

SW Engineering CSC648/848 Summer 2019

EnvironMate

Team 01

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Milestone 2

10 July 2019

Version: 1.0

1. Data Definition V2

- Users:
 - Unregistered (no date saved)
 - Registered (users who can post incidents)
 - Email
 - Password
 - Name (first and last)
 - Date of birth (legal reason)
 - Sign-up date
 - Admin: (city employee)
 - Email
 - Password
 - Name (first and last)
 - Date of birth (legal reason)
 - Sign-up date
- Incidents:
 - Type of incident:
 - Chemical spill (oil, gasoline, etc)
 - Hazardous waste (used needles, feces, etc)
 - Animal (wild, stray, etc)
 - Damage (general damage: potholes, broken/dangerous equip)
 - Other (user specified)
 - Description (user describes)
 - Date (posted date)
 - Time (posted time)
 - Location (location of the incident)
 - Park name
 - Zip Code
 - Incident Status
 - Status Type
 - Received (not yet seen)
 - Reviewed (seen and in progress)
 - Resolved (completed)
 - Archived (completed and will no longer be seen by users)
 - Changed On (the date status was last updated)
 - Data (stored as BLOB not exceeding 128 MB)
 - Media (data that registered users will use to describe the incident they post)

- Images
 - .png
 - .jpeg / .jpg
 - .gif

2. Functional Requirements V2

Priority 1- Must Have

System-

- 1) shall allow 3 types of users; unregistered user, registered user, admin user.
- 8) Registration form: required for users to register. Contains name, e-mail and Date Of Birth. Stored in the database.

Unregistered User-

- 9) shall be able to register.
- 2) shall be able to view all the incidents.
 - Use the search bar to view incidents, or use view incidents page/tab
- 3) shall be able to search incidents by zip code.
 - Dropdown next to search bar to search by zip code only
- 4) shall be able to search incidents by location.
 - Dropdown next to search bar to search by location only
- 6) shall be able to filter incidents by types of incidents.
 - Dropdown next to search bar to search by keyword (i.e. : oil spill)
- 7) shall be able to filter incidents by status.
 - A filter option on view incidents page to filter by status

Registered User-

- 11) shall be able to perform all functions of unregistered users.
- 12) shall be able to login.
- 13) shall be able to logout.
 - Logout button on every single page top right
- 14) shall be able to create incidents; with one photograph, location, type and description.
 - Form on create incidents page with all these categories
- 15) shall be able to view the incidents created by them.

Admin-

- 18) shall be able to perform all functions of registered users.
- 19) shall be able to change the status of an incident.
 - Have a drop down menu with options “Reviewed” and “Resolved”
- 20) shall be able to archive an incident if it is identified as inappropriate or has been in resolved status for X days.
 - Have an archive button

Priority 2- Desired

Unregistered User-

- 5) shall be able to filter incidents by multiple locations.

Registered User-

- 10) shall be able to edit their own profile information.
 - o Edit profile button on “My Profile” page
- 16) shall be able to edit incidents that are not in resolved status.
 - o Edit incident button

