

Screenshots of data

Platform

PLATFORMNAME
DoorDash
Fantuan
Grubhub
SkipTheDishes
UberEats

User_1

USERNAME	USERID	ACCOUNT_BALANCE	PLATFORMNAME
foodlover2	1001	43.75	DoorDash
bluesweater	1002	2.54	UberEats
catperson	1003	20	DoorDash
sunflower34	1004	78.88	DoorDash
abcdef	1005	0	SkipTheDishes
paperkite	1006	13.99	UberEats

UserAddress

STREETADDRESS	CITY	COUNTRY	ADDRESSTYPE	USERID
1 Apple Dr	Vancouver	Canada	delivery	1001
2 Banana St	Vancouver	Canada	billing	1002
3 Cherry Rd	Vancouver	Canada	delivery	1003
4 Donut Dr	Vancouver	Canada	delivery	1004
5 Eclair St	Vancouver	Canada	delivery	1005
6 Fig Rd	Vancouver	Canada	billing	1005
7 Grape Dr	Vancouver	Canada	delivery	1006

Restaurant

NAME	RESTAURANTID	RATING	LOCATION	TYPE
McDonalds	5001	3	15 Fries St	fast food
Kung Fu Noodle	5002	4	25 Panda St	restaurant
Yunshang Rice Noodle	5003	5	35 Noodle St	restaurant
Nori	5004	5	45 Seaweed St	restaurant
Chatime	5005	5	55 Tea St	bubble tea

FoodItem

NAME	RESTAURANTID
chicken rice noodle	5003
chicken wings	5001
fried rice	5002
fries	5001
hamburger	5001

DeliveryPerson

NAME	ID	CURRENTLOCATION
John Doe	4001	14 Hello St
Jane Deer	4002	24 High St
Jeremy Don	4003	34 Hay Rd
Jack Donald	4004	44 Greetings Ln
Jill Dew	4005	54 Salutations St

Vehicle2

MODEL	MAKE
Elantra	Hyundai
Everest	Ford
Civic	Honda
Camry	Toyota
X5	BMW

Vehicle1

NUMBER_PLA	MODEL
123 ABC	Elantra
124 ABC	Everest
125 ABC	Civic
126 ABC	Camry
127 ABC	X5

Promotion

PROMOTIONID	DISCOUNTPERCENTAGE	PLATFORM
2001	.15	DoorDash
2002	.26	UberEats
2003	.37	SkipTheDishes
2004	.48	Fantuan
2005	.59	Grubhub
2006	.25	DoorDash
2007	.36	UberEats
2008	.47	SkipTheDishes
2009	.58	Fantuan
2010	.69	Grubhub

PlatformWidePromotion

REDEEMCODE	PROMOTIONID
-----	-----
111000	2001
222000	2002
333000	2003
444000	2004
555000	2005

RestaurantSpecificDiscount

RESTAURANTID	PROMOTIONID
-----	-----
5001	2006
5002	2007
5003	2008
5004	2009
5005	2010

UsesVehicle

DELIVERYPERSONID	NUMBER_PLA
-----	-----
4001	123 ABC
4002	124 ABC
4003	125 ABC
4004	126 ABC
4005	127 ABC

WorksFor

DELIVERYPERSONID	PLATFORM
-----	-----
4001	DoorDash
4002	UberEats
4003	DoorDash
4004	UberEats
4005	SkipTheDishes

Hosts

PLATFORM	RESTAURANTID
-----	-----
DoorDash	5001
Fantuan	5001
Fantuan	5003
Fantuan	5004
Grubhub	5001
Grubhub	5005
SkipTheDishes	5001
UberEats	5001
UberEats	5002

Offers

RESTAURANTID	PROMOTIONID
-----	-----
5001	2006
5002	2007
5003	2008
5004	2009
5005	2010

Queries

INSERT operation

- **File: data_retrieve_helper.php, function: insertAddress()**

```
INSERT into UserAddress
```

```
VALUES($newStreet, $newCity, $newCountry, $addressType, $ID)
```

DELETE operation

- **File: data_retrieve_helper.php, function: deleteAddress()**

```
DELETE FROM UserAddress
```

```
WHERE userID = $ID AND
```

```
streetAddress = $oldStreet AND
```

```
city = $oldCity AND
```

```
country = $oldCountry
```

UPDATE operation

- **File: data_retrieve_helper.php, function: changeAddressType()**

```
UPDATE UserAddress
```

```
SET addressType = $addressType
```

```
WHERE userID = $ID AND
```

```
streetAddress = $oldStreet AND
```

```
city = $oldCity AND
```

```
country = $oldCountry
```

Projection operations

- **File: data_retrieve_helper.php, function: retrieveAllDiscountCode()**

```
SELECT promotionID
```

```
FROM RestaurantSpecificDiscount
```

- **File: data_retrieve_helper.php, function: retrieveAllDeliveryPersonName()**

```
SELECT name
```

```
FROM DeliveryPerson
```

Selection operations

- **File: data_retrieve_helper.php, function: restaurantsFilter()**

```
SELECT restaurantID, name, rating
```

```
FROM Restaurant
```

```
WHERE rating > $rate
```

- **File: data_retrieve_helper.php, function: retrieveDiscountCodeFromRestaurants()**

```
SELECT promotionID
```

```
FROM RestaurantSpecificDiscount
```

```
WHERE restaurantID = $restaurantID
```

- **File: data_retrieve_helper.php, function: retrieveCarNumberPlate()**

```
SELECT number_plate
FROM UsesVehicle
WHERE deliveryPersonID = $personID
```

- **File: data_retrieve_helper.php, function: retrieveCarModel()**

```
SELECT model
FROM Vehicle
WHERE number_plate = $num_plate
```

- **File: data_retrieve_helper.php, function: retrieveUserAddress()**

```
SELECT streetAddress, city, country, addressType
FROM UserAddress
WHERE userID = $ID
```

Join

- **File: restaurant.php, function: handleRestPlatRequest()**

```
SELECT name, restaurantID
FROM Hosts NATURAL JOIN Restaurant
WHERE platform='$platformName'
```

Aggregation – GROUP BY

- **File: promotion.php, function: handlePromoMinMaxRequest()**

```
SELECT p.platform, $aggregateOp (p.discountPercentage)
FROM Promotion p
GROUP BY p.platform
```

Aggregation – HAVING

- **File: restaurant.php, function: handleMaxRatingGroupedRequest()**

```
SELECT R.type, CAST(AVG(R.rating) AS DECIMAL(10,2)) AS avg_rating, MAX(R.rating)
FROM Restaurant R
GROUP BY R.type
HAVING AVG(R.rating) > $ratingThreshold
```

Nested aggregation – GROUP BY

- **File: promotion.php, function: handleMaxBalanceRequest()**

```
SELECT u1.platformName, MAX(u1.account_balance) as maxAccountBalance
FROM User_1 u1
GROUP BY u1.platformName
HAVING 1 < (
    SELECT COUNT(*)
    FROM User_1 u2
```

```
        WHERE u1.platformName = u2.platformName
    )
```

Division

- **File: restaurant.php, function: handleOnAllPlatRequest()**

```
SELECT r.name
FROM Restaurant r
WHERE NOT EXISTS
(
    SELECT p.platformName FROM Platform p
    MINUS
    SELECT h.platform FROM Hosts h WHERE h.restaurantID=r.restaurantID
)
```