

ParkBark

<http://flip2.engr.oregonstate.edu:9131/>

Group 27 Portfolio Assignment

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Executive Summary

STEP 1 - Project Proposal, Outline, ERD

From peer feedback we updated our entity and attribute names to be more specific and readable. We changed the attribute 'name' that existed both in the Dogs entity and Humans entity to 'dog_name' and 'human_name', respectively. We shortened 'Dog-Human_Relationships' to 'DogHumanRelations'. In addition, we removed the NULL constraint from the 'exit_time' attribute in 'Visits'.

Our own upgrades included adding a 'Breeds' entity to record the details of the breed of a dog that visits the park, and adding a 'RelationTypes' entity to record the details of relationships between 'Dogs' and 'Humans'.

STEP 2 - Normalized Schema + DDL with Sample Data

From peer feedback we decided to stick with leaving 'RelationTypes' as a separate entity so that various relationships could be represented and accounted for. We also made the relationship between 'Breeds' and 'Dogs' NULLable so a dog could now be added without a specified breed.

During our development process we also decided to add ON DELETE CASCADEs to our DDL for the foreign keys 'relation_typeID', 'dogID', and 'humanID' in 'DogHumanRelations' so that if a relation type, dog, or human is deleted from its respective parent table, this would be reflected in the 'DogHumanRelations' table. Similarly, we added an ON DELETE CASCADE to the foreign key 'relationID' in 'Visits' so that if a dog-human relationship is deleted from 'DogHumanRelations', this would be reflected in the 'Visits' table.

STEP 3 - Design HTML Interface + DML SQL

From peer feedback we updated the column names of tables to be more human readable. We also added various JOINS in our DML to display information that would be more intuitive to the user instead of just displaying ID numbers. We chose to leave 'Administer' in the descriptions of all our pages as it should be clear to a user what they're looking at in the event that they stumble across the URL. We also changed some of the UI free text input fields to drop downs for the sake of cleaner data.

From later peer feedback we also updated our Home Page UI so that the links were more distinguishable from their descriptions.

STEP 4 - Implement CRUD for One Entity

We made the choice of using regular HTTP requests instead of XMLHttpRequests and AJAX as that's not really industry standard anymore and would have further complicated our project.

Project and Database Outlines

Project Overview: ParkBark - Who's at the dog park today?

Here is the (belly) rub. Dogs are the best friends humanity will ever have, but they're not robots. They need recreational stimulation just like we do! Have you ever driven to the dog park clear across town, sweating in the heat with the windows down as your car guzzles gas at \$5 bucks a gallon. It's stop and go traffic, and you've only got an hour in your day to make sure Kujo gets his licks in, but when you get there, it's empty! What was the point of all that hassle? Obviously, Kujo can sniff about, but he could have done that in the yard. Y'all came for the best thing for a pup, socialization. Well, you don't have to worry anymore. With ParkBark (patent pending), you can find out in advance if your dog's pals are hanging tough in the muck, rain or shine. Our application gives users the ability to indicate when they're at the park so that others can join them. Using state-of-the-art open source database technology, ParkBark keeps you in the know, so that you never waste your time and gas again. Seriously, this is tech that'll scratch the itch. Get ParkBark today.

Still have doubts? Did you know that according to the American Pet Products Association 10% of current pet owners are new ones as of 2016, and it turns out that the majority of these new pet owners are millennials - many eschewing children in favor of furry friends. Furthermore, the ASPCA reports that more than 23 million American households, nearly 1 in 5 nationwide, adopted new pets during the pandemic.

What's more, dog parks aren't going anywhere. The city of Portland has 33 off-leash dog areas as of 2022 with more planned in the years to come. ParkBark sees a marketplace that is ready for this application.

In ParkBark's pilot launch we'll be focused on one park, but the ability to scale up could be as simple as creating new databases for each new park brought into the application. While the possibility of allowing users to make the additions via crowd-sourcing was considered, we at ParkBark feel that it's more important to ensure data validity by implementing the scale out on a park by park basis with each addition verified by staff here at our organization.

