LAB 4 - SQL DDL Commands for Table Creation

```
DATE - format YYYY-MM-DD. DATETIME - format: YYYY-MM-DD HH:MI:SS.

CREATE TABLE Cash_Voucher(
   vouch_id INT PRIMARY KEY,
   outlet_id INT,
   FOREIGN KEY (vouch_id) REFERENCES Voucher(vouch_id),
   FOREIGN KEY (outlet_id) REFERENCES Outlet(outlet_id)
);

CREATE TABLE Complaint(
   complaint_id INT IDENTITY(1,1) PRIMARY KEY,
   status INT,
   description VARCHAR(1000),
   date_time DATETIME,
   phone_number INT,
   outlet_id INT,
   FOREIGN KEY (status) REFERENCES Complaint_Status(complaint_status_id),
   FOREIGN KEY (phone_number) REFERENCES User_details(phone_number),
   FOREIGN KEY (outlet_id) REFERENCES Outlet(outlet_id)
);

CREATE TABLE Complaint_Status (
   complaint_status_id INT IDENTITY(1,1) PRIMARY KEY,
   complaint_status_name VARCHAR(20) UNIQUE
);

CREATE TABLE Day_Package(
   package_id INT IDENTITY(1,1) PRIMARY KEY,
   package_pax INT,
   package_name VARCHAR(255),
   package_description VARCHAR(1000),
);

CREATE TABLE Franchise(
   franchise_id INT IDENTITY(1,1),
   franchise_name VARCHAR(255),
   PRIMARY KEY (franchise_id)
);

CREATE TABLE Gender (
   gender_id INT PRIMARY KEY,
   gender_name VARCHAR(20) UNIQUE
);
```

```
CREATE TABLE GPT_Chat(
    chat_id INT PRIMARY KEY,
    input VARCHAR(255),
    output VARCHAR(255),
    date_time DATETIME,
    phone_number INT,
    FOREIGN KEY (phone_number) REFERENCES User_Details(phone_number)
);

CREATE TABLE Group_Membership(
    group_id INT,
    phone_number INT,
    PRIMARY KEY(group_id, phone_number),
    FOREIGN KEY (group_id) REFERENCES Group_Name(group_id),
    FOREIGN KEY (phone_number) REFERENCES User_Details(phone_number)
);

CREATE TABLE Group_Name(
    group_id INT PRIMARY KEY,
    group_name VARCHAR(255)
);

CREATE TABLE Mall(
    mall_id INT IDENTITY(1,1),
    mall_name VARCHAR(255),
    physical_address VARCHAR(255),
    mall_chain_id INT,
    PRIMARY KEY (mall_id),
    FOREIGN KEY (mall_chain_id) REFERENCES Mall_Chain(mall_chain_id)
);

CREATE TABLE Mall_Chain(
    mall_chain_id INT IDENTITY(1,1),
    chain_name VARCHAR(255),
    PRIMARY KEY (mall_chain_id)
);

CREATE TABLE Mall_Recommendation(
    recommendation_id INT PRIMARY KEY,
    mall_id INT,
    purchase_voucher_id INT,
    FOREIGN KEY (mall_id) REFERENCES Mall (mall_id),
    FOREIGN KEY (purchase_voucher_id) REFERENCES Purchase_Voucher(vouch_id),
    FOREIGN KEY (recommendation_id) REFERENCES Recommendation(recommendation_id)
 );

CREATE TABLE Offered(
    product_id INT,
    outlet_id INT,
    price DECIMAL,
    PRIMARY KEY (product_id, outlet_id),
    FOREIGN KEY (outlet_id) REFERENCES Outlet(outlet_id),
    FOREIGN KEY (product_id) REFERENCES Product(product_id)
);
```

```
CREATE TABLE Outlet(
    outlet_id INT IDENTITY(1,1) PRIMARY KEY,
    unit_number VARCHAR(255),
    outlet_name VARCHAR(255),
    mall_id INT,
    FOREIGN KEY (mall_id) REFERENCES Mall(mall_id)
);

