Project Summary

The domain of this application is the entertainment industry, specifically focused on Disney Resorts. It encompasses various aspects of providing information to administrators and guests about these resorts, their residing theme parks, and the smaller themed "lands" within those. This database will facilitate the efficient management of guest information, merchandise, food, and attractions found in each resort, such as rides and shows.

Here is a list of things guests can do:

- Project on certain tables in the database. For privacy/security, guests cannot project on Account, Reserve, and TicketAtDisneyResortOwnedByAccount
- Make reservations or update their reservations at restaurants
- Find out which Disney Lands appear in every single Disney Resort in the world
- Find out which Land has the lowest average wait time for rides across all Disney Resorts
- Find what stores are in a Theme Park
- Find the average price of merchandise at a store

On the other hand, administrators have unrestricted access to project on all tables in the database, and also delete accounts.

How The Schema Differed

Since our normalization process was done incorrectly, changes were made. These changes include:

- Removing DisneyResortPostal and AddressCityCountry, and altering DisneyResortAddress to contain foreign key postalCode
- Completely overhauling the schemas from the normalization of LandContainThemePark
 - Removing LandTheme, LandYearOpen, and ThemeParkThemeName
 - Adding ThemeNameand ThemeParkLand
- For the normalization of Ride
 - Removing RideMinimumHeight
 - Adding a foreign key minimumHeight to RideAvgWaitTime
 - Altering name of MinimumHeightRideType to RideTypeMinimumHeight
- Added partySize attribute to Reserve table to meet the requirements for insert query

Schema and Screenshots

PostalCodeCity(postalCode, city)

POSTALCODE
CITY
92802 Anaheim
98264 Bay Lake
279-0031 Chiba
77700 Coupvray
HKG Hong Kong
10011005 Shanghai

$PostalCodeCountry(\underline{postalCode}, country)$

POSTALCODE
COUNTRY
92802 JSA
98264 JSA
279-0031 Japan
77700 France
HKG Hong Kong SAR
10011005 China

${\tt DisneyResortAddress}(\underline{{\tt disneyResortName}}, \, {\tt address}, \, {\tt postalCode})$

<u> </u>
DISNEYRESORTNAME
ADDRESS
POSTALCODE
Disneyland Resort 1313 Disneyland Dr 92802
Walt Disney World Resort 1375 East Buena Vista Drive 98264
Tokyo Disney Resort 1-1 Maihama 279-0031
Disneyland Paris Bd de Parc 77700
Hong Kong Disneyland Resort Park Promenade HKG
Shanghai Disneyland Resort No. 310 Huang Zhao Road 10011005

ComprisingThemePark(themeParkId, name, disneyResortName)

```
THEMEPARKID
NAME
DISNEYRESORTNAME
           1
Disneyland Park
Disneyland Resort
Disney California Adventure Park
Disneyland Resort
Magic Kingdom Park
Walt Disney World Resort
           4
Epcot
Walt Disney World Resort
Disney's Hollywood Studios
Walt Disney World Resort
Disney's Animal Kingdom Theme Park
Walt Disney World Resort
 Tokyo Disneyland
 Tokyo Disney Resort
Tokyo DisneySea
 Tokyo Disney Resort
Disneyland Park (Paris)
Disneyland Paris
           10
```

```
Walt Disney Studios Park
Disneyland Paris

11
Hong Kong Disneyland
Hong Kong Disneyland Resort

12
Shanghai Disneyland Resort
Shanghai Disneyland Resort
```

NAME
THEME
Main Street, U.S.A.
American small towns during the early 20th Century

Adventureland
Remote jungles of Asia, Africa, South America, Oceania, the Caribbean Islands and the Middle East

Frontierland
19th Century American Frontier, American History and North America

Fantasyland
Disney's animated fairy tale films, Fantasy, the towns and villages of Europe

Tomorrowland Future, technology, outer space, discovery and science fiction

New Orleans Square 19th Century New Orleans

Critter Country
Land of bears and other animals

Mickey's Toontown Mickey Mouse universe

Star Wars: Galaxy's Edge Star Wars

Buena Vista Street 20th Century Art Deco/Mission street

Pixar Pier Pixar/A Victorian era seaside amusement park Paradise Gardens Park A Victorian era seaside amusement park