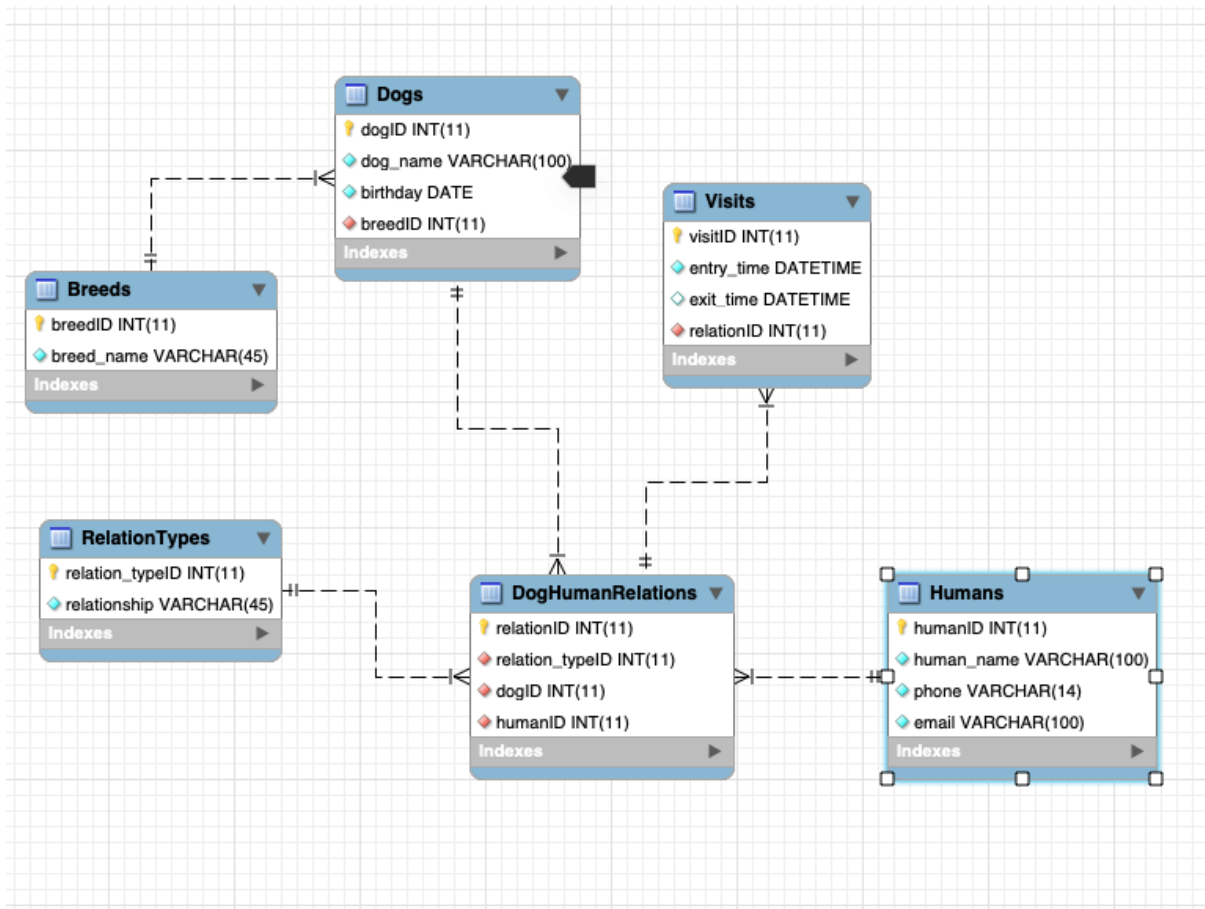
Database Outline, in Words

- **Humans:** records the details of the Humans of the Dogs that visit the park
 - Attributes
 - humanID: int, auto_increment, not NULL, PK
 - human_name: varchar(100), not NULL
 - phone: varchar(14), not NULL
 - email: varchar(100), not NULL
 - Relationships
 - a 1:M relationship between Humans and DogHumanRelations is implemented with humanID as a FK inside of DogHumanRelations
 - A M:M relationship between Humans and Dogs is implemented through the intermediary table DogHumanRelations
- **Dogs:** records the details of the Dogs that visit the park
 - Attributes
 - dogID: int, auto_increment, not NULL, PK
 - dog_name: varchar(100), not NULL
 - birthday: date, not NULL
 - breedID: int, FK
 - Relationships
 - a 1:M relationship between Dogs and DogHumanRelations is implemented with dogID as a FK inside of DogHumanRelations
 - A M:M relationship between Dogs and Humans is implemented through the intermediary table DogHumanRelations
- **Breeds:** records the details of the Breeds of the Dogs that visit the park
 - Attributes
 - breedID: int, auto_increment, not NULL, PK
 - breed_name: varchar(45)
 - Relationships
 - a Nullable 1:M relationship between Breeds and Dogs is implemented with breedID as a FK inside of Dogs

