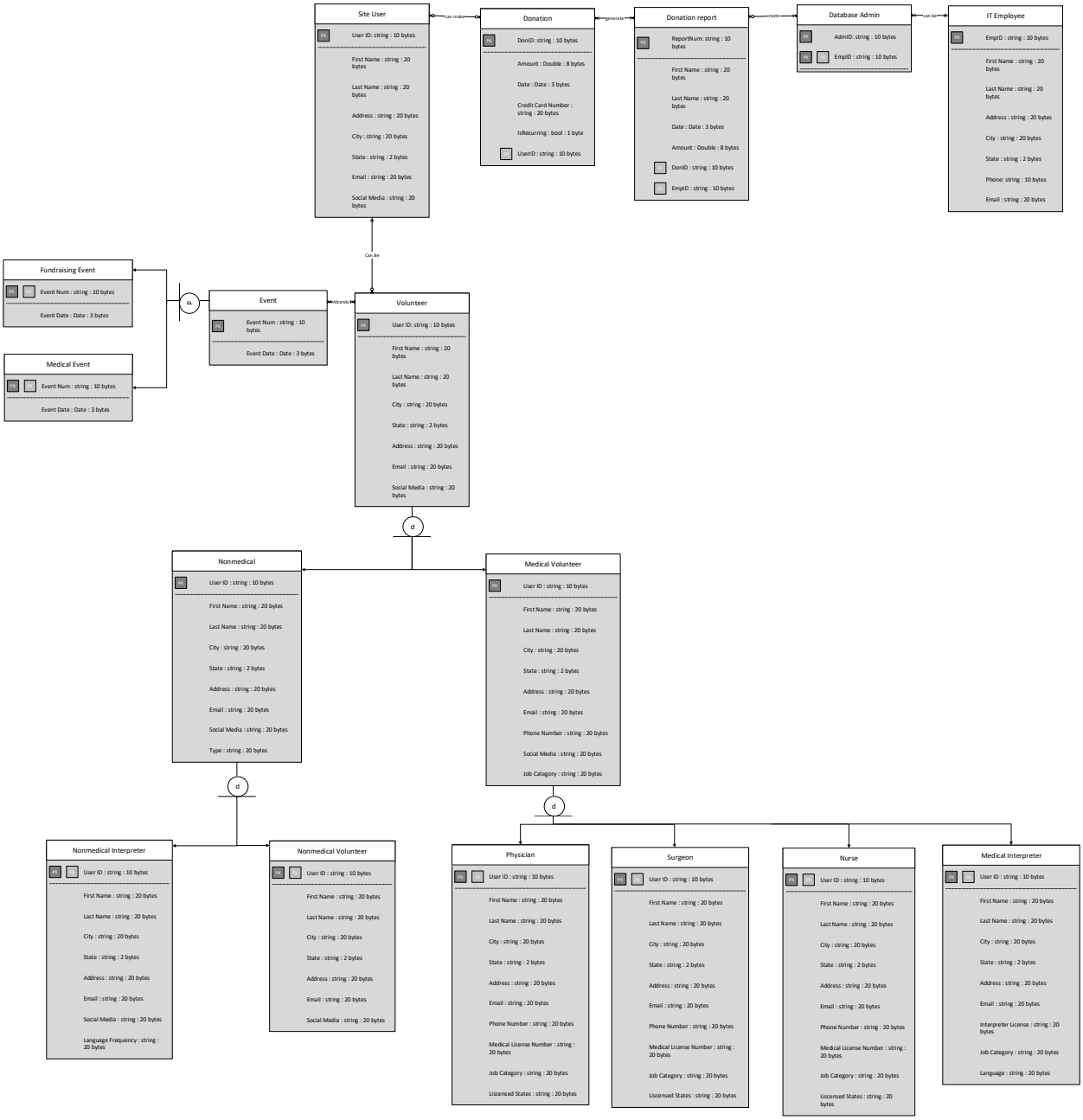

Medical
First Name
Last Name
Email
Address
City
State
Job Category
Create()
Update()
Delete()
Surgeon
First Name
Last Name
Address
Phone
Date of Birth
Email
Medical License Number
Job Category
Licensed States
Create()
Upload()
Modify()
Delete()
Submit()
Physician
First Name
Last Name
Address
Phone
Date of Birth
Email
Medical License Number
Job Category
Licensed States
Create()
Upload()
Modify()
Delete()
Submit()
Nurse
First Name
Last Name
Address
Phone
Date of Birth
Email
Medical License Number
Job Category
Licensed States
Create()
Upload()
Modify()
Delete()
Submit()
Medical Interpreter
First Name
Last Name
Address
City
State
Interpreter License
Languages
Create()
Upload()
Modify()
Delete()
Submit()

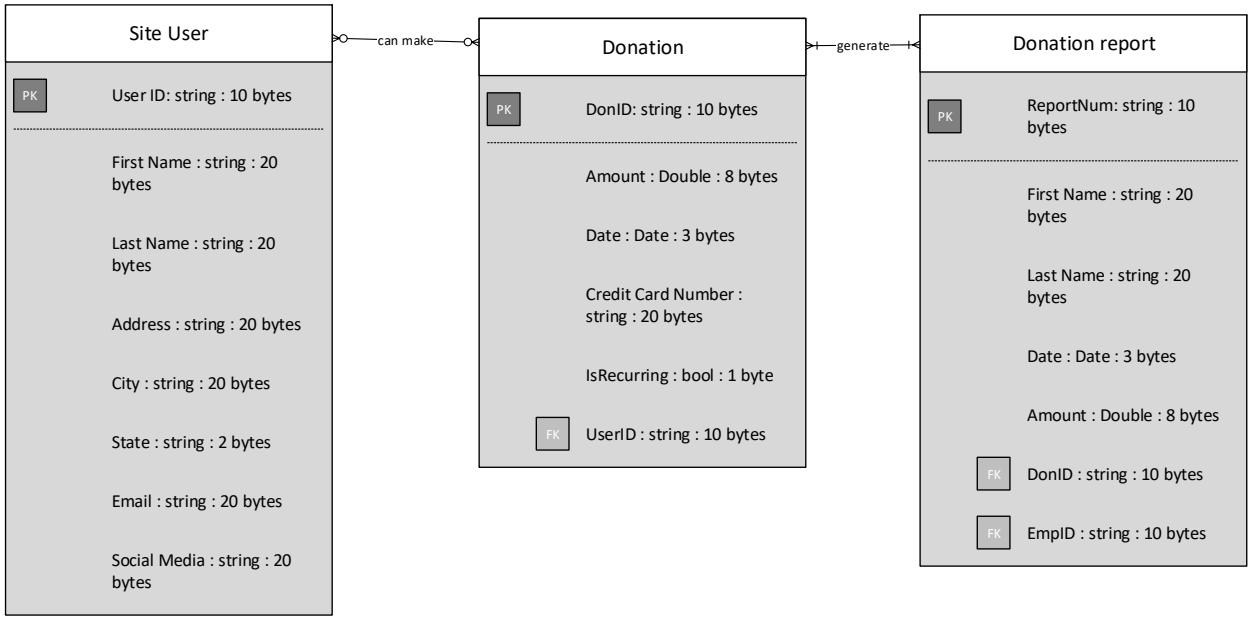

Newsletter
First Name
Email
Subscribe()
1
1
Site User
First Name
Last Name
Address
City
State
Social Media
Email
MakesDonation()
SignUpForNewsletter()
LogIn()
SocialMediaShare()
1
1
LogIn
Username
Password
Signin()
Signoff()
Volunteer
First Name
Last Name
Email
Address
City
State
SignUp()
Time Tracking()