Grizzly Peak 1950s National Recreation Area

Hollywood Land 1930s Hollywood

Avengers Campus Marvel Cinematic Universe

Cars Land Cars, Radiator Springs

Adventure Isle Remote jungles of Asia, Africa, South America, Oceania, the Caribbean Islands an d the Middle East

ThemeParkLand(themeParkld, landld, name, yearOpen)

THEMEPARKID	LANDID
YEAROPEN	
1	1
Main Street, U 1955	
1 Adventureland	2
1955	
1 Frontierland	3
1955	
1 Fantasyland	4
1955	
1 Tomorrowland	5
1955 1	6
New Orleans Sq 1966	
1	7
Critter Countr 1972	У
1	8
Mickey's Toont 1993	own

1 Star Wars: Galaxy's 2019	9 Edge
2 Buena Vista Street 2001	10
2 Pixar Pier 2001	11
2 Paradise Gardens Pa 2001	12 rk
2 Grizzly Peak 2001	13
2 Hollywood Land 2001	14
2 Cars Land 2012	15
2 Avengers Campus 2021	16
3 Fantasyland 1971	6
3 Tomorrowland 1971	7
7 Fantasyland 1983	5
9 Fantasyland 1992	4
11 Fantasyland 2005	3
12 Fantasyland 2016	3

Attraction(attractionId, name)

```
ATTRACTIONID
NAME
Space Mountain
Incredicoaster
Big Thunder Mountain Railroad
Pirates of the Caribbean
Buzz Lightyear Astro Blasters
6
Walt Disney's Enchanted Tiki Room
"Believe...In Holiday Magic" Fireworks Spectacular
A Christmas Fantasy Parade
Disney Junior Dance Party!
Fireworks at Disneyland Park
Star Wars: Millennium Falcon - Smugglers Run
Star Wars: Rise of the Resistance
          13
Alice in Wonderland
```

```
Casey Jr. Circus Train

15
Dumbo the Flying Elephant

16
Peter Pan's Flight

17
It's a Small World
```

IsPartOf(themeParkId, landId, attractionId)

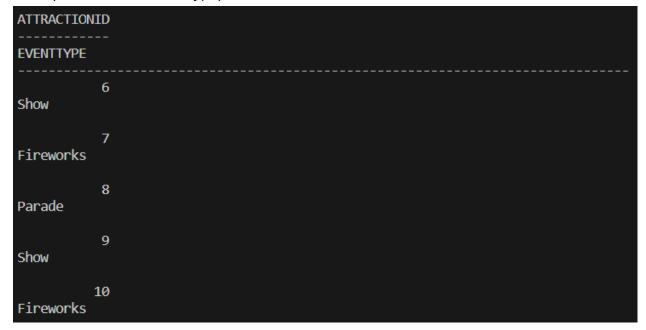
THEMEPARKID	LANDID	ATTRACTIONID
1	3	3
1	4	13
1	4	14
1	4	15
1	4	16
1	4	17
1	5	1
1	5	5
1	6	4
1	9	11
1	9	12
2	11	2
3	7	1

$RideTypeMinimumHeight(\underline{minimumHeight}, rideType)$

RideAvgWaitTime(<u>attractionId</u>, minimumHeight, avgWaitTime)

ATTRACTIONID	MINIMUMHEIGHT	AVGWAITTIME
1	102	50
2	122	50
3	102	35
4	0	40
5	0	25
11	102	80
12	102	80
13	0	25
14	0	35
15	0	10
16	0	45
17	0	60

${\sf Event}(\underline{\textbf{attractionId}}, \, {\sf eventType})$



$Show time Event (\underline{\textbf{attractionId}}, \underline{\textbf{startTime}}, end Time)$

ATTRACTIONID	STARTTIME	ENDTIME
6	800	815
6	930	945
7	2400	2115
8	1300	1340
9	1015	1045
9	1115	1145
10	2030	2040

$Show time Duration (\underline{startTime}, \underline{endTime}, duration)$

STARTTIME	ENDTIME	DURATION
800	815	15
930 2400	945 211 5	15 15
1300 1015	1340 1045	40 30
1115	1145	30
2030	2040	10

FeatureRestaurant(<u>restaurantId</u>, restaurantName, maxOccupancy, **themeParkId**, **landId**)