Admin-

Priority 3- Opportunistic

Unregistered User-

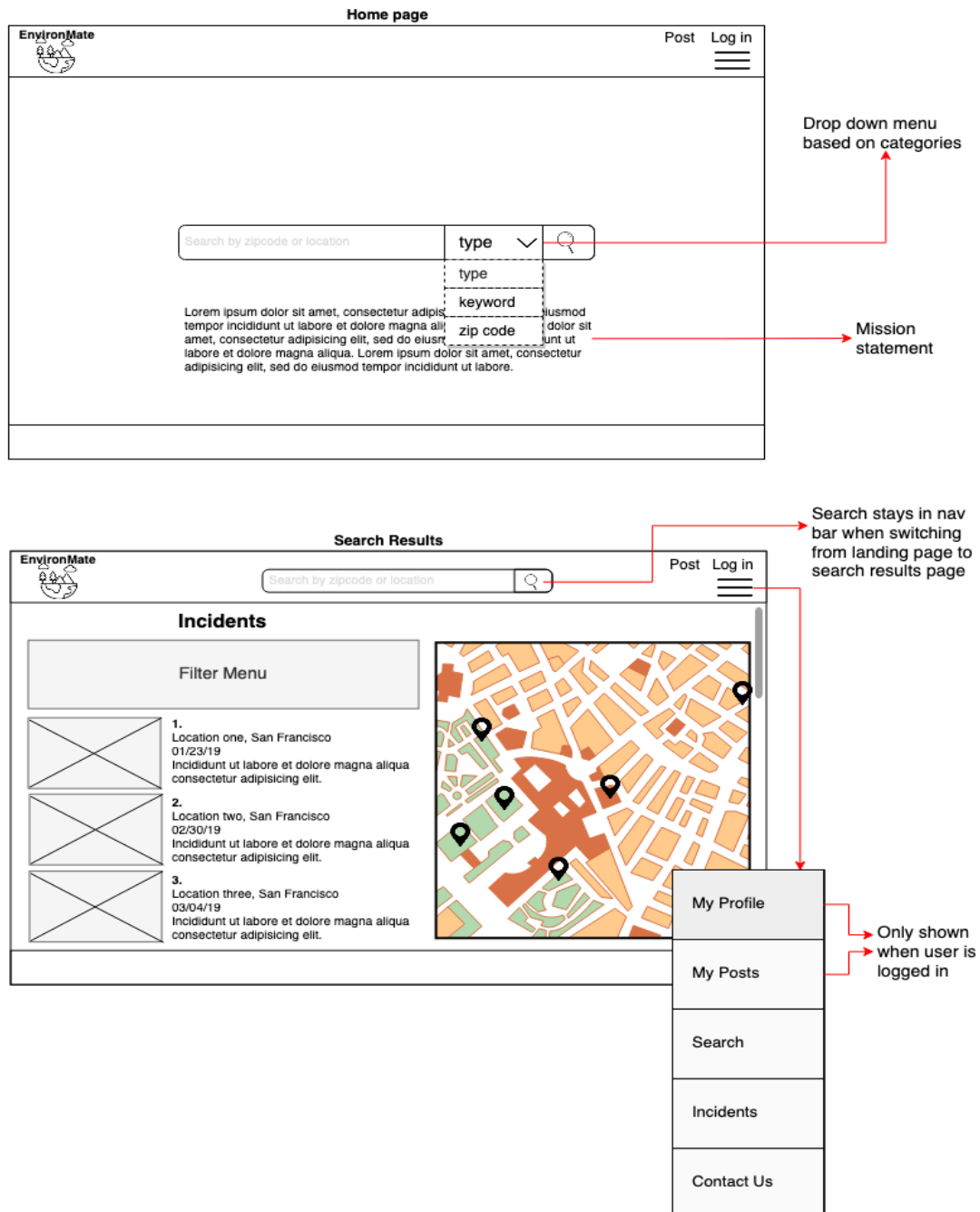
Registered User-

- 17) shall be able to delete their own profile.
 - o Delete profile button which deletes their account

Admin-

3. UI Mockups and Storyboards

General Mockups



General Mockups

Log in

EnvironMate

Search...

Post Log in

Log in

Email

Password

Dont have an account? [Sign up](#)

Make an Account with Environmate

First Name

Last Name

Email

Date of Birth

Month

Day

Year

Have an account? [Log in](#)

The log in link will activate a pop up window. If the user does not have an account, they can sign up through the link at the bottom.

The sign up link will activate a different pop up window where a user can create an account.

Report an Incident

EnvironMate

Search...