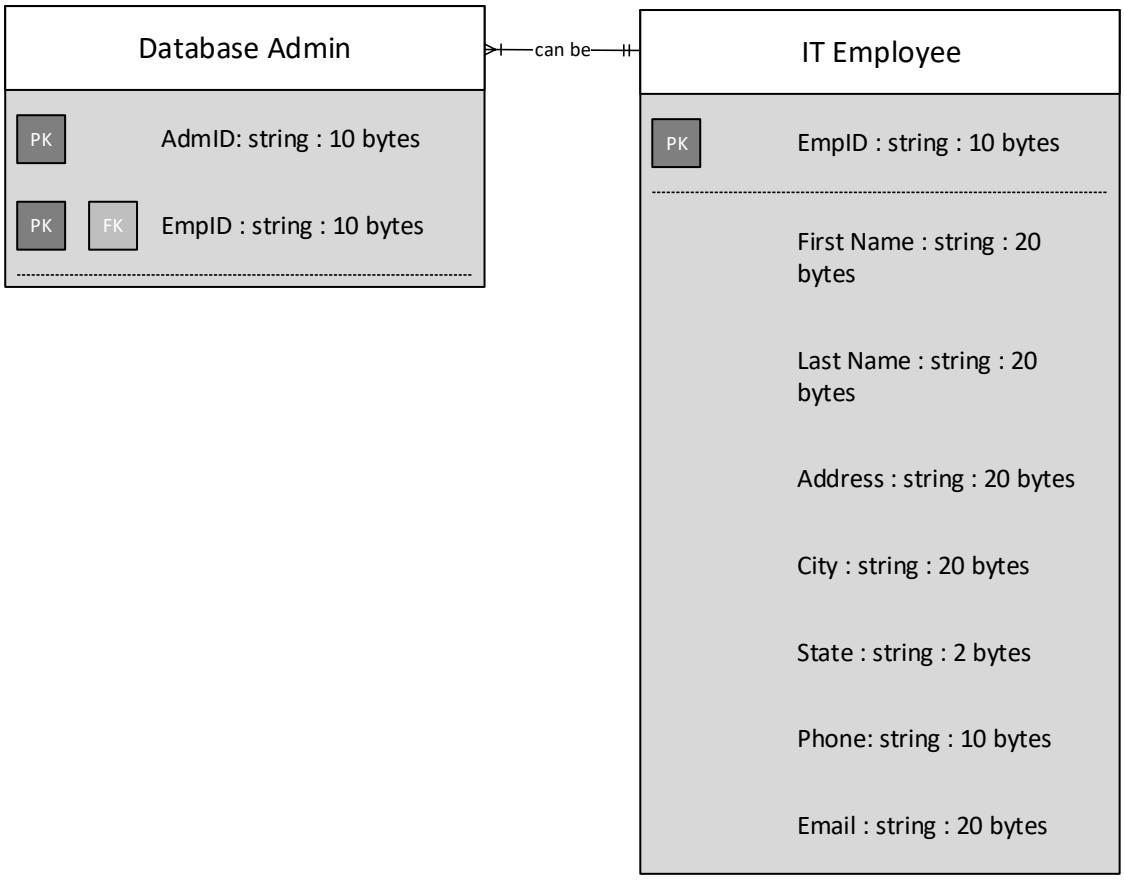

Donation
Credit Card Number
Donation Amount
Date
Confirm()
Cancel()
1
1
ThankYouPage
Message
Video
PlayVideo()
DisplayMessage()
RecurringDonation
Credit Card Number
Donation Amount
Recurring
Date
Confirm()
Cancel()
Time Tracking
Time Worked
Username
Event ID
Add()
Donation Report
First Name
Last Name
Donation Amount
Date
Recurring
GenerateReport()
CancelReport()
IT Employee
IDNum
First Name
Last Name
Address
City
State
M
N
Database Admin
IDNum
First Name
Last Name
Address
City
State
CreateReport()
BackupSystem()
RecoverSystem()

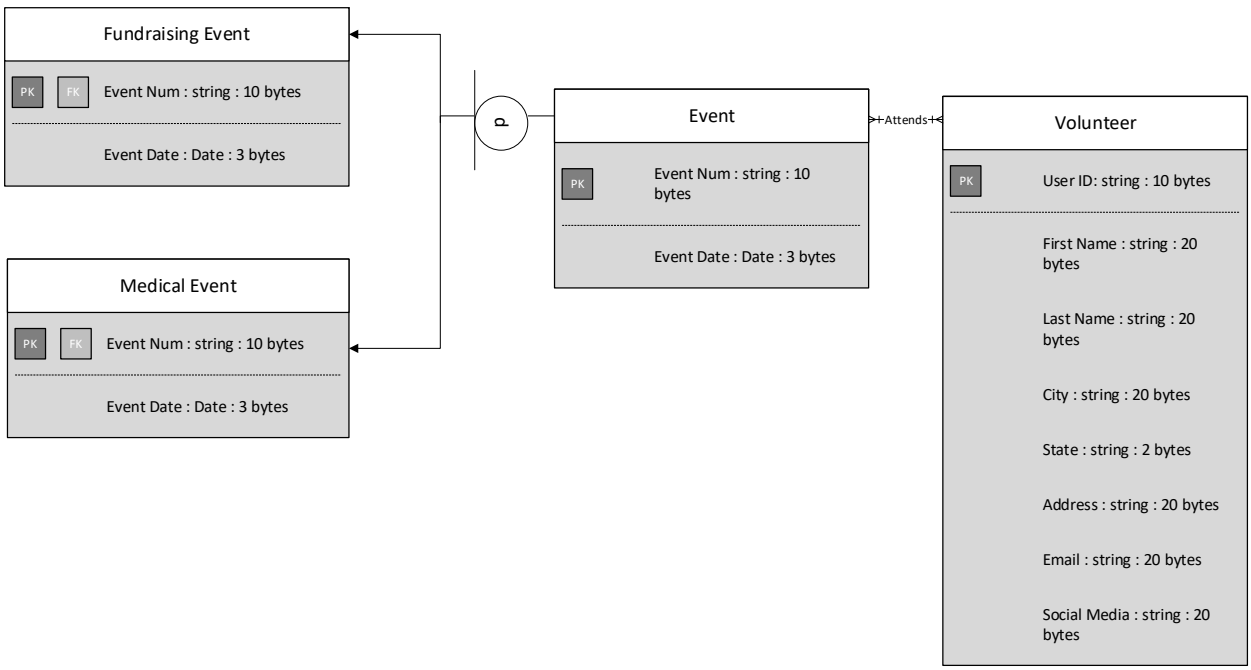
Relational Database

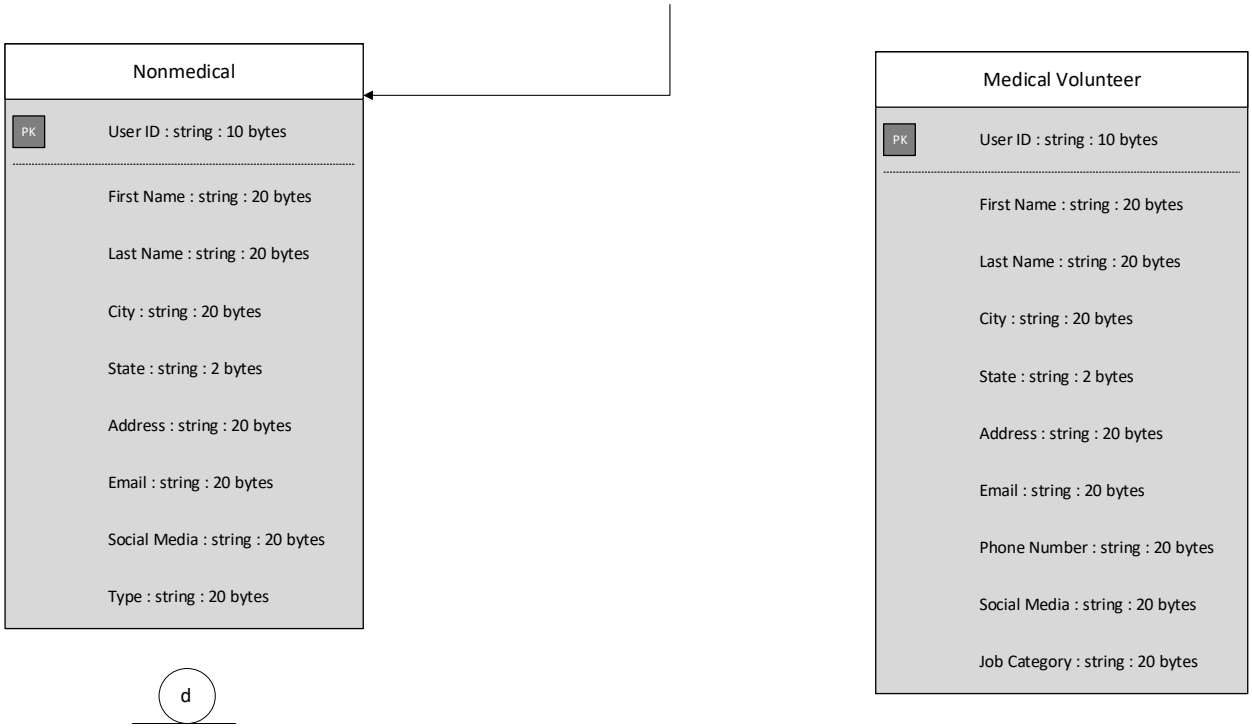
The database is in 3NF because each table has a primary key and is free of partial and transitive dependencies. The size of the database does not allow it to be shown very legibly in its entirety, so the first image will be followed by larger images of individual sections.

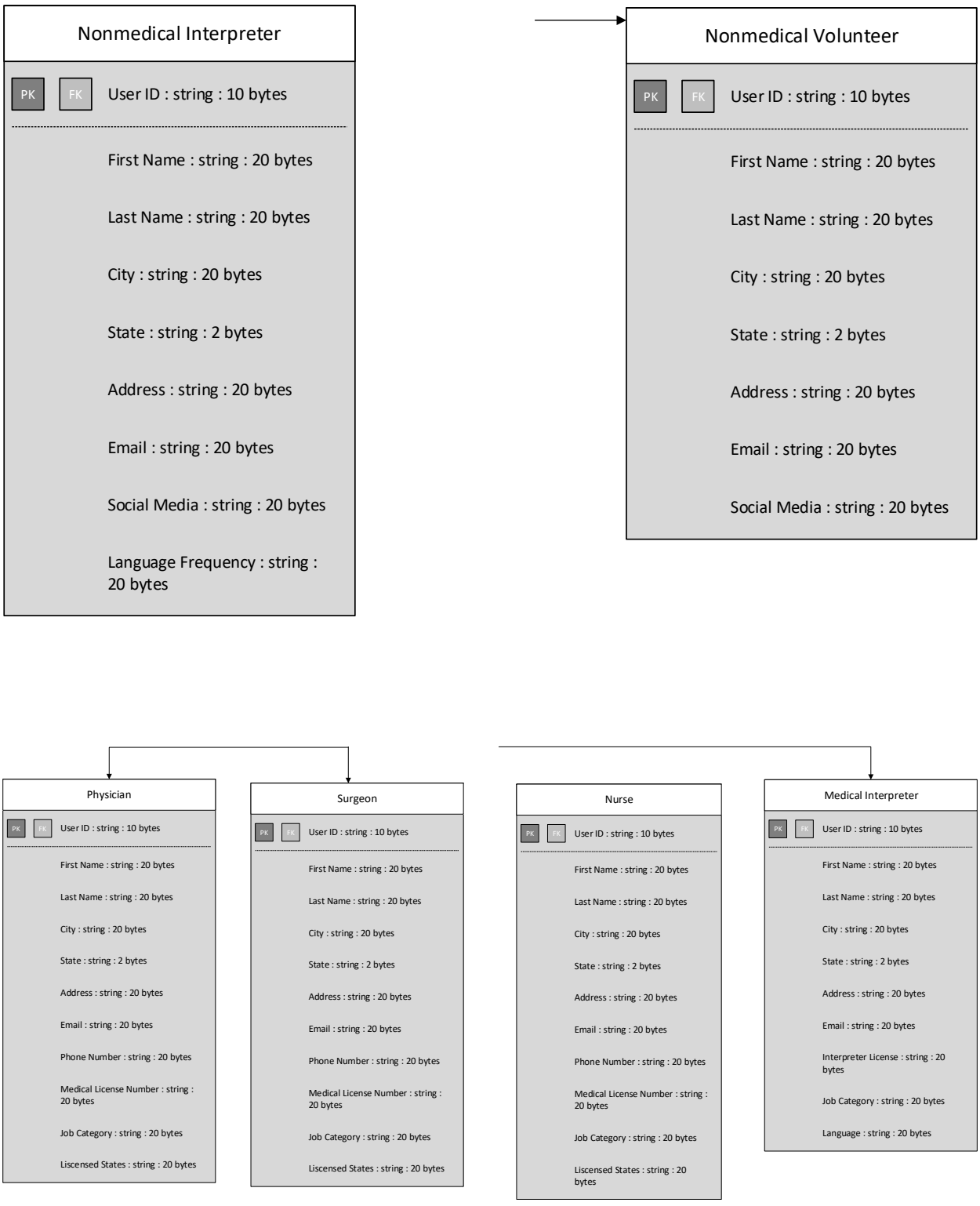



Site User
PK
User ID: string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
Address : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Email : string : 20 bytes
Social Media : string : 20 bytes
can make
Donation
PK
DonID: string : 10 bytes
Amount : Double : 8 bytes
Date : Date : 3 bytes
Credit Card Number : string : 20 bytes
IsRecurring : bool : 1 byte
FK
UserID : string : 10 bytes
generate
Donation report
PK
ReportNum: string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
Date : Date : 3 bytes
Amount : Double : 8 bytes
FK
DonID : string : 10 bytes
FK
EmpID : string : 10 bytes


Database Admin
PK
AdmID: string : 10 bytes
PK
FK
EmpID : string : 10 bytes
can be
IT Employee
PK
EmpID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
Address : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Phone: string : 10 bytes
Email : string : 20 bytes

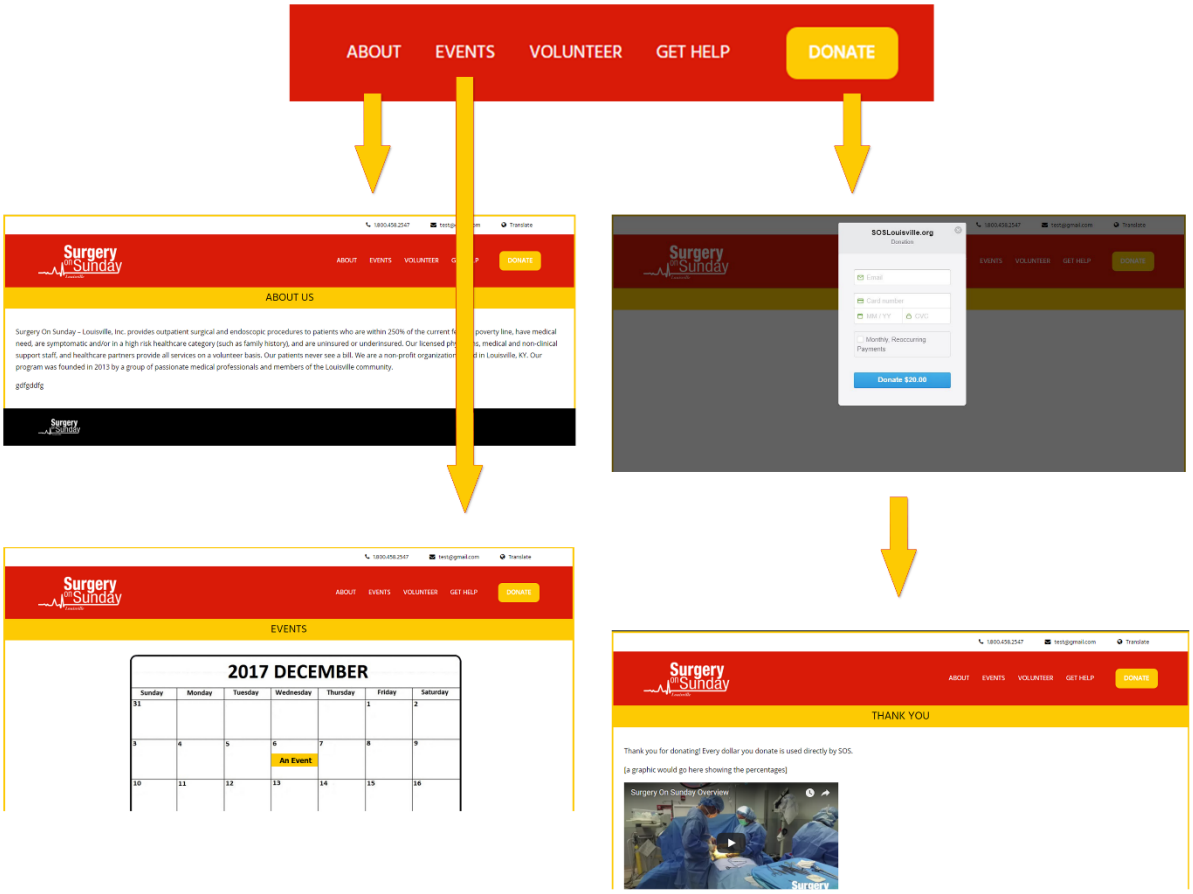

Fundraising Event
PK
FK
Event Num : string : 10 bytes
Event Date : Date : 3 bytes
Medical Event
PK
FK
Event Num : string : 10 bytes
Event Date : Date : 3 bytes
p
Event
PK
Event Num : string : 10 bytes
Event Date : Date : 3 bytes
Attends
Volunteer
PK
User ID: string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Social Media : string : 20 bytes


Nonmedical
PK
User ID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Social Media : string : 20 bytes
Type : string : 20 bytes
d
Medical Volunteer
PK
User ID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Phone Number : string : 20 bytes
Social Media : string : 20 bytes
Job Category : string : 20 bytes