CREATE TABLE Package_Visits(
    package_id INT,
    mall_id INT,
    PRIMARY KEY (package_id, mall_id),
    FOREIGN KEY (package_id) REFERENCES Day_Package(package_id),
    FOREIGN KEY (mall_id) REFERENCES Mall(mall_id)
);

CREATE TABLE Product (
    product_id INT IDENTITY(1,1) PRIMARY KEY,
    name VARCHAR(255),
    description VARCHAR(255)
);

CREATE TABLE Purchase(
    visit_id INT,
    product_id INT,
    date_time DATETIME,
    quantity INT,
    PRIMARY KEY (visit_id, product_id),
    FOREIGN KEY (product_id) REFERENCES Product(product_id)
);

CREATE TABLE Purchase_Voucher(
    vouch_id INT PRIMARY KEY,
    mall_id INT,
    FOREIGN KEY (vouch_id) REFERENCES Voucher(vouch_id),
    FOREIGN KEY (mall_id) REFERENCES Mall(mall_id)
);

CREATE TABLE Recommendation(
    recommendation_id INT IDENTITY(1,1),
    start_date DATE,
    end_date DATE,
    start_time TIME,
    end_time TIME,
    phone_number INT,
    serial_id INT,
    PRIMARY KEY (recommendation_id),
    FOREIGN KEY (phone_number) REFERENCES User_Details(phone_number),
    FOREIGN KEY (serial_id) REFERENCES Voucher_Instance(serial_id)
);
```

```
CREATE TABLE Restaurant(
    outlet_id INT PRIMARY KEY,
    franchise_id INT,
    FOREIGN KEY (franchise_id) REFERENCES Franchise(franchise_id)
);

CREATE TABLE Restaurant_Recommendation(
    recommendation_id INT,
    restaurant_id INT,
    cash_voucher_id INT,
    PRIMARY KEY (recommendation_id),
    FOREIGN KEY (recommendation_id) REFERENCES Recommendation(recommendation_id),
    FOREIGN KEY (restaurant_id) REFERENCES Restaurant(outlet_id)

);

CREATE TABLE Shop(
    outlet_id INT PRIMARY KEY
    FOREIGN KEY (outlet_id) REFERENCES Outlet (outlet_id)
);

CREATE TABLE Tour_Instance(
    tour_id INT IDENTITY(1,1),
    date DATE,
    time TIME,
    package_id INT,
    bus_number INT,
    serial_id INT,
    group_id INT,
    PRIMARY KEY (tour_id),
    FOREIGN KEY (serial_id) REFERENCES Voucher_Instance(serial_id),
    FOREIGN KEY (group_id) REFERENCES Group_Name(group_id),
    FOREIGN KEY (package_id) REFERENCES Day_Package(package_id)
);

CREATE TABLE User_Details(
    phone_number INT PRIMARY KEY,
    user_name VARCHAR(255),
    date_of_birth DATE,
    home_address VARCHAR(255),
    gender_id INT,
    FOREIGN KEY (gender_id) REFERENCES Gender(gender_id)
);

CREATE TABLE User_Relationship(
    user1 INT,
    user2 INT,
    relationship VARCHAR(255)
    PRIMARY KEY (user1, user2)
    FOREIGN KEY (user1) REFERENCES User_Details(phone_number),
    FOREIGN KEY (user2) REFERENCES User_Details(phone_number)
);
```

```
CREATE TABLE Visit(
    visit_id INT IDENTITY(1,1),
    mall_id INT,
    group_id INT,
    date_time DATE,
    tour_instance INT,
    PRIMARY KEY (visit_id)
    FOREIGN KEY (tour_instance) REFERENCES Tour_Instance(tour_id)
);

CREATE TABLE Voucher(
    vouch_id INT IDENTITY(1,1),
    terms VARCHAR(255),
    value FLOAT,
    PRIMARY KEY (vouch_id)
)
```