Post Log in

Report an Incident

* Required Fields

☐ Use My Location

Address *

Zip Code *

Type of Incident *

---- Choose one ----

Date of Incident *

Month

Day

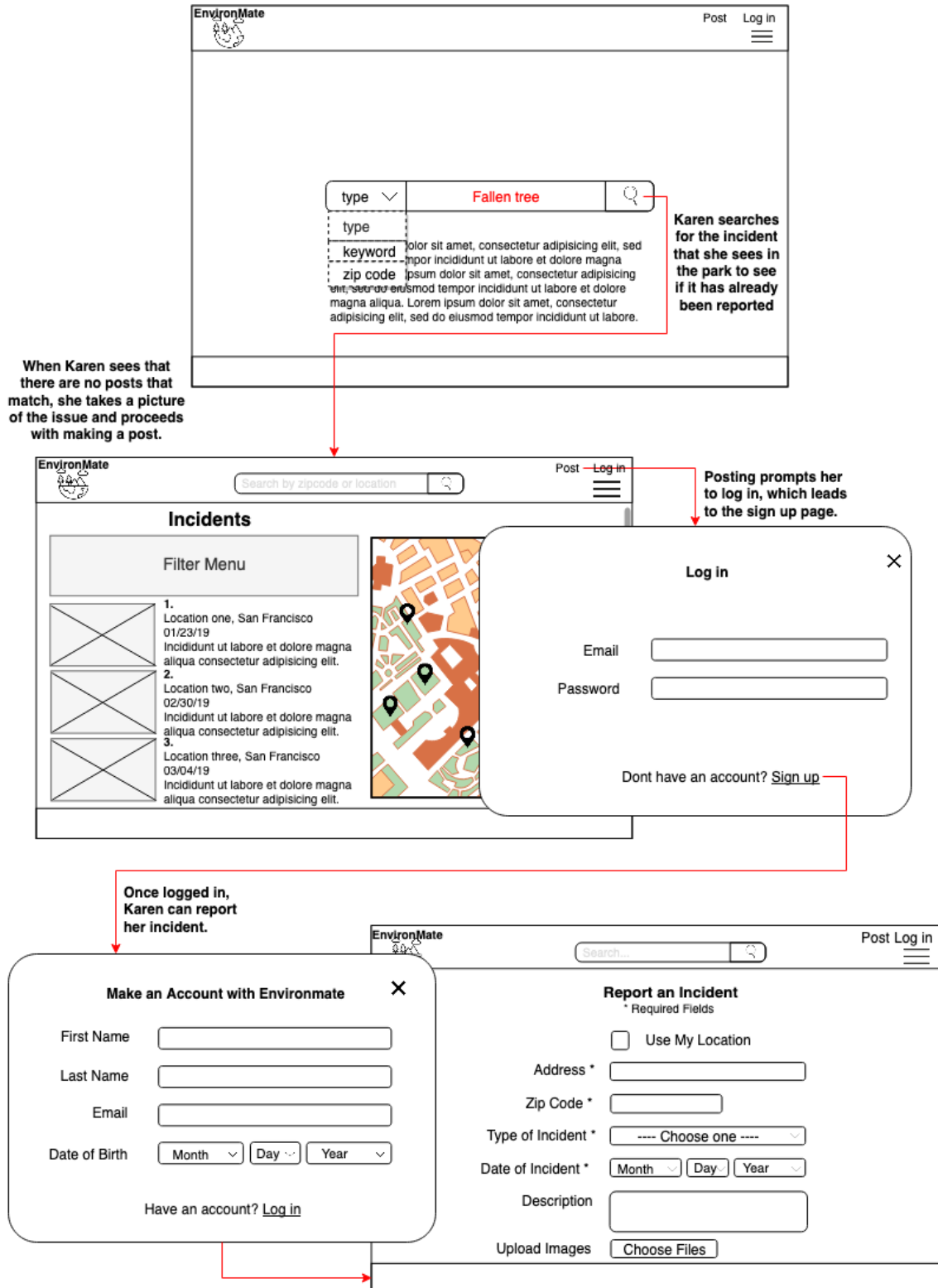
Year

Description

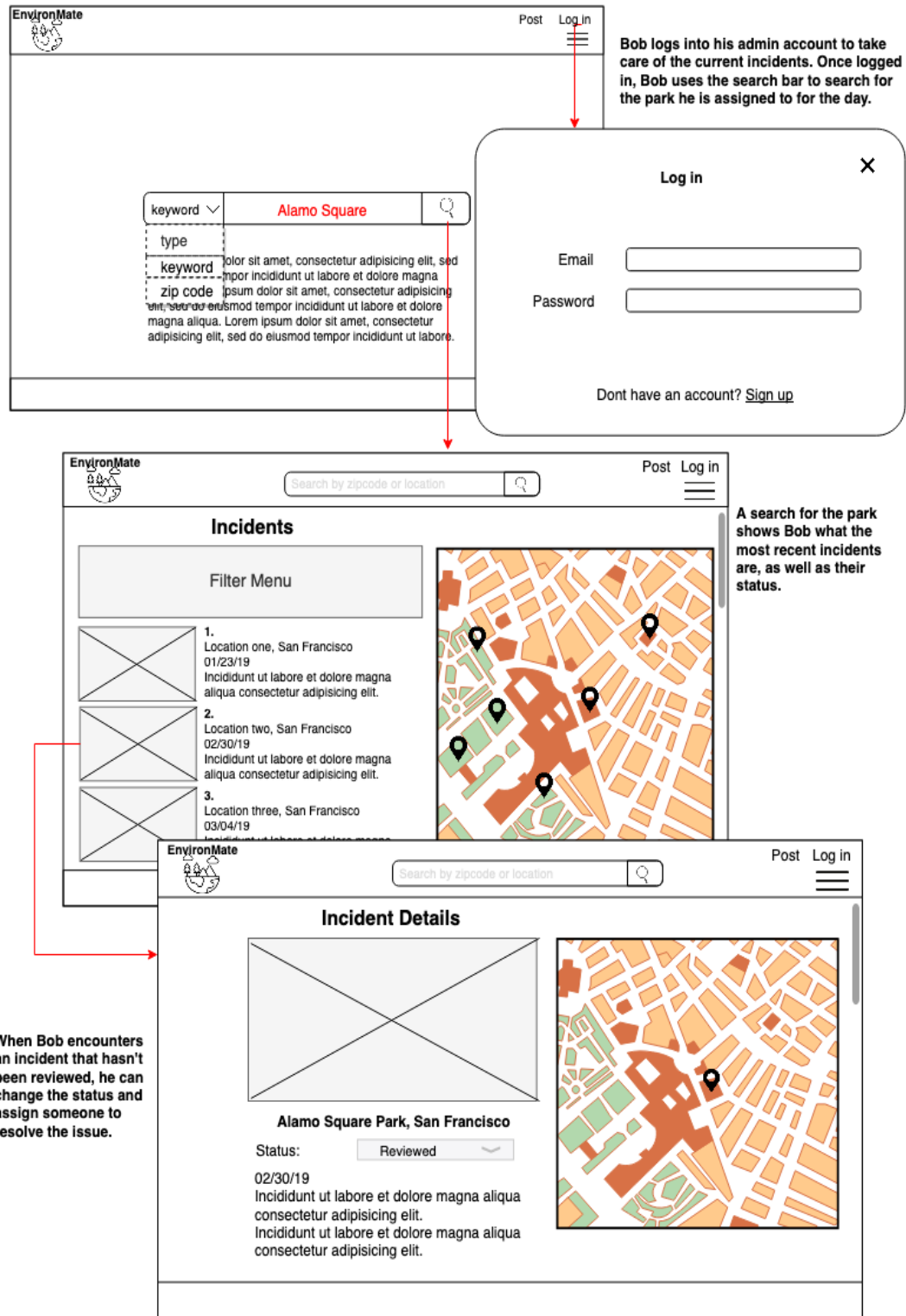
Upload Images

Choose Files

Story Board 1 – Use case 1, unregistered and registered user



Story Board 2 – Use case 2, Use case 2, admin



4. High Level Architecture, Database Organization

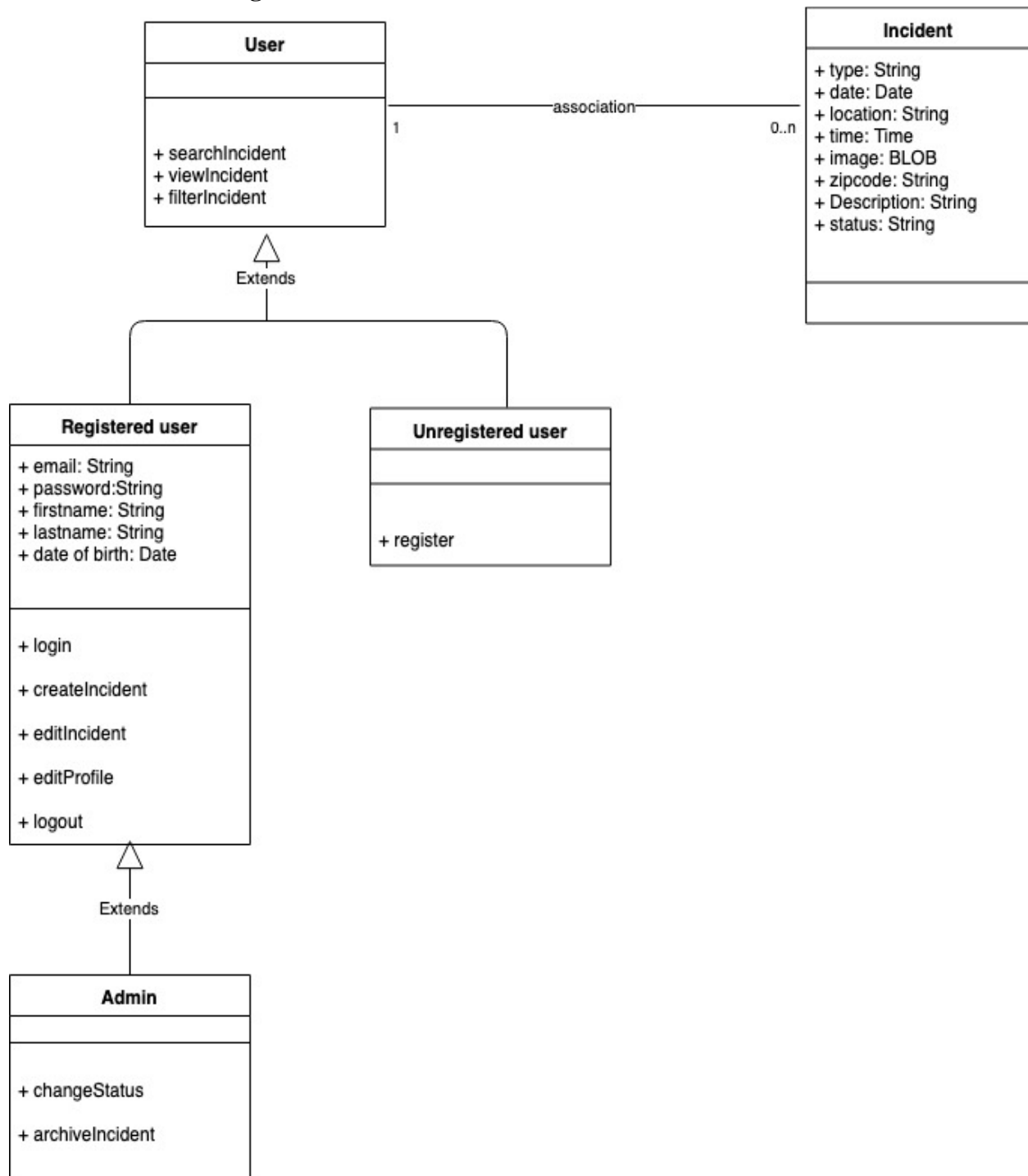
- **Database Tables (MySQL)**
 - INCIDENT_TYPE
 - TYPE_ID
 - TYPE_NAME
 - ROLES
 - ROLE_ID
 - ROLE_NAME
 - INCIDENT_STATUS
 - STATUS_ID
 - STATUS
 - CHANGED_ON_DATE
 - CHANGED_BY
 - USERS
 - USER_ID
 - USER_EMAIL
 - PASSWORD
 - FIRST_NAME
 - LAST_NAME
 - DATE_OF_BIRTH
 - INACTIVE
 - SIGNUP_DATE
 - ROLE
 - INCIDENTS
 - INCIDENT_ID
 - TYPE
 - DATE
 - LOCATION
 - TIME
 - IMAGE
 - ZIP_CODE
 - DESCRIPTION
 - USER_ID
 - STATUS
 - LOCATION
 - LOCATION_ID
 - LOCATION_NAME
 - ZIP_CODES

- ZIP_ID
- ZIP_CODE

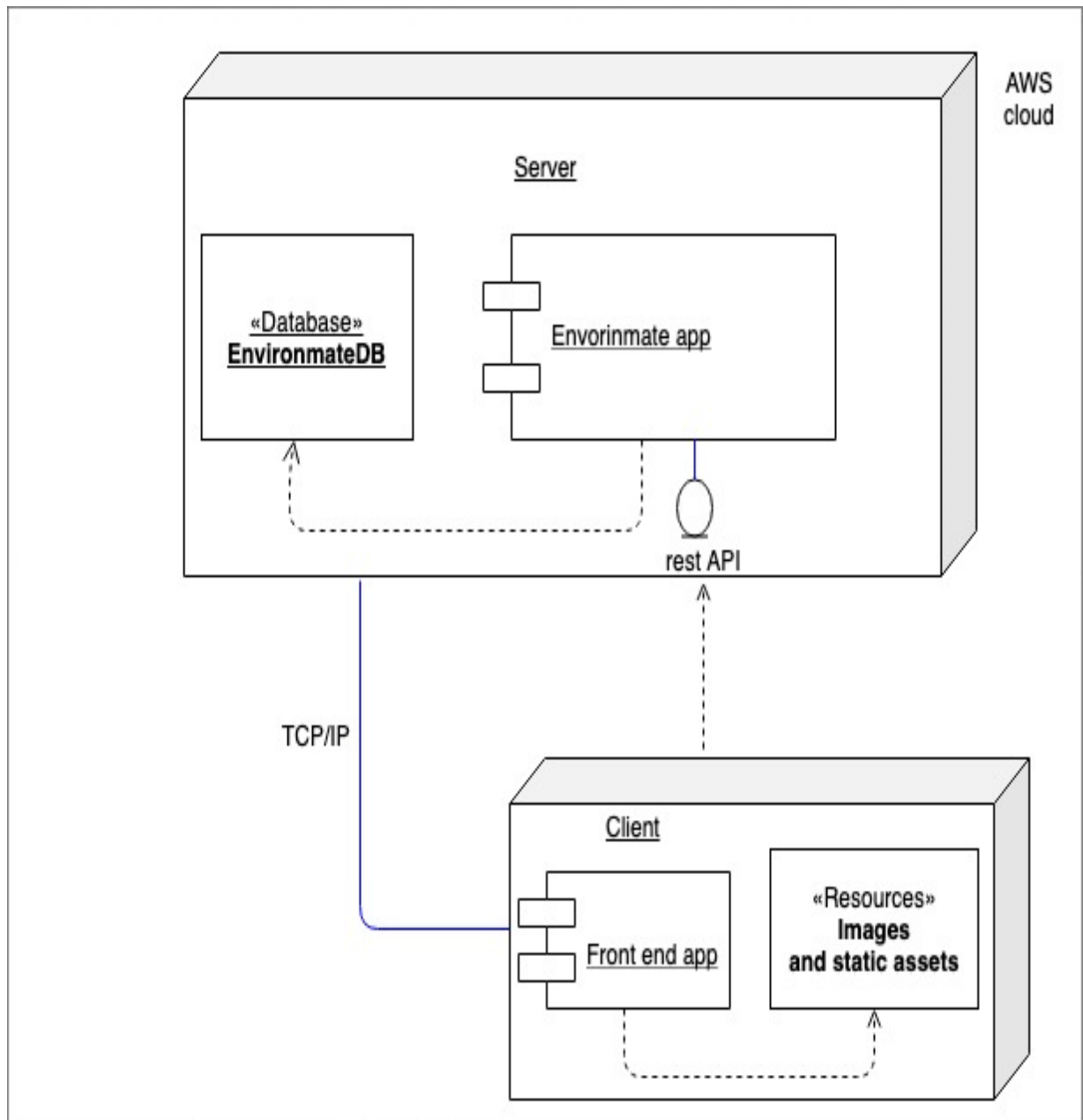
- **Media storage:**
 - Images shall be stored via BLOBS directly in the MySQL database
 - Application will not support video/audio/GPS
- **Search/filter:**
 - Search implementation shall use the existing SQL functionality, %LIKE and standard querying
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5. High Level UML Diagrams:

UML class diagram



UML Component and deployment diagrams



6. **Key Risks**

- **Skills Risks-** The majority of our team have minimal experience with using the express and MySQL.
 - Our plan is to provide tutorials that give in depth material with examples in order to be able to contribute to the backend.
- **Schedule Risks-** Only two people in the group have one class. Everyone else has at least 2 or more classes. Group members also have jobs outside of school.
 - Our plan to resolve this issue is to be very organized as a team, and clearly explaining to each member what is expected from them and when it is due. We also encourage to ask as many questions as possible in order to provide proper feedback.
- **Technical Risks-** Team is not familiar with storage Blobs
 - Once again our plan is to provide sufficient learning material from the web in order for them to be able to contribute.
- **Teamwork Risks-** Distance outside of class
 - Everyone lives pretty far from San Francisco. Our plan is to arrange meetings before or after class in order to get the most work done together as a team. Otherwise, we are all very active in communication through Slack.
- **Legal Risks-** Inappropriate Images / Obtaining software illegally.
 - If a member is going to use code or images from the web, we will have another member double check to make sure the software they are using is open-source, or if the image is free to use.

7. **Project Management**

Team 1, EnvironMate, has elected to use the built-in project manager that GitHub offers for task management. This will allow us to declare different tasks and assign them to team members for completion. The tasks can be marked as to-do, in progress, or done, for easy visualization of our progress. Another advantage to using the GitHub project manager is being able to have code, documents, and tasks in one centralized location.

For Milestone 2, we decided to divide work according to the different section's numbers, and team members volunteered to complete them. The backend team focused on the UML diagrams, high level architecture, database organization, and vertical prototyping. The front end team completed the mockups, storyboards, and expanded on the functional requirements. The team lead tackled the data definitions, and the team collectively identified key risks.

While frontend and backend teams are focused on completing Milestone 2, both teams are also trying to curb future workloads. The backend team is working on getting the databases built and populated. The front-end team is tackling the navbar, footers, search bar, and forms that will be used for the website. We have some rudimentary pages and are familiarizing ourselves with our tools to ensure a smooth transition when building the website next week.