Food(<u>name</u>, price)

```
NAME
    PRICE
Honey-Spiced Chicken Sandwich
       13
Classic Cheeseburger
        13
BBQ Chicken Salad
        12
Pumpkin Churro Funnel Cake
        12
French Fries
         4
Tiramisu
        11
Cheesecake
        11
```

Serve(<u>restaurantId</u>, <u>foodName</u>)

RESTAURANTID
FOODNAME
1 BBQ Chicken Salad
1 Classic Cheeseburger
1 French Fries
1 Honey-Spiced Chicken Sandwich
1 Pumpkin Churro Funnel Cake
1 Tiramisu
2 Cheesecake

Account(accountId, name, email, birthDate)

```
ACCOUNTID
NAME
BIRTHDATE
         1
Celine
celine@ubc.ca
14-NOV-03
         2
Brandon
brandon@ubc.ca
29-JUN-01
         3
Josh
josh@ubc.ca
24-APR-01
         4
Melissa
melissa@ubc.ca
15-SEP-01
         5
Rachael
rachael@ubc.ca
01-JAN-75
         6
Kelly
kelly@ubc.ca
19-MAR-00
```

Reserve(accountId, restaurantId, partySize, time)

•		-	-
ACCOUNTID	RESTAURANTID	PARTYSIZE	TIME
1	1	4	06-NOV-23
2	5	8	08-DEC-23
3	3	2	29-JUN-24
1	4	1	12-JAN-24
1	5	10	30-MAY-25
4	3	3	18-FEB-25

TicketAtDisneyResortOwnedByAccount(<u>ticketId</u>, <u>disneyResortName</u>, entryDate, accountId)

```
TICKETID
DISNEYRESORTNAME
ENTRYDATE ACCOUNTID
Shanghai Disneyland Resort
14-NOV-23 1
       112
Shanghai Disneyland Resort
15-NOV-23
      113
Disneyland Paris
20-0CT-23
                   3
       114
Disneyland Resort
21-DEC-19
                   2
Shanghai Disneyland Resort
21-0CT-24
```

OpenStore(storeId, sku)

```
STOREID
NAME
THEMEPARKID LANDID
World of Disney
Emporium
      1 1
Little Green Men Store Command
      1 5
The LEGO Store
Pioneer Mercantile
      1 3
Doko-Ondar's Den of Antiquities
      1 9
The Outpost Shop
       8
Ramone's House of Body Art
               15
```

```
9
Bing Bong's Sweet Stuff
2 11

10
Rushin' River Outfitters
2 13
```

Merchandise(sku, name, price)

```
SKU
NAME
    PRICE
    55555
Winnie-the-Pooh plush large
       65
    66666
Piglet plush large
       60
    77777
Tigger plush large
       60
    88888
Rabbit plush large
       60
    99999
Eeyore plush large
Elsa plush small
       20
    11111
Anna plush small
       20
    22222
Olaf plush small
       20
Kristoff plush small
       20
     44444
Hans plush small
       20
```

```
10000
Frozen 10th Anniversary Latte Mug
    24.99
    10001
Anna Nightgown
    36.99
    10002
Elsa Nightgown
     36.99
```

Sell(<u>storeld</u>, <u>sku</u>)

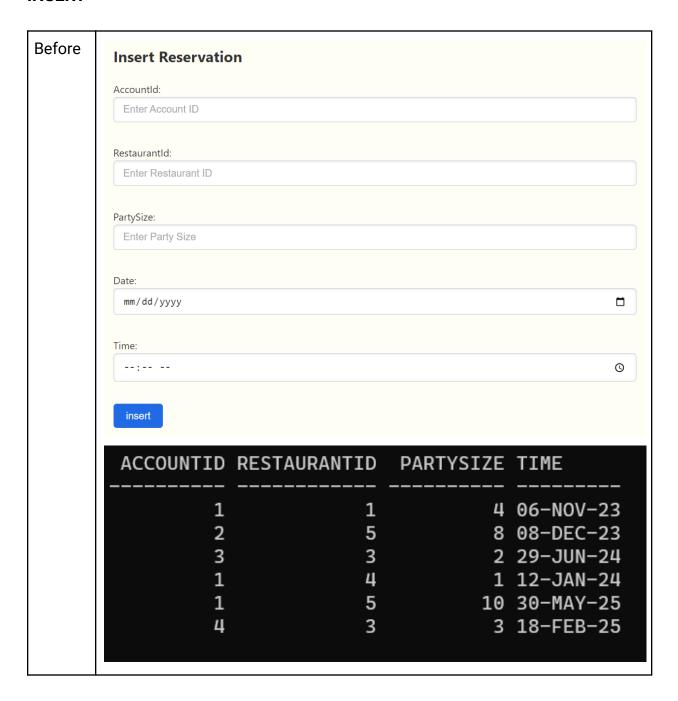
STOREID	SKU
1	55555
1	66666
1	77777
1	88888
1	99999
2	10001
2	10002
3	0
3	11111
3	22222
3	33333
3	44444

