

University of British Columbia, Vancouver

Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 4

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Group Number: 60

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

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A short description of the final project, and what it accomplished.

Our project, Find My Pet, aims to assist potential candidates interested in adopting a pet by modelling key aspects of a successful pet adoption agency.

We were able to allow users to book appointments, update Adopter personal information (such as their email, address, etc.), view which cities donated above average amounts of money to the center, find pets that play all games, allow adopters to explore what breeds they may like (based on nature and coat color), find pets of a breed of their choosing, find out how many pets we have of each breed, delete pets that have been adopted, find specific information about the pets in the center (such as their name, etc.), and find out breeds that we have more than 2 pets of.

A description of how your final schema differed from the schema you turned in. If the final schema differed, explain why?

The only difference between our original and final schema is that we decided to use our unnormalized schema for our project. We decided our unnormalized version had more intuitively divided tables.

A list of all SQL queries used to satisfy the rubric items and where each query can be found in the code (file name and line number(s)).

Query 1 (INSERT): Insert an Appointment

- Found in appService.js at lines 93-127

Query 2 (UPDATE): Update values for an Adopter

- Found in appService.js at lines 142-184

Query 3 (DELETE): Delete a pet

- Found in appService.js at lines 253-265

Query 4 (SELECTION): Find breeds that match the criteria given

- Found in appService.js at lines 201-227

Query 5 (PROJECTION): Find any attributes in the pet table

- Found in appService.js at lines 267-283

Query 6 (JOIN): Finding pets by breed

- Found in appService.js at lines 285-312

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For SQL queries 7 through 10 inclusive, include a copy of your SQL query and a maximum of 1-2 sentences describing what that query does.

Query 7 - Aggregation with GROUP BY: (appService.js, lines 240-251)

In this query, we find the count of every breed and return the name of the breed alongside the count.

```
SELECT B.BreedName, COUNT(B.PetID) AS PetCount
FROM Is_Breed B
GROUP BY B.BreedName
```

Query 8 - Aggregation with HAVING: (appService.js, lines 229-238)

In this query, we find all the breeds where they have at least 3 pets of that breed and return both the breed and the pet count.

```
SELECT b.BreedName, COUNT(b.PetID) AS PetCount
FROM Is_Breed b
GROUP BY b.BreedName
HAVING COUNT(b.PetID) > 2
```

Query 9 - Nested aggregation with GROUP BY: (appService.js, lines 71-91)

In this query, we found cities whose average donations were above the average donation across all cities. The final result displays a table containing the above average cities, along with their average donation.

```
SELECT A.city, ROUND(AVG(D.Amount), 2) as avg_donation
FROM Donation D
JOIN Adopter A ON A.AdopterID = D.AdopterID
GROUP BY A.city
HAVING AVG(D.Amount) > (
    SELECT AVG(D2.Amount)
    FROM Donation D2
)
ORDER BY avg_donation DESC
```

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Query 10 - Division: (appService.js, lines 186-198)

In this query, we found pets that play all games. The final result displays pet names and PetID's

```
SELECT p.PetName, p.PetID
FROM Pet p
WHERE NOT EXISTS
    (SELECT g.GameID FROM Game g
    WHERE NOT EXISTS
        (SELECT 1 FROM Plays pl WHERE pl.GameID = g.GameID AND
        pl.PetID = p.PetID))
```