Backend Stuff

Backend Infrastructure

- Python Flask Backend
  - A Flask backend which can respond to the listed 'MVP Backend Endpoints'
  - It accepts http requests formatted as
    [url]/[endpoint]?[[param1]=[value1]&[param2]=[value2]&...]
  - Responses are returned as JSON documents
- IBMCloud Backend Hosting
  - Some sort of hosting for Python Flask Backend
- water-waze-db2
  - DB2 free tier (200MB limit)
  - Hosted in IBMCloud
  - Responds to requests from the Python Flask Backend
  - Tables listed in MVP DB2 Tables

Backend Endpoints

Endpoint	Request Type	Parameters	Response
/create_user	POST	- username - email - name {first: [first name], last: [last name]} - username	- user - UserID
/get_user	GET		
/get_locations	GET	- coords - Longitude & Latitude - Radius - Radius in KM	- Locations - Location IDs mapped to coordinates - Radius - Actual radius searched - Num #Results shown
/get_location_info	GET	- location - Location ID	- Rating - Comments

Endpoint	Request Type	Parameters	Returns
/create_location	POST	- coords - Longitude & Latitude - user - User ID of who posted the user (Bad way to do it but it'll work for now) - title - string title - rel_loc - string Relative Location (what it's near / inside of) - Optional - description - string - Optional - loc_type - string Type of the location - Optional	- Location ID - Unique ID for this water stop
/rate_location	POST	- location - Location ID - user - User ID - rating [1, 5] - comment - String comment	

Minimal Backend Endpoints

Endpoint	Request Type	Parameters	Returns
/get_locations	GET	- coords - Longitude & Latitude (GeoJson?) - Radius - Radius to search in	- Locations - Location IDs mapped to coords, rating, information, etc. - Radius - Actual Radius searched - Num # Results Shown

/rate_location	POST	• Location
		    o Location ID
		• Rating
		    o int [1, 5]	

MVP DB2 tables

- Note - all attributes are required unless otherwise noted in 'Type'

Users

Attribute	Type	Description
user_id	unique, uuid	User ID
username	unique, string	
first_name	string	
last_name	string	
notifications	boolean	True if notifications enabled.
email	string	

Locations

Attribute	Type	Description
Locaiton_id	unique, uuid	Table generated location ID
longitude	double	Stored in locaiton_data as well, but it is exposed here for better indexing
latitude	double	latitude. See longitude description.

location_data	unique, json	The JSON is stored as a GeoJson formatted doc
		Includes:
		
		    • ID
		    • rating
		    • title
		    • description
		    • location [[lat], [long]]
		    • Num users rated

location_ratings

Attribute	Type	Description
ID	Unique, Integer	Rating ID
rating	Integer [1, 5]	The user Rating
comment	String, optional	A quick comment about the location.
user_id	unique, uuid	The ID of the user
location_id	unique, uuid	The ID of the location