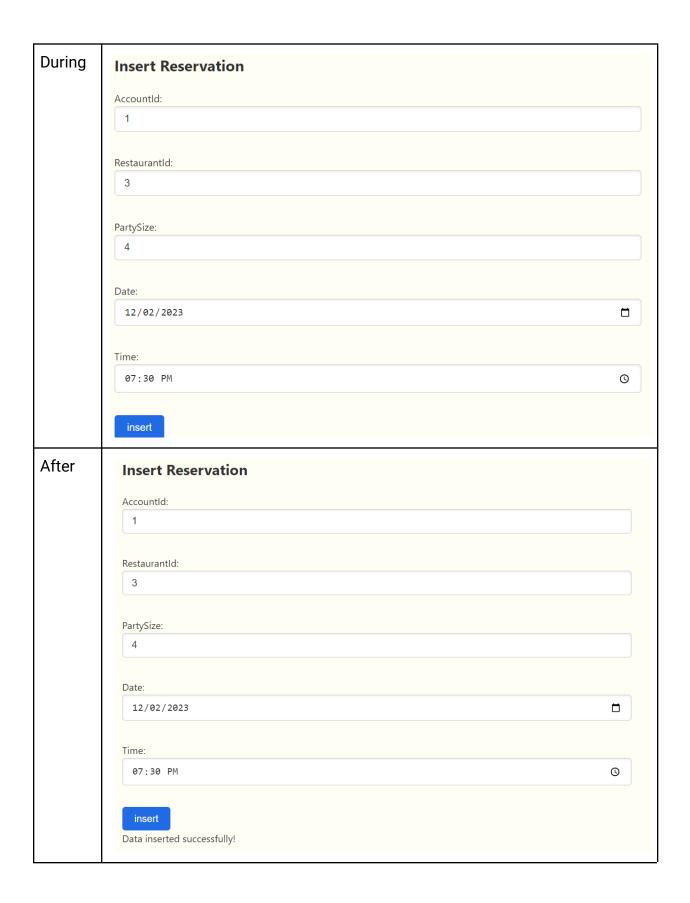
Location of Queries

Query	File Name	Line Number
INSERT	reservationService.js	line 9
DELETE	appService.js	line 103
UPDATE	attractionService.js	line 34-36
Selection	attractionService.js	line 5
Projection	appService.js	line 94
Join	storeService.js	line 8-13
Aggregation with Group By	storeService.js	line 27-32
Aggregation with Having	themeParkService.js	line 7-11
Nested Aggregation with Group By	landsService.js	line 30-39
Division	landsService.js	line 7-15

Query Demonstration

INSERT





ACCOUNTID	RESTAURANTID	PARTYSIZE	TIME
2	2	2	02-FEB-22
1	1	4	06-NOV-23
2	5	8	08-DEC-23
3	3	2	29-JUN-24
1	4	1	12-JAN-24
1	5	10	30-MAY-25
4	3	3	18-FEB-25

DELETE

Before	Delete Account
	Account ID: Enter Account Id
	delete
	ACCOUNTID NAME
	EMAIL
	BIRTHDATE 1 Celine
	celine@ubc.ca 14-NOV-03
	2 Brandon brandon@ubc.ca 29-JUN-01
	3 Josh josh@ubc.ca 24-APR-01
	4 Melissa melissa@ubc.ca 15-SEP-01
	5 Rachael rachael@ubc.ca 01-JAN-75
	6 Kelly kelly@ubc.ca 19-MAR-00

During	Delete Account
	Account ID:
After	Delete Account Account ID: 1 delete Data deleted successfully! ACCOUNTID NAME EMAIL BIRTHDATE 2 Brandon brandon@ubc.ca 29-JUN-01 3 Josh josh@ubc.ca 24-APR-01 4 Melissa melissa@ubc.ca 15-SEP-01 5 Rachael rachael@ubc.ca 01-JAN-75
	kelly@ubc.ca 19-MAR-00