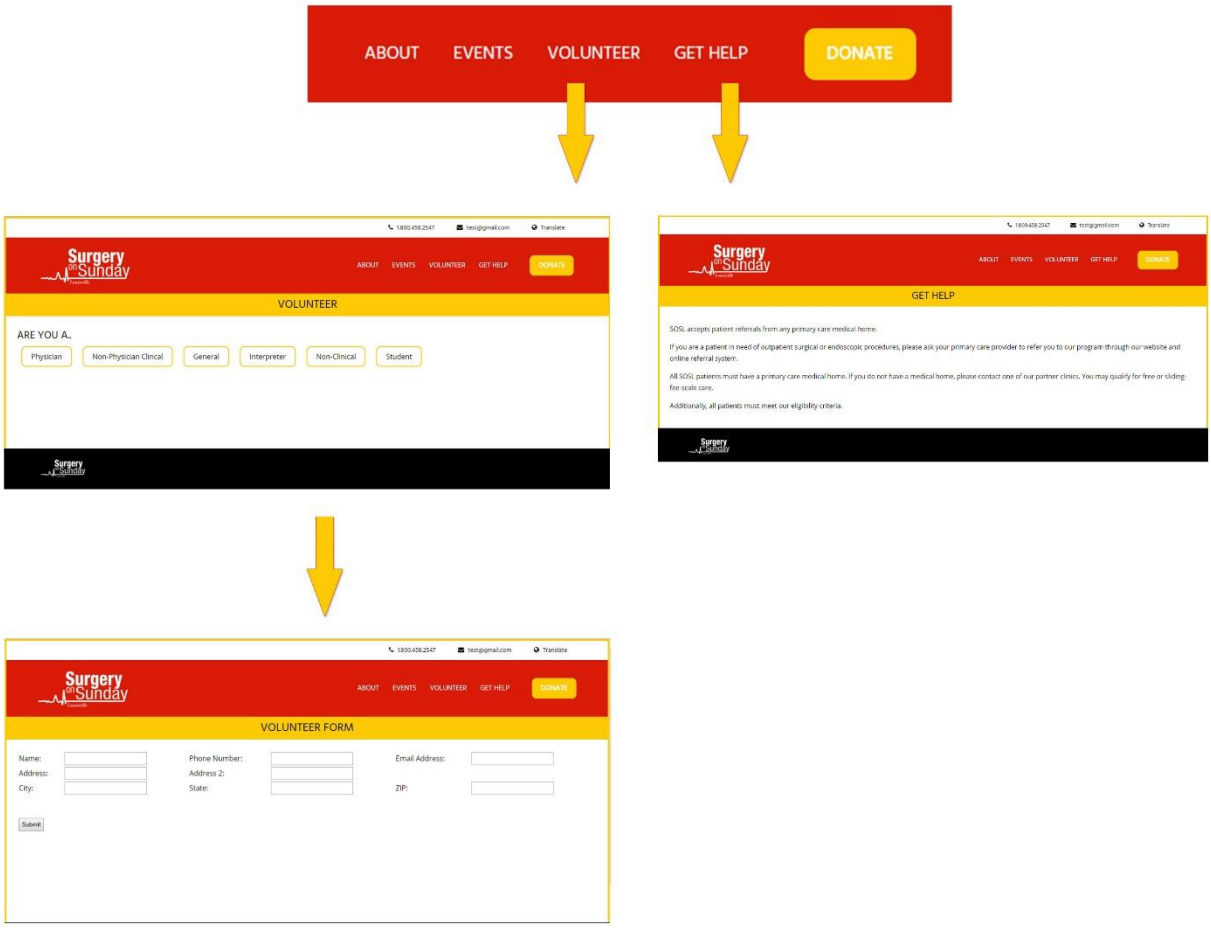

Nonmedical Interpreter
PK
FK
User ID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Social Media : string : 20 bytes
Language Frequency : string : 20 bytes
Nonmedical Volunteer
PK
FK
User ID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Social Media : string : 20 bytes
Physician
PK
FK
User ID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Phone Number : string : 20 bytes
Medical License Number : string : 20 bytes
Job Category : string : 20 bytes
Liscensed States : string : 20 bytes
Surgeon
PK
FK
User ID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Phone Number : string : 20 bytes
Medical License Number : string : 20 bytes
Job Category : string : 20 bytes
Liscensed States : string : 20 bytes
Nurse
PK
FK
User ID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Phone Number : string : 20 bytes
Medical License Number : string : 20 bytes
Job Category : string : 20 bytes
Liscensed States : string : 20 bytes
Medical Interpreter
PK
FK
User ID : string : 10 bytes
First Name : string : 20 bytes
Last Name : string : 20 bytes
City : string : 20 bytes
State : string : 2 bytes
Address : string : 20 bytes
Email : string : 20 bytes
Interpreter License : string : 20 bytes
Job Category : string : 20 bytes
Language : string : 20 bytes

User Navigation

This diagram shows the navigation of the About, Events and Donate pages.

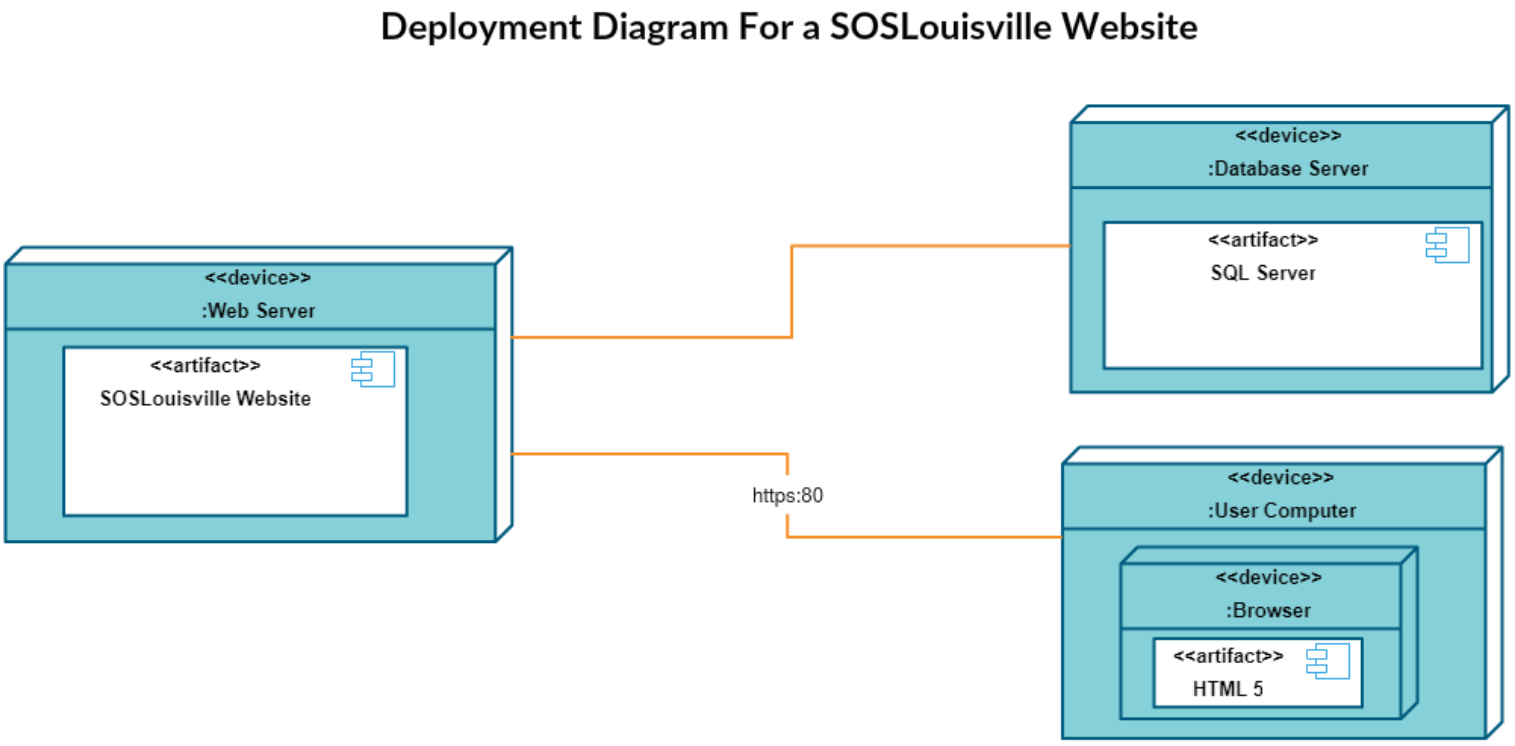


This diagram shows the navigation of the Volunteer and Get Help screens.



Physical Architecture Design:

This is a simplified deployment diagram for the SOSLouisville website. There are only a few architecture designs and decisions to be made for this system. The user will connect to the website through a browser on their computer. Any computer would work for this. The computer will access to web server, which hosts the website. When performing the processes on the website, the web server will access a database server which stores and controls all data for the volunteers, donations, etc. The decisions were made to make a simple yet effective system that would be easy to implement and to troubleshoot as well.