LAB 5 - SQL Queries to Solve Appendix B

1. Find the most popular day packages where all participants are related to one another as either family members or members of the same club.

```
WITH No_Of_Pax AS (
SELECT group_id, COUNT(group_id) AS Pax_in_Group
FROM Group_Membership
GROUP BY group_id)
SELECT package_id, SUM(Pax_in_Group) AS Total_Pax
FROM Tour_Instance AS T JOIN No_Of_Pax AS N
 ON T.group_id = N.group_id, Group_Name AS G
WHERE G.group_id = T.group_id AND (G.group_name = 'Family' OR G.group_name = 'Club')
GROUP BY package_id;
```

OUTPUT:

	package_id	Total_Pax
1	1	13
2	2	8
3	3	12
4	4	16

No_Of_Pax was created temporarily with WITH. No_Of_Pax is a table with group_ids and the total number of individuals in each group_id

Tour_Instance is joined with No_Of_Pax to show how many people were in that particular day package

`AND (G.group_name = 'Family' OR G.group_name = 'Club')` ensures tour instances group_ids are related as family and club members

2. Find families who frequently shopped and dined together, with or without day packages. As part of your output, indicate whether these families use day packages or not. "frequently" means at least 50% of the time.

```
WITH Visits AS(
SELECT COUNT(*) AS Number_of_Visits, group_id
FROM Visit
GROUP BY group_id),

Packages_Used AS(
SELECT group_id, COUNT(group_id) AS No_Of_Packages
FROM Tour_Instance
GROUP BY group_id),

VisitsPerGroup AS(
SELECT V.Number_of_Visits, V.group_id, P.No_Of_Packages AS Packages_Used
FROM Visits AS V LEFT OUTER JOIN Packages_Used AS P ON V.group_id = P.group_id
)

SELECT
  V.Number_Of_Visits,
  V.group_id,
  Group_Name.group_name,
  ISNULL(V.Packages_Used, 0) AS Packages_Used,
  CASE WHEN v.Packages_Used >= V.Number_of_Visits / 2 THEN 'Yes' ELSE 'No' END AS
Frequently
FROM VisitsPerGroup AS V
JOIN Group_Name ON V.group_id = Group_Name.group_id
WHERE Group_Name.group_name = 'Family'
ORDER BY Number_of_Visits DESC;
```

OUTPUT:

	Number_Of_Visits	group_id	group_name	Packages_Used	Frequently
1	31	9	Family	0	No
2	12	1	Family	6	Yes
3	10	2	Family	1	No
4	8	4	Family	3	No
5	6	5	Family	3	Yes
6	1	3	Family	1	Yes

Visits table was created temporarily to get the **number_of_visits** that indicate how many times each **group_id** did a visit.

Packages_Used table was created to get how many times each **group_id** used a package.

VisitsPerGroup table was created to join the total **Number_Of_Visits**, and **Packages_Used** based on the **group_id**. Additional checks were done to ensure the **group_name = ‘Family’** and from there we do a check of **v.Packages_Used >= V.Number_of_Visits / 2** to ensure 50% or more before generating a **Frequently** column as either ‘Yes’ or ‘No’

3. What are the most popular recommendations from the app regarding malls?

```
SELECT COUNT(*) AS Number_of_Recommendations, mall_id
FROM Mall_Recommendation
GROUP BY mall_id
ORDER BY Number_of_Recommendations DESC;
```

OUTPUT:

Number_of_Recommendations	mall_id
1	1
1	3

Count the number of mall recommendations and group them by their mall_id and order them to see the most popular recommendation
They are subclasses of recommendations so there would be lesser

4. Compulsive shoppers are those who have visited a certain mall more than 5 times within a certain period of time. Find the youngest compulsive shoppers and the amount they spent in total during December 2023.

```
SELECT phone_number, date_of_birth, mall_id, sum(quantity * price) AS amt_spent FROM
 (
 SELECT U.phone_number, U.date_of_birth, V.mall_id, Pur.product_id, Pur.quantity,
O.price FROM dbo.Visit AS V
 JOIN dbo.Group_Membership AS G ON V.group_id = G.group_id JOIN dbo.User_Details AS U
ON G.phone_number = U.phone_number
 JOIN dbo.Purchase AS Pur ON V.visit_id = Pur.visit_id JOIN dbo.Product AS Pro ON
Pro.product_id = Pur.product_id
 JOIN dbo.Offered AS O on O.product_id = Pur.product_id AND O.outlet_id =
Pur.outlet_id WHERE V.date_time >= '2023-12-01' AND V.date_time <= '2023-12-31') AS T
GROUP BY phone_number, date_of_birth, mall_id HAVING COUNT(*) > 5
ORDER BY date_of_birth DESC;
```