UPDATE

_		r			
к	e	Г(7	re	2

Current Rides

1 102 50 2 122 50 3 102 35 4 0 40 5 0 25 11 102 80 12 102 80 13 0 25
3 102 35 4 0 40 5 0 25 11 102 80 12 102 80
4 0 40 5 0 25 11 102 80 12 102 80
5 0 25 11 102 80 12 102 80
11 102 80 12 102 80
12 102 80
12 0 25
13 0 25
14 0 35
15 0 10
16 0 45
17 0 60

Update Ride Minimum Height AND Average Wait Time

U	pd	ate	O	ue	rv

Attraction ID:

Enter Attraction Id

Minimum Heights: Select an option 🗸

New Average Wait Time:

Enter New Average Wait Time

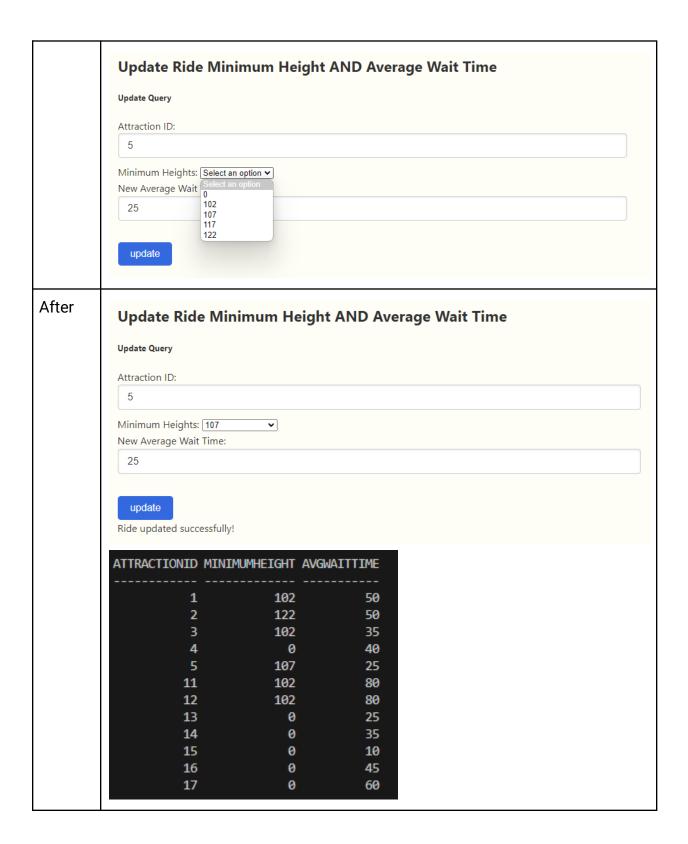
update

ATTRACTIONID	MINIMUMHEIGHT	AVGWAITTIME
1	102	50
2	122	50
3	102	35
4	0	40
5	0	25
11	102	80
12	102	80
13	0	25
14	0	35
15	0	10
16	0	45
17	0	60

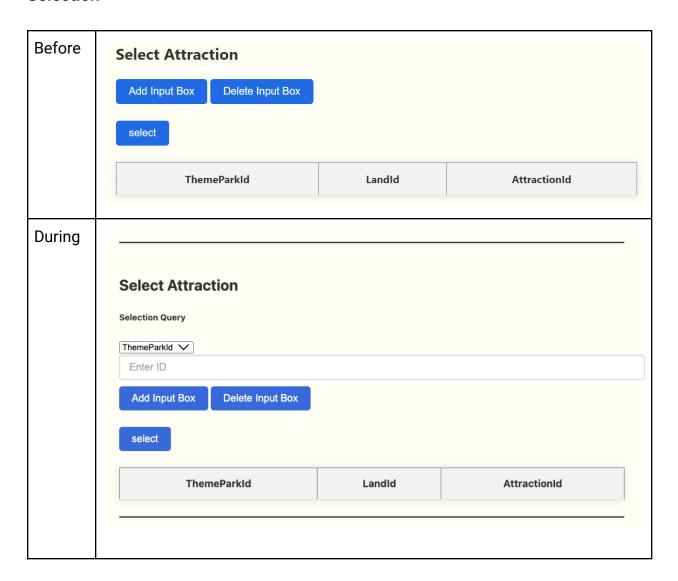
During

Current Rides

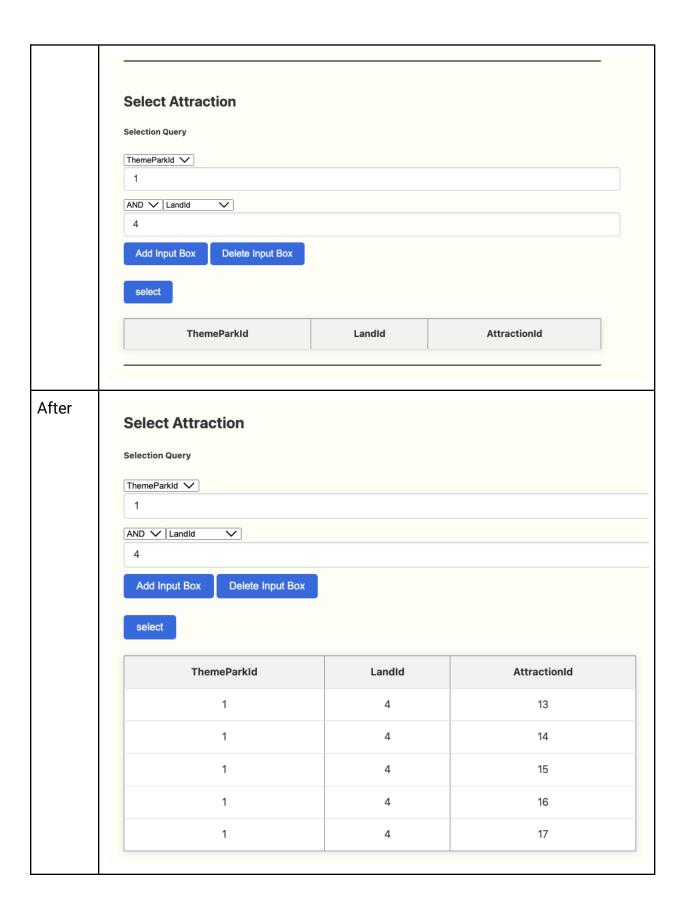
Attraction ID	Minimum Height	Average Wait Time
1	102	50
2	122	50
3	102	35
4	0	40
5	0	25
11	102	80
12	102	80
13	0	25
14	0	35
15	0	10
16	0	45
17	0	60



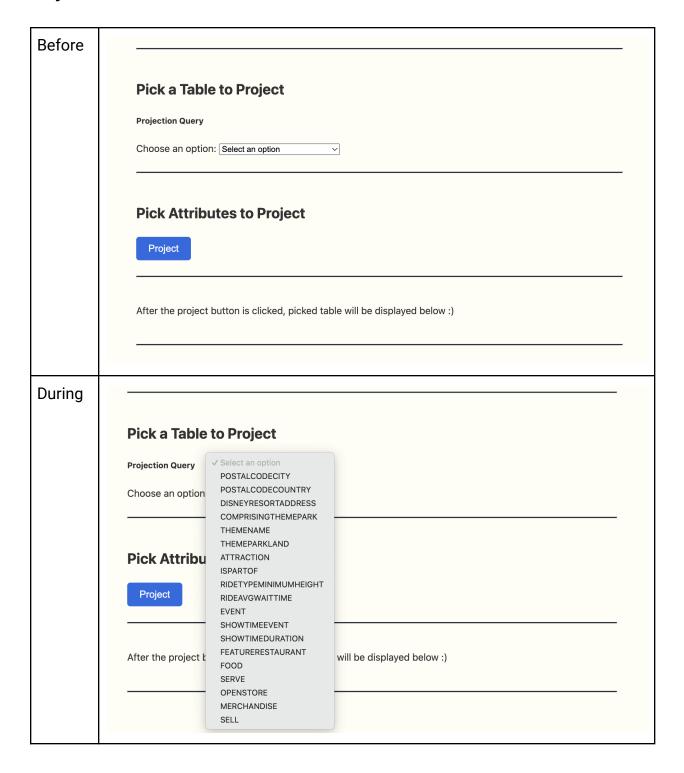
Selection







Projection



Pick a Table to	Project	
Projection Query		
Choose an option: AT	TTRACTION	
ATTRACTION		
ATTICACTION		
Pick Attribute	s to Project	
☐ ATTRACTIONID		
□ NAME		
Project		
After the project butto	on is clicked, picked table will be displayed below :)	

After

ATTRACTION

Pick Attributes to Project

ATTRACTIONID

NAME

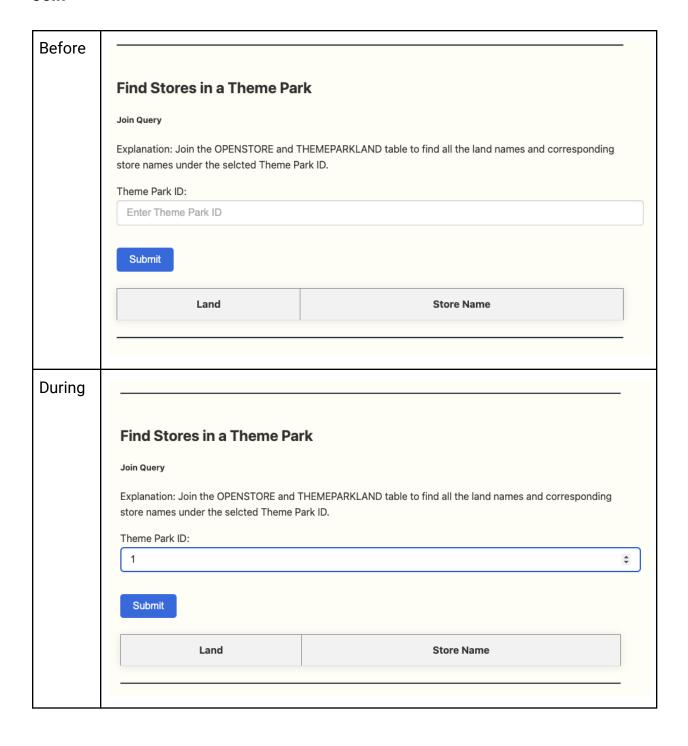
Project

Selected table projected successfully!

After the project button is clicked, picked table will be displayed below:)

ATTRACTIONID	NAME
1	Space Mountain
2	Incredicoaster
3	Big Thunder Mountain Railroad
4	Pirates of the Caribbean
5	Buzz Lightyear Astro Blasters
6	Walt Disney's Enchanted Tiki Room
7	"BelieveIn Holiday Magic" Fireworks Spectacular
8	A Christmas Fantasy Parade
9	Disney Junior Dance Party!
10	Fireworks at Disneyland Park
11	Star Wars: Millennium Falcon - Smugglers Run
12	Star Wars: Rise of the Resistance
13	Alice in Wonderland
14	Casey Jr. Circus Train
15	Dumbo the Flying Elephant
16	Peter Pan's Flight
17	It's a Small World

Join



After

Find Stores in a Theme Park

Join Query

Explanation: Join the OPENSTORE and THEMEPARKLAND table to find all the land names and corresponding store names under the selcted Theme Park ID.

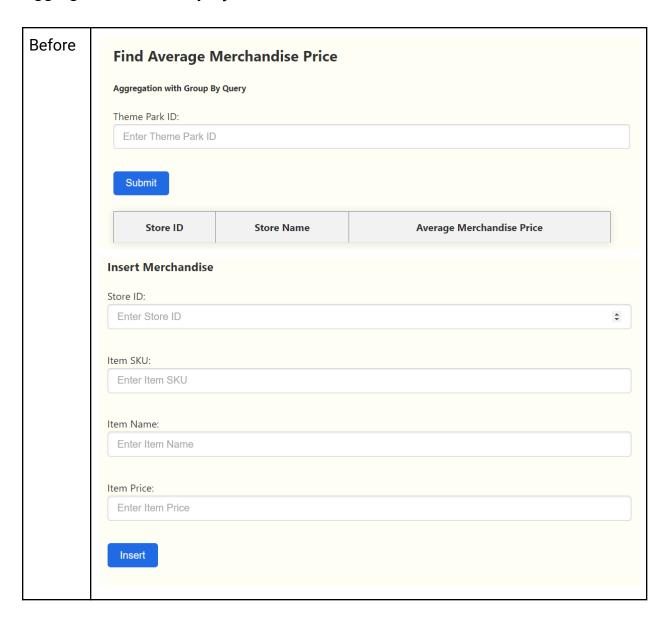
Theme Park ID:

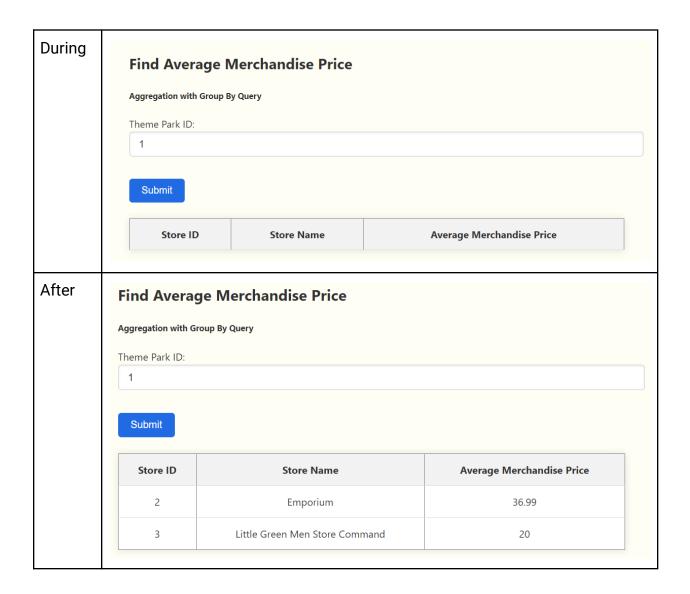
1

Submit

Land	Store Name
Main Street, U.S.A.	Emporium
Tomorrowland	Little Green Men Store Command
Frontierland	Pioneer Mercantile
Star Wars: Galaxy's Edge	Doko-Ondar's Den of Antiquities

Aggregation with Group By





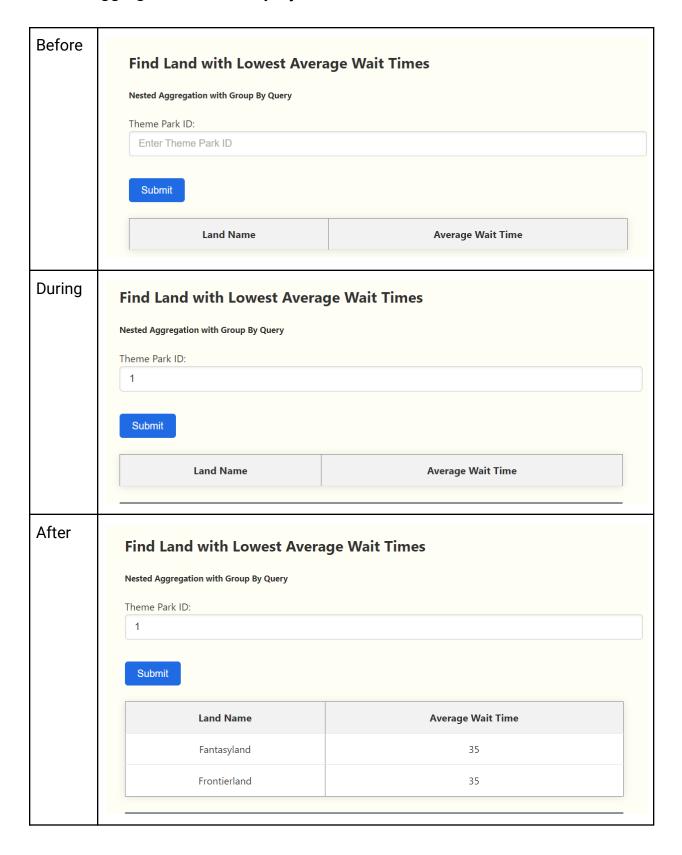
During (insert new data)	Insert Merchandise Store ID: 2 Item SKU: 10101 Item Name: test item Item Price: 1000 Insert New merchandise added successfully!		
After (insert new data)	Find Average Aggregation with Growth	e Merchandise Price Pup By Query Store Name Emporium	Average Merchandise Price 357.9933333333333
	3	Little Green Men Store Command	20

Aggregation with Having





Nested Aggregation with Group By



Division

Before	Find All Lands That Appear In All Disney Resorts find	
During	Just press the button	
After	Find All Lands That Appear In All Disney Resorts find The Land(s) that appear in all Disney Resorts: Fantasyland	