Security Procedures

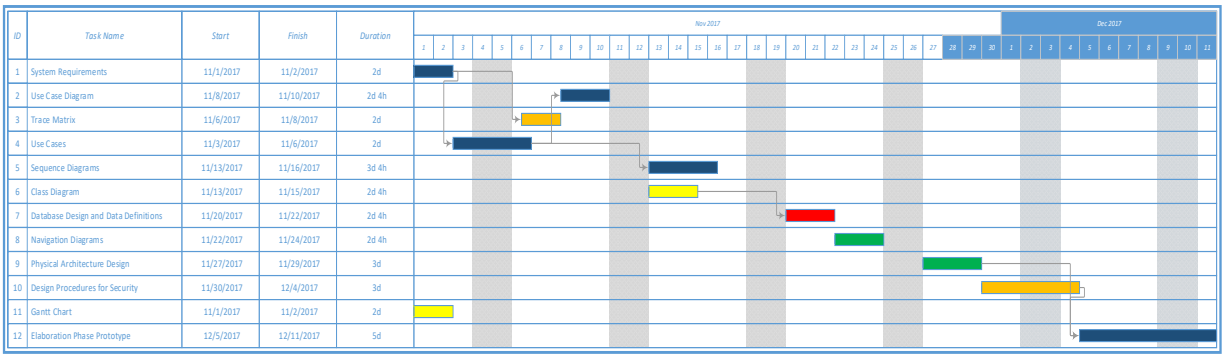
Name of Procedure	Backup User Information.
Reason for Procedure	Protect User information in case of data deletion for any cause of system error.
What the procedure will achieve?	The procedure will duplicate the current system's data into a hard drive periodically.
How often will the procedure be performed?	Once by month.
Who will perform the procedure?	IT Staff.

Name of Procedure	Backup Donation Information.
Reason for Procedure	To have a copy of the original donation data in case of and error in system that would delete or modify information.
What the procedure will achieve?	The procedure will duplicate the current system's data into a hard drive periodically.
How often will the procedure be performed?	Once a weak.
Who will perform the procedure?	IT Staff.

Name of Procedure	Restore Backed up Information
Reason for Procedure	The procedure is to verify the data backed up is in working condition and ensure the integrity of the same.
What the procedure will achieve?	The procedure will restore backed up information into a test system to verify its integrity.
How often will the procedure be performed?	Bi-annually.
Who will perform the procedure?	IT Staff.

Gantt Chart

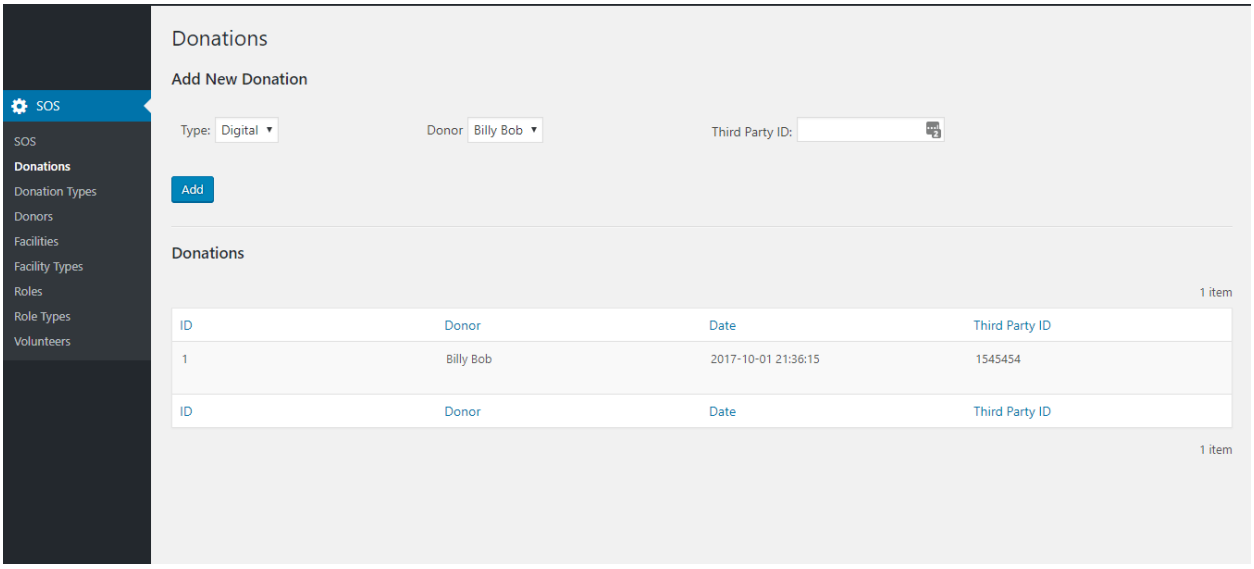
The Gantt is a way to represent the schedule of completing steps of the project. Gantt Charts were created for all the stages of the project. Each chart shows the tasks and the estimated duration required for the task. The tasks are divided into team members and represented with color coded bars. Tasks may be dependent on other tasks in the iteration. This means that one or more tasks cannot be started until the prior task is complete. The task dependency is represented with arrows showing which steps must be work on first.



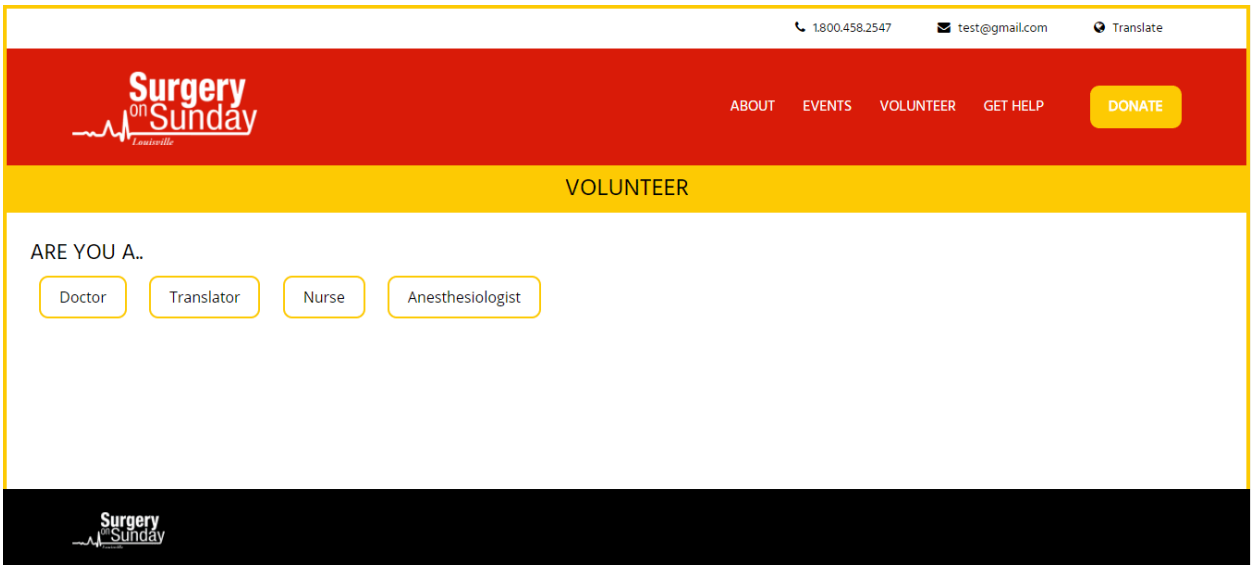
ID	Task Name	Start	Finish	Duration
1	System Requirements	11/1/2017	11/2/2017	2d
2	Use Case Diagram	11/8/2017	11/10/2017	2d 4h
3	Trace Matrix	11/6/2017	11/8/2017	2d
4	Use Cases	11/3/2017	11/6/2017	2d
5	Sequence Diagrams	11/13/2017	11/16/2017	3d 4h
6	Class Diagram	11/13/2017	11/15/2017	2d 4h
7	Database Design and Data Definitions	11/20/2017	11/22/2017	2d 4h
8	Navigation Diagrams	11/22/2017	11/24/2017	2d 4h
9	Physical Architecture Design	11/27/2017	11/29/2017	3d
10	Design Procedures for Security	11/30/2017	12/4/2017	3d
11	Gantt Chart	11/1/2017	11/2/2017	2d
12	Elaboration Phase Prototype	12/5/2017	12/11/2017	5d

Prototypes

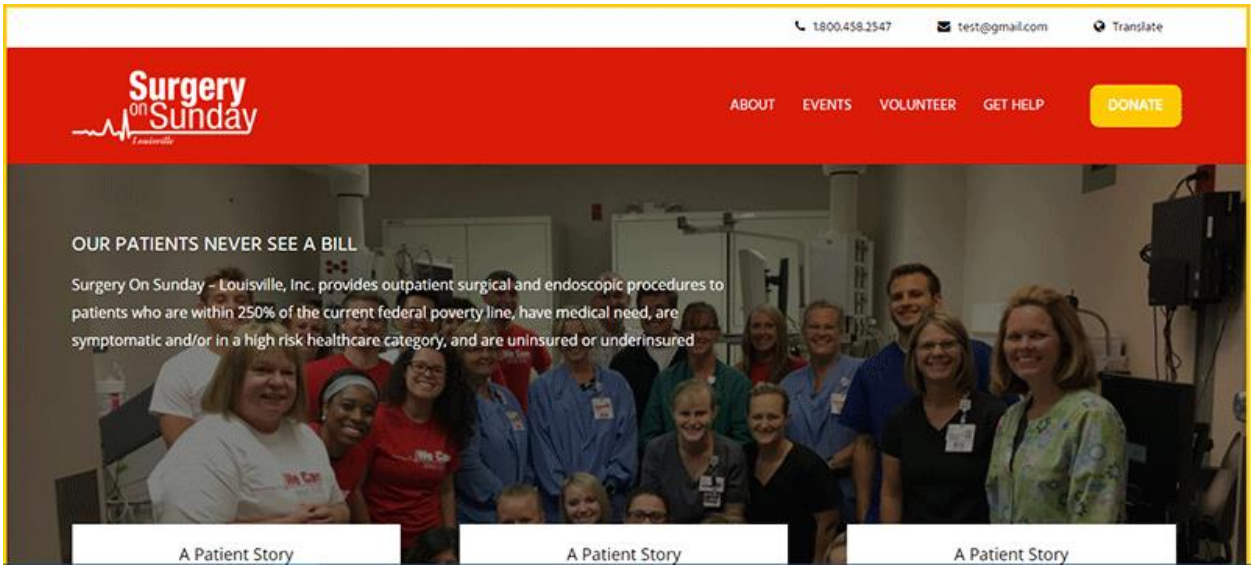
This is the donor/donation prototype. This is where donors will enter, modify or delete their information and make or cancel donations.



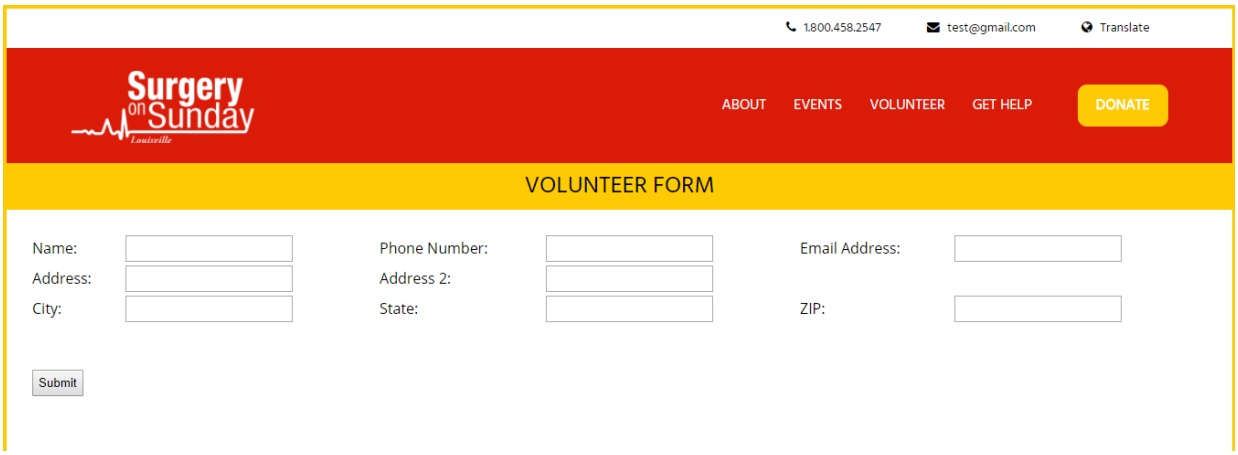
This is the prototype for the volunteer information. It has an option for each individual type of volunteer to link to a form where they can enter, modify or delete their information, and they can upload supporting documents to show they have current medical licenses.



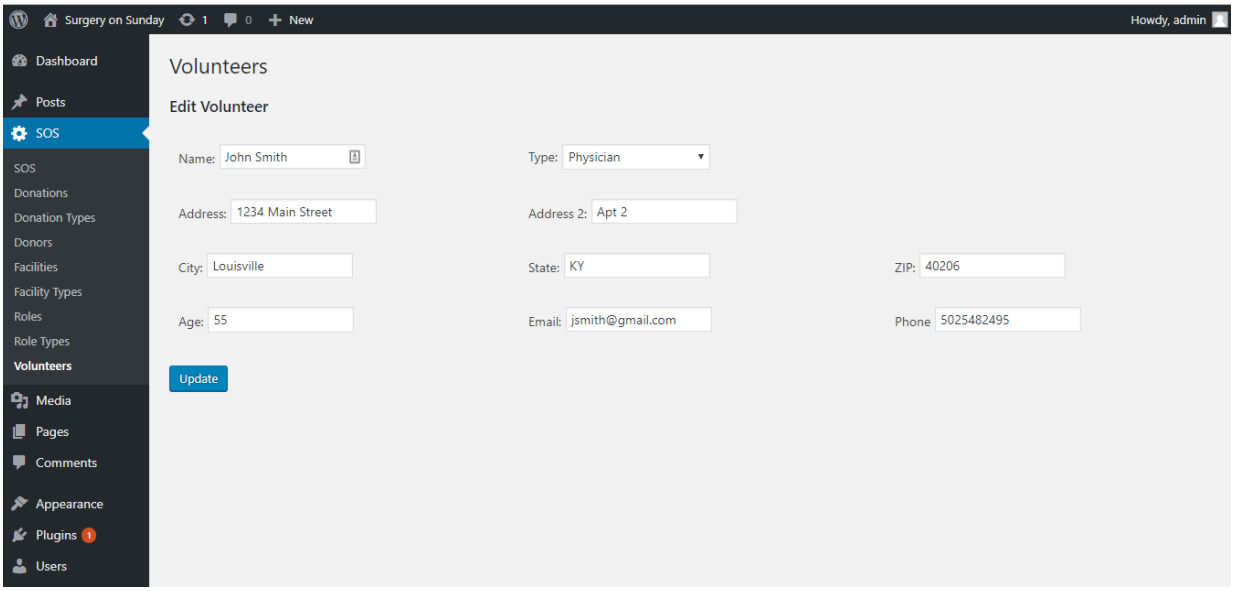
This view of the prototype shows where the patient story will be displayed. In the right-hand corner, the website visitor has the option to translate to another language.



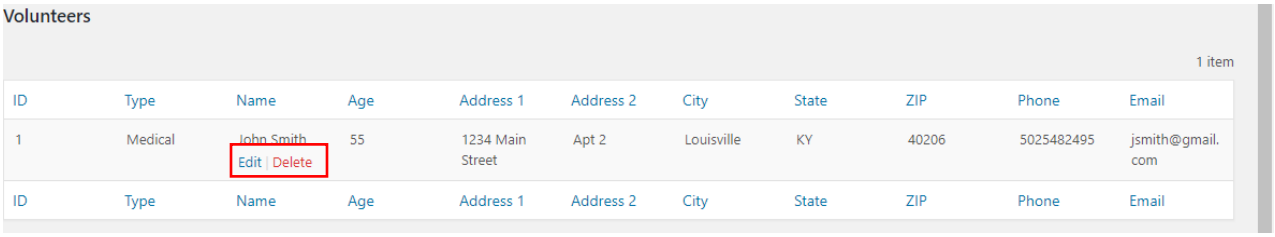
This view of the prototype shows when a non-medical volunteer (or interpreter) is entering their data.



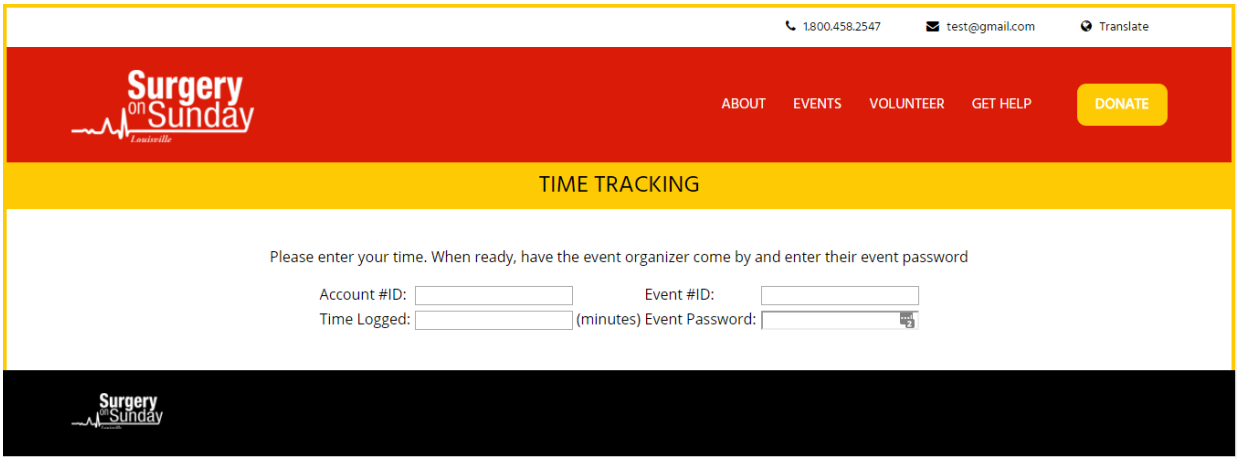
This view of the prototype is when a non-medical volunteer (or interpreter) is editing their data



This view of the prototype is when a non-medical volunteer (or interpreter) is deleting their data



This view shows a volunteer entering their time logged for an event



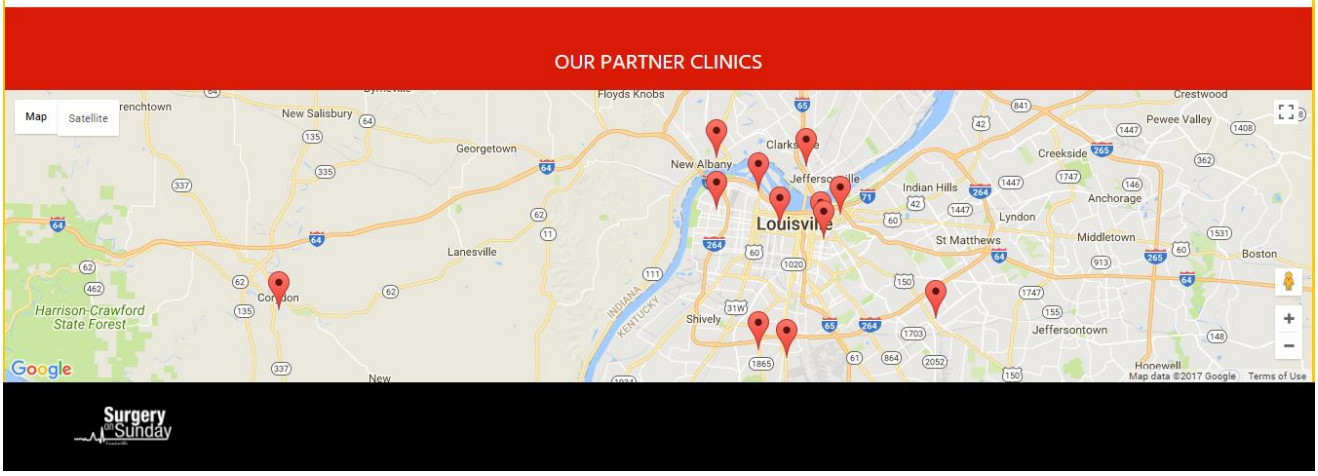
This view of the prototype shows the partner clinics on a map.

would link to news articles and the news archive.

Read More

would link to news articles and the news archive.

Read More



Backup