**G1\_P2 Pet Tracker Proposal\_v3**

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**Trello Board**: <https://trello.com/b/ceHWJ1eu/revature-p2-kanban-board>

**Project Repository**: <https://github.com/06012021-dotnet-uta/P2_NumberOne>

**Sale Description:**

Pet Tracker will provide users a means to find lost pets and locate their owners in the local area. There will be 3 main use cases. The owners will be able to use Pet Tracker to look for lost pets. They will also be able to simply track roaming pets. Lastly, users who have found roaming pets will be able to mark the location of the pet for reference and see additional pet information if it is registered. Users will also be able to look up owner contact information of the registered pets.

In order to make Pet Tracker work, Pet Tracker will require the following information of pet owners: a contact email or phone number or address. Pet Tracker will require the following information of registered pets of registered owners: the type of pet (i.e. cat, dog, bird), the breed of the pet, the coloration of the pet, the age of the pet, the status of the pet (i.e. lost, permitted roaming, dangerous). Pet Tracker will require the following information from roam pet finders: an approximate location of where the pet was found using either OpenLayers or IPStack, an approximate time of the pet sighting, and a description of the pet (i.e. type of pet, coloration, any identifiable information). As a stretch goal, we would like to speed up the identification process used by Pet Tracker by using a QR and ID code that can be placed on pets to link directly to their profile page to make location tagging quicker.

For users looking to locate lost pets through Pet Tracker, they will need to register their pets under their profile. Once done they can create a post with attached information to assist in the location of their pet. Other users will then be able to view the lost pet post and provide additional details in an attached forum section. If the pet is then found by another site user, the owner’s contact information will be available in order to return the lost pet.

For users that wish to log locations of roaming pets, they will be able to see active forums that provide location information on where the roaming pet was seen through the pet profile. If no forum exists for their pet, they will be able to create a forum for an unlisted pet to assist in the location of any unregistered animals. Then register that forum to their claimed pet’s profile.

Finally, for users that are not owners of pets, they have the option of posting information regarding a pet they saw in the area in which the user is located. This can be via an unregistered pet page forum or a registered pet forum. The roaming pet finder will have the option to search for the pet if it is a registered pet or not before making the post. As an additional stretch goal, Pet Tracker may include a recommended pet identifier to encourage search for registered pets before making the post.

**Minimal Viable Project:**

- Users can login and register accounts

- Users are able select a location

- Site displays forums for lost pets near the selected location

- Users can register pets to their account

- Users can create forums with descriptions for lost pets

- Users can post pet sightings with their location to forums associated with seen pet

**3 stretch goals:**

* Share location with someone else if it is in the area.
* Show if there is a clinic near the area in case the animal is hurt.
* ID to QR code for quick lookup of information

**Desired Design Specifications:**

* **GPS Tracking System**
  + Pet Tracker will be utilizing OpenLayers as a base mapping system to keep track of verified/claimed pet forums to generate a wandering map on the associated pet’s profile.
  + Generated OpenLayers maps will allow users to select a pinpoint home location, show general home location zone, show sighting recordings, and view wandering pet zones.
  + Note, we will not display pinpoint home location addresses on public maps for privacy reasons. The public may only see a general wandering area on the pet profile.
  + Pet Tracker will allow owners to set a valid wandering radius of a pinpoint “home” location. The API will then extrapolate and return a lost/not lost status based on the distance of the sighting locations compared to the home location on each slighting post. Sighting posters will not be able to see a pet’s home location but will be able to see registered pets’ provided contact information if necessary.
  + As a stretch goal for P3 potentially, owners have the choice to add GPS trackers on their pets, to track their location.
  + For those owners that don't have the resources to put GPS collars, they may place a QR code as a means of identification on the app. Refer below for more details.
* **QR Code Identification System**
  + The QR Code Identification System will allow owners to potentially attach a QR code to their pets (like on the collar/identification tag).
  + The QR Code will have 2 potential uses as a stretch goal.
    - 1: The QR Code will automatically link viewers to the associated Pet Profile Page for quick information look up.
    - 2: The QR Code will automatically generate a slighting post request on the most active pet forum associated with the pet’s profile for quick and easy sight updates.
* **Owner Usage & Profiles**
  + Owners may shift through the forums’ sighting posts to confirm or delete sightings. They may also create wandering maps based on these sighting posts.
  + Owners will have access to see a generated map of wandering pet locations and home locations on their pet profile. However, this will not be made available to the public.
  + Owners may create additional maps and forums to separate/distinguish wandering adventures.
  + Owners will not be required to designate a “home” location. This implies that Pet Tracker will not automatically generate a “lost” status but will simply keep track of sighting locations.
  + The owner solely will have the choice to mark the pet as wandering.
* **Non-Owner Usage & Expectations**
  + Non-pet owner users will have the option to add additional information on existing pet forums but not pet profiles. They may post additional sightings to the forum if they believe the wandering pet to be the same.
  + Users that are in the local area will be able to see the description of pets that have been marked as lost to associate/register sighting posts with actual pets. Otherwise, sighting posts may be left unclaimed for lost pet owners to search when needed.
* **Pets Profiles**
  + Pet Profiles are mainly used to store pet information such as the breed, type, home locations, and statuses.
  + Pet Profiles will link pets to its owner and to its claimed pet forums.
  + Pet Profiles will list created pet wandering maps and link users to map related details.
  + There will be image support, such that users may upload photos of their pets for supplementary description and easier identification/recognition.
* **Pet Forums**
  + Pet forums will be used to keep track of pet sightings by both owners and users.
  + Pet forums will have 2 main states: claimed and unclaimed.
  + Pet forums may be claimed by owners only.
  + Pet forums when claimed will be used to generate Pet Maps for the claimed pet’s profile.
  + Pet forums maybe left unclaimed for usage as a lost pet locator by pet owners.
  + Pet forums will also support images for ease of identification by users to see if they are posting about the same pet and by owners to see if the pet is theirs.

**3rd Party API:**

* OpenLayers : <https://openlayers.org/>
* IpStack: <https://ipstack.com/>

# LostAndFound API (<https://www.programmableweb.com/api/lostandfound>)

* QR Code Generator <https://goqr.me/api/> (For stretch goal)

**User Story:**

***Scenario 1:*** As a lost pet owner, I want to mark my registered pet as lost and see if I can find the last seen locations of a pet to find them.

***Scenario 2***: As a pet owner, I want to register my pet and track their movements just to keep an eye on them.

**Scenario 3**: As a person who’s seen a registered pet, I want to post where I have seen the pet and check if they’re lost.

***Scenario 4:*** As a person who’s seen a lost pet, I want to be able to contact the owner that I have found their lost pet so they can retrieve them.

***Scenario 5:*** As a person who’s seen an unregistered wandering pet, I want to post where and when I have seen the pet. So that a lost pet owner can generically search for them.

***Scenario 6:*** As a lost pet owner, I want to look through unregistered pet sightings to see if I can find my lost pet.

**User Interaction Model:**