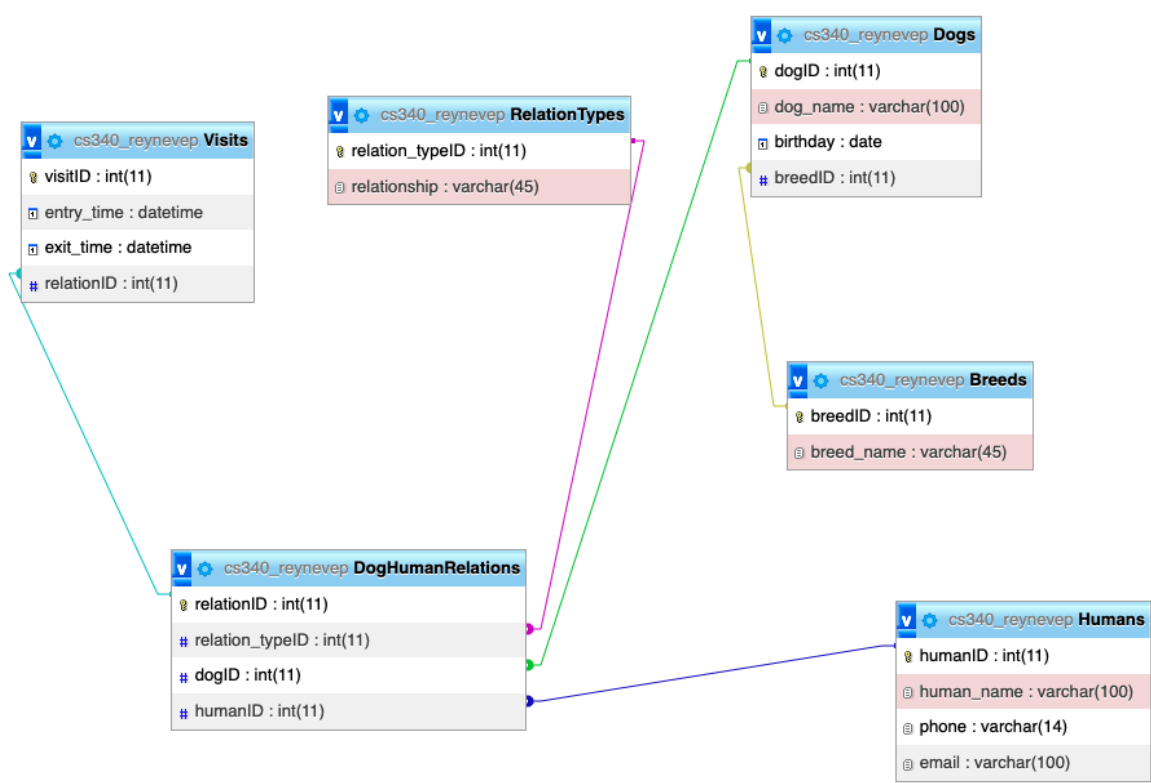
- **DogHumanRelations:** records the details of relationships between Dogs and Humans
 - Attributes
 - relationID: int, auto_increment, not NULL, PK
 - relation_typeID: int, not NULL, FK
 - dogID: int, not NULL, FK
 - humanID: int, not NULL, FK
 - Relationships
 - A 1:M relationship between DogHumanRelations and Visits is implemented with relationID as a FK inside of Visits
 - A M:1 relationship between DogHumanRelations and Dogs where DogHumanRelations is acting as an intermediary.
 - A M:1 relationship between DogHumanRelations and Humans where DogHumanRelations is acting as an intermediary.
- **RelationTypes:** records the details of the type of relationship between Dogs and Humans
 - Attributes
 - relation_typeID: int, auto_increment, not NULL, PK
 - relationship: varchar(45), not NULL
 - Relationships
 - A 1:M relationship between RelationTypes and DogHumanRelations is implemented with relation_typeID as a FK inside of DogHumanRelations
- **Visits:** records the details of when Dogs visit the park and who they visit the park with
 - Attributes
 - visitID: int, auto_increment, not NULL, PK
 - entry_time: datetime, not NULL
 - exit_time: datetime
 - relationID: int, not NULL, FK

- Relationships
 - A M:1 relationship between Visits and DogHumanRelations is implemented with relationID as a FK inside of Visits

ER Diagram



Schema



Sample Data

Breeds

breedID	breed_name
1	American Pit Bull Terrier
2	Labrador Retriever
3	Australian Shepherd
4	Rottweiler

Dogs

dogID	dog_name	birthday	breedID
1	Buddy	2016-06-20	2
2	Bella	2017-12-05	1
3	Milo	2018-12-08	3
4	Luna	2020-02-01	4
5	Max	2017-12-26	4

Humans

humanID	human_name	phone	email
1	Dwayne Bishop	(329) 456-9661	bishopd@gmail.com
2	Bethany Brady	(775) 797-3205	beth.brady@yahoo.com
3	Emilio Walters	(999) 606-3906	walters.em@hotmail.com
4	Denise Kim	(884) 408-9583	denise.kim7@gmail.com

RelationTypes

relation_typeID	relationship
1	owner
2	sitter

DogHumanRelations

relationID	relation_typeID	dogID	humanID
1	1	1	1
2	2	2	2
3	2	3	3
4	1	4	4
5	1	5	4

Visits

visitID	entry_time	exit_time	relationID
1	2022-07-05 12:28:18	2022-07-05 13:11:15	5
2	2022-07-05 12:28:18	2022-07-05 13:11:15	4
3	2022-07-07 13:52:25	2022-07-07 14:40:27	3
4	2022-07-08 07:18:55	2022-07-08 07:58:31	2
5	2022-07-10 09:34:56	2022-07-10 10:37:23	1

UI Screenshots with Informative Titles

DISPLAY Home Page

[Home](#) [Dogs](#) [Humans](#) [Breeds](#) [Relation Types](#) [Dog-Human Relations](#) [Visits](#)

Welcome to the ParkBark DB Administration Page!

Please feel free to acquaint yourself with your admin privileges.

Administer dogs in the database here: [Dogs](#)

Administer humans in the database here: [Humans](#)

Administer breeds in the database here: [Breeds](#)

Administer relationship types in the database here: [Relation Types](#)

Administer dogs-human relationships in the database here: [Dog-Human Relations](#)

Administer park visits in the database here: [Visits](#)

CREATE/READ/UPDATE/DELETE Dogs Page

[Home](#) [Dogs](#) [Humans](#) [Breeds](#) [Relation Types](#) [Dog-Human Relations](#) [Visits](#)


Welcome to the Dogs Administration Page!

Dog ID	Dog Name	Birthday	Breed
1	Bud	Wed Aug 03 2022 00:00:00 GMT-0700 (Pacific Daylight Time)	Labrador Retriever
2	Bella	Tue Dec 05 2017 00:00:00 GMT-0800 (Pacific Standard Time)	American Pit Bull Terrier
3	Milo	Sat Dec 08 2018 00:00:00 GMT-0800 (Pacific Standard Time)	Australian Shepherd
4	Luna	Sat Feb 01 2020 00:00:00 GMT-0800 (Pacific Standard Time)	Rottweiler
5	Max	Tue Dec 26 2017 00:00:00 GMT-0800 (Pacific Standard Time)	Rottweiler
7	Bolt	Mon Aug 01 2022 00:00:00 GMT-0700 (Pacific Daylight Time)	

Add Dogs

Dog name:

Birthday:

Breed:


Update Dogs

Dog ID:


 

Dog name:

Birthday:

Breed:

Delete Dogs

Dog ID:

CREATE/READ/UPDATE/DELETE Humans Page

[Home](#) [Dogs](#) [Humans](#) [Breeds](#) [Relation Types](#) [Dog-Human Relations](#) [Visits](#)

Welcome to the Humans Administration Page!

Human ID	Human Name	Phone	Email
1	Dwayne Bishop	(329) 456-9661	bishopd@gmail.com
2	Bethany Brady	(775) 797-3205	beth.brady@yahoo.com
3	Emilio Walters	(999) 606-3906	walters.em@hotmail.com
4	Denise Kim	(884) 408-9583	denise.kim7@gmail.com

Add Humans

Human name:

Phone Number:

Email:

Update Humans

Human ID:

Human name:

Phone Number:

Email:

Delete Humans

Human ID:

CREATE/READ/DELETE Breeds Page

[Home](#) [Dogs](#) [Humans](#) [Breeds](#) [Relation Types](#) [Dog-Human Relations](#) [Visits](#)

Welcome to the Breeds Administration Page!

Breed ID	Breed Name
1	American Pit Bull Terrier
2	Labrador Retriever
3	Australian Shepherd
4	Rottweiler

Add Breed

Breed name:

Delete Breed

Breed ID:

CREATE/READ/DELETE RelationTypes Page

[Home](#) [Dogs](#) [Humans](#) [Breeds](#) [Relation Types](#) [Dog-Human Relations](#) [Visits](#)

Welcome to the Relation Types Administration Page!

Relation Type ID	Relationship
1	Owner
2	Sitter

Add Relationship

Relationship:

Delete Relationship

Relation Type ID:

CREATE/READ/UPDATE/DELETE/DYNAMIC DISPLAY Dog-Human Relations Page[Home](#) [Dogs](#) [Humans](#) [Breeds](#) [Relation Types](#) [Dog-Human Relations](#) [Visits](#)

Welcome to the Dog-Human Relations Administration Page!

Relation ID	Relation Type	Dog Name	Human Name
1	Sitter	Bud	Dwayne Bishop
2	Sitter	Bella	Bethany Brady
3	Sitter	Milo	Emilio Walters
4	Owner	Luna	Denise Kim
5	Owner	Max	Denise Kim

Add Dog-Human Relations

Relation type:

Dog Name:

Human Name:

Update Dog-Human Relations

Relation ID:

Relation type:

Dog Name:

Human Name:

Delete Dog-Human Relation

Relation Type ID:

CREATE/READ/DELETE Visits Page

[Home](#) [Dogs](#) [Humans](#) [Breeds](#) [Relation Types](#) [Dog-Human Relations](#) [Visits](#)

Welcome to the Visits Page!

Reference Table: Dog-Human Relationships

Relation ID	Relation Type	Dog Name	Human Name
1	Sitter	Bud	Dwayne Bishop
2	Sitter	Bella	Bethany Brady
3	Sitter	Milo	Emilio Walters
4	Owner	Luna	Denise Kim
5	Owner	Max	Denise Kim

Visits

Visit ID	Entry Time	Exit Time	Relation ID
1	Tue Jul 05 2022 12:28:18 GMT-0700 (Pacific Daylight Time)	Tue Jul 05 2022 13:11:15 GMT-0700 (Pacific Daylight Time)	5
2	Tue Jul 05 2022 12:28:18 GMT-0700 (Pacific Daylight Time)	Tue Jul 05 2022 13:11:15 GMT-0700 (Pacific Daylight Time)	4
3	Thu Jul 07 2022 13:52:25 GMT-0700 (Pacific Daylight Time)	Thu Jul 07 2022 14:40:27 GMT-0700 (Pacific Daylight Time)	3
4	Fri Jul 08 2022 07:18:55 GMT-0700 (Pacific Daylight Time)	Fri Jul 08 2022 07:58:31 GMT-0700 (Pacific Daylight Time)	2
5	Sun Jul 10 2022 09:34:56 GMT-0700 (Pacific Daylight Time)	Sun Jul 10 2022 10:37:23 GMT-0700 (Pacific Daylight Time)	1

Add Visit

Entry Time:

Exit Time:

Relation ID:

Delete Visit

Visit ID: