

Non Negotiables-

- No external Libraries
- **Chat** Application must be progressive, support online offline, made using **socket.io**, must be non blocking
- **Server - NodeJS + Express**
- Server must support - Chat system + MongoDB (Network DB) , IndexedDB (Browser storage)
- Information link from DBPedia
- No cookies and No local storage

Web Application (Online)

1. Create new Sightings

- Allow users to create new sightings with the following information:
 - Description
 - Date/time
 - Nickname
 - Geolocation
 - Image upload via file system or URL
 - Comments on the sighting
- Implement validation for required fields

2. View All Sightings

- Create a homepage that displays all sightings on the platform
- Allow filtering of sightings by date/time seen

3. View A Sighting

- Allow users to click on a sighting to view the following information:
 - Description
 - Date/time taken
 - Nickname
 - Geolocation
 - Image
- Allow users to enter into a live chat with the person who clicked the sighting.

Offline Functionality

1. Create new sightings offline

- Allow users to create at least 1 new sighting that is stored in the browser IndexedDB

2. Store sightings in browser storage

- Store at least 2 sightings in the browser storage so users can see them when they are offline

3. Comment on uploaded and new sightings

- Allow users to comment on their own already uploaded & new sightings

4. Keep a local copy of the list of all sightings

- Store a local copy of the list of all sightings, not all details but just the list of sightings

Online Functionality

1. Sync local changes to server
 - Upload local changes to server, including everything since last synced
2. Retrieve updates for new sightings and status updates
 - Only retrieve updates for any new sightings and status updates on identification of any already loaded sighting from the list of sightings in the homepage of user
3. Reload chat messages related to user's created sightings
 - Reload chat messages related to user's created sightings when back online
4. Notify users for any new messages on their uploaded sightings
 - Notify users for any new messages on their uploaded sightings

Chat Application

1. Chat appears when user clicks on a sighting
 - Implement a chat application that appears when the user clicks on a sighting
2. Real-time chat with notifications
 - Ensure that the chat application is real-time with notifications
3. Message cannot be edited or deleted
 - Implement a feature where users cannot edit or delete messages
4. Improved broadcast sighting ID functionality
 - Improve the functionality for broadcasting sighting ID so that the web app can choose which messages it needs to update, i.e., where the user has a sighting open, and/or should be notified since they created the sighting.