

# Project Report

**Project Title:** Pet Adoption System

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**Team:** 8

## Introduction/Objective

Our objective is to create a pet adoption system that stores pet information, customer information, volunteer information, and shelter information in a persistent database. The system should facilitate easy and secure interactions between all entities and streamline the adoption process.

## Use Cases:

Customers should be able to:

- Search for all pets available for adoption.
- Obtain specific information belonging to all available pets.

Volunteers should be able to:

- Add, delete, and modify pets from the database.
- Track information of adopted pets, including, but not limited to current owner, overseeing volunteer, and shelter adopted from.
- Update their information and log their hours.

Shelters should be able to:

- Update their information and add/delete volunteers
- Track information of adopted pets, including, but not limited to current owner, overseeing volunteer, and shelter adopted from.

## Normalized Database Relations and Schema:

Customer(customer\_id, first\_name, last\_name, customer\_address, customer\_phone)

Pet(pet\_id, pet\_name, pet\_age, pet\_species, pet\_breed, pet\_sex, **shelter\_id**)

Adopts(adopt\_id, **pet\_id**, **customer\_id**, **volunteer\_id**, adopt\_date)

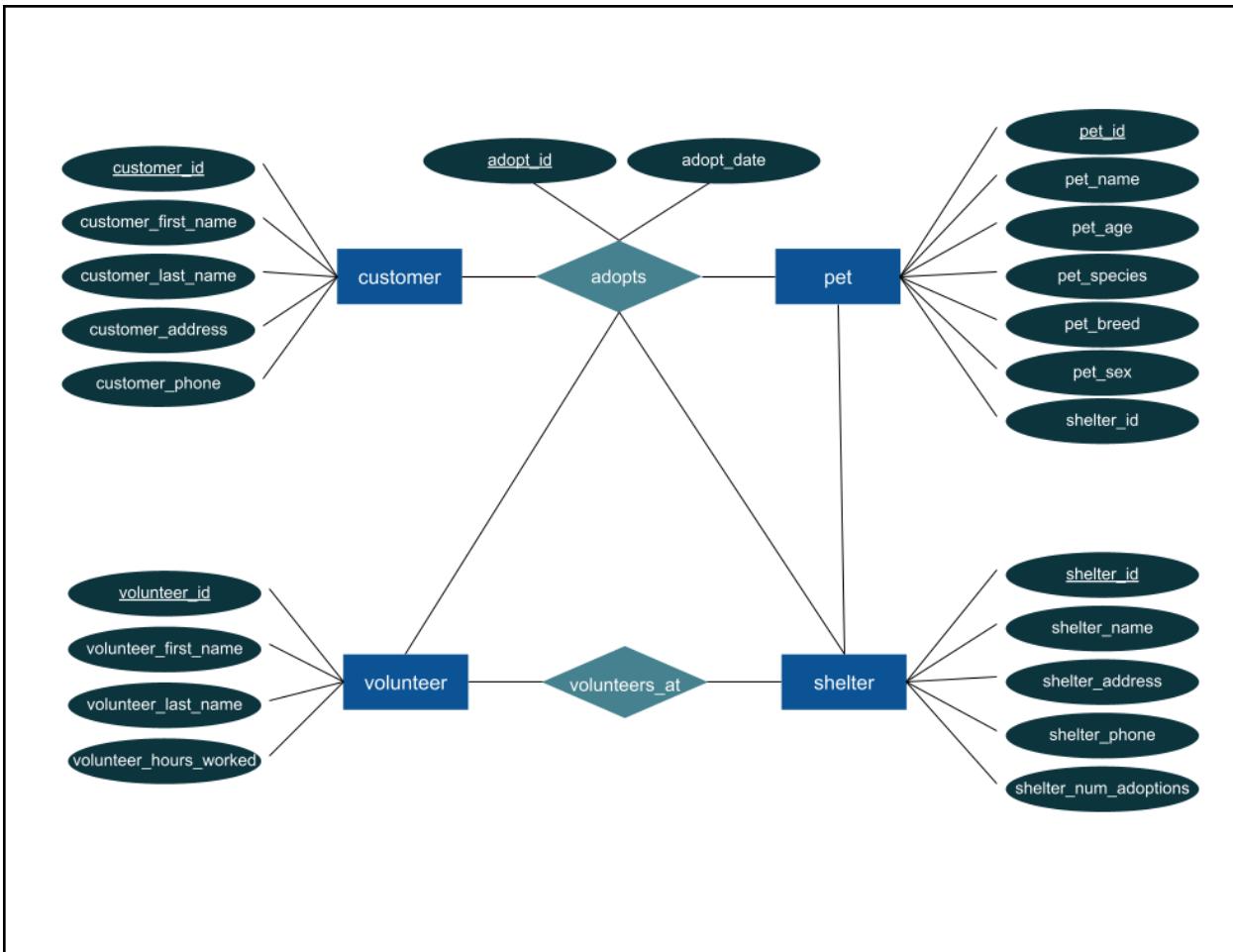
Shelter(shelter\_id, shelter\_name, shelter\_address, shelter\_phone, num\_adoptions)

Volunteer(volunteer\_id, first\_name, last\_name, hours\_worked)

VolunteersAt(**volunteer\_id**, **shelter\_id**)

Primary Key, **Foreign Key**

## ER Diagram:



## Tech Stack:

### Front-end:

- ReactJS for front-end library
- JavaScript

### Back-end:

- Java
- Java Spring Boot for back-end framework
- JDBC API for database access

### Database:

- MySQL for DBMS
- Locally hosted

### Deployment:

- Locally hosted for now
- May move to an AWS instance later

## High Level Design:

- Model: Contains “plain old java objects” - POJOs and Row mapping classes
- View: Different views for customers, volunteers, and shelters
- Controller: Calls CRUD methods like update, add, delete, etc on the model
- DAO: Interacts with MySQL database

## Work done:

- **Alex:**
  - Frontend + Backend: Developed complete React web application and performed routing between both sections.
- **Gabriel:**
  - Backend: Implemented various Controller classes, DAO classes
  - Database: set up mysql on AWS, normalization and ER diagram
- **Madison:**
  - Backend: Implemented various POJO classes, RowMapper classes, created CRUD methods in controller classes, created dummy data for database

Program Screenshots:

### Shelter View: Looking at pets

The screenshot shows a web application interface for managing pets. On the left, there's a sidebar with navigation links: Pets, Customers, Volunteers, Shelters, and Logs. The main area displays a grid of nine pet cards, each containing a photo, the pet's name, gender, age, breed, and a small Adopt or Delete button. The pets listed are Zara (F - 6mo - Poodle), Hazel (F - 3mo - Ragdoll), Pumpk... (M - 7mo - Orange T...), Kiwi (M - 2mo - Parakeet), Flurry (M - 4mo - Maltese), Sugar (F - 3mo - Chihuahua), Ivy (F - 1yr - American C...), Spike (M - 3mo - Leopard ...), and Nemo (M - 7mo - Clownfish).

Pet Name	Gender	Breed
Zara	F	6mo - Poodle
Hazel	F	3mo - Ragdoll
Pumpk...	M	7mo - Orange T...
Kiwi	M	2mo - Parakeet
Flurry	M	4mo - Maltese
Sugar	F	3mo - Chihuahua
Ivy	F	1yr - American C...
Spike	M	3mo - Leopard ...
Nemo	M	7mo - Clownfish

## Shelter View: Adding a Volunteer

The screenshot shows a sidebar on the left with a profile picture and the text "Gabriel's Animal Home". Below the sidebar is a vertical menu with options: Pets, Customers, Volunteers, Shelters, and Logs. The main area displays a grid of animal cards. A modal window titled "Adding Volunteer" is open in the center. The modal contains fields for "Name" (with "First" and "Last" input fields), "Image Link" (with a "Link" input field), and two buttons: "Cancel" (red) and "Confirm" (blue). The background grid includes cards for animals like "Zara" (dog), "Pumpkin" (cat), "Ivy" (crocodile), "Spike" (gecko), "Sugar" (dog), and "Nemo" (fish).

## Volunteer View: Looking at customers

The screenshot shows a sidebar on the left with a profile picture and the text "Madison Kolley". Below the sidebar is a vertical menu with options: Pets, Customers, Shelters, and Logs. The main area displays a grid of customer profiles. Each profile card contains a small photo, the customer's name, and a truncated name (e.g., "..."). The profiles shown are: Alex Bui, Andrea Li..., Cecily Va..., Gladys Sa..., Zain Solo..., Racquel ..., Silas Mur..., Demi Go..., and Aneesa ... .

## Customer View: Looking at shelters



Alex Bui

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Pets  
Shelters

Search shelters...Customer ▾



Gabriel's ... 10 adoptions



Bob's She... 5 adoptions



Gwen's Pl... 4 adoptions

## Customer View: Looking at pets via list version



Alex Bui

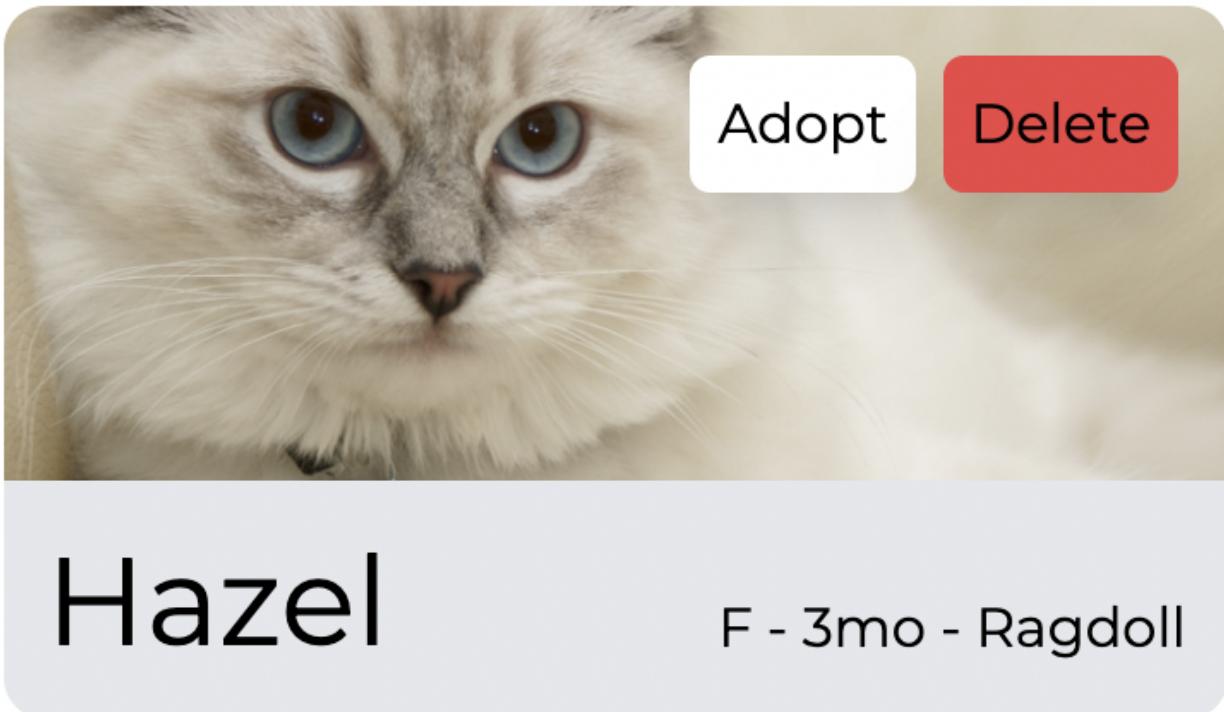
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Pets  
Shelters

Search pets...Customer ▾

Zara	F - 6mo - Poodle
Hazel	F - 3mo - Ragdoll
Pumpkin	M - 7mo - Orange T...
Kiwi	M - 2mo - Parakeet
Flurry	M - 4mo - Maltese
Sugar	F - 3mo - Chihuahua
Ivy	F - 1yr - American Cr...
Spike	M - 3mo - Leopard ...
Nemo	M - 7mo - Clownfish
Blueberry	F - 1mo - Beta

Example of Adoption/Delete button on card, only seen by Volunteer/Shelter



Example of Volunteer confirming adoption for selected Customer

Pets

Customers

Shelters

Logs

Zar

Pumpk... M - 7mo - Orange T...

Sugar F - 3mo - Chihuahua

Nemo M - 7mo - Clownfish

Ivy F - 1yr - American C...

Spike M - 3mo - Leopard ...

Adopting Hazel

Who's adopting?

Alex Bui

Alex Bui

Andrea Livingstone

Cecily Vang

Gladys Santiago

Zain Solomon

## Shelter and Volunteer View: Adoption Logs



Madison Kolley

Volunteer ▾

Zara	Alex Bui	by Madison Kolley at Gabriel's Animal Home
Flurry	Cecily Vang	by Madison Kolley at Gabriel's Animal Home
Spike	Alex Bui	by Madison Kolley at Gabriel's Animal Home

Pets

Customers

Shelters

Logs