OUTPUT:

	phone_number	date_of_birth	mall_id	amt_spent
1	92703145	2001-01-10	1	100025
2	81293410	2000-02-18	2	36

The Visits table hold the information for each individual visit. Each visit contains a group_id (denoting which user(s) are involved), the mall_id visited, and the date.
We select the entries for each visit, and look up the individuals in each group for the visit, and only select those with dates >=1st Dec 2023 and <= 31st Dec 2023.
We are then able to group them together by user (phone_number), only if this specific combination of “phone_number, date_of_birth and mall_id” appear >5 times from our selection. This means these people in the output have at least 6 visits to a particular mall in December. | `ORDER BY date_of_birth DESC;` sorts the output by the youngest compulsive shopper first.

In the Purchase table, each purchase can be tagged to a visit_id. For the visit_ids that we have selected (ones in December), we calculate amt_spent as the sum of quantity and price, where the price is obtained using the outlet_id in the Purchase table, and the product_id.

5. Find users who have dined in all the restaurants in some malls, but have never dined in any restaurants in some other malls.

```
WITH UserRestaurants AS(
SELECT gm.phone_number, o.mall_ID, COUNT(DISTINCT r.outlet_id) AS
num_restaurants_visited
    FROM dbo.Group_Membership gm
    JOIN dbo.Visit v ON gm.Group_ID = v.Group_ID
    JOIN dbo.Purchase p ON v.visit_ID = p.visit_ID
    JOIN dbo.Outlet o ON p.outlet_ID = o.outlet_ID
    JOIN dbo.Restaurant r ON o.outlet_ID = r.outlet_ID
    GROUP BY gm.phone_number, o.mall_ID
),
MallRestaurants AS (
    SELECT o.mall_ID, COUNT(DISTINCT r.outlet_id) AS total_restaurants
    FROM dbo.Outlet o
    JOIN dbo.Restaurant r ON o.outlet_ID = r.outlet_ID
    GROUP BY o.mall_ID
)
SELECT phone_number
FROM UserRestaurants ur
JOIN MallRestaurants mr  ON ur.mall_ID = mr.mall_ID
GROUP BY phone_number
HAVING COUNT(ur.phone_number) <> (SELECT COUNT(DISTINCT mall_id) FROM mall)AND
SUM(CASE WHEN ur.num_restaurants_visited = mr.total_restaurants THEN 1 ELSE 0 END) >=
1;
```

OUTPUT:

	phone_number
1	81828956

For this query, we have made the following assumptions:

1.) A purchase has to happen for someone to be deemed “dined” at a restaurant.
2.) For a group visit, if a purchase happens, every member in the group is credited with the dining at that restaurant.
3.) We have interpreted the question as having two distinct conditions:
    a) A shopper must have dined at EVERY restaurant in AT LEAST one mall.
    b) A shopper must have not dined at ANY restaurant in AT LEAST one mall.
    The query should only return shoppers of whom a) and b) are fulfilled.

The first table defined in the query, UserRestaurants, selects from the Purchase table, if the user visits a Restaurant. `COUNT(DISTINCT r.outlet_id)` counts the number of distinct restaurants that the user has Purchased from for each mall_id as `num_restaurants_visited`. We determine if

a purchase is from a restaurant and not a shop by `JOIN dbo.Restaurant r ON o.outlet_ID`.
The users are determined by their `dbo.Group_Membership` as Purchases are tagged to Visits, which have a group_id that can contain 1 or more members.
With this table, we will have a list of User-Mall-Restaurants_Visited entries.

The second table we define is `MallRestaurants` , where we query the outlets in each mall, if the outlet is in `dbo.Restaurant`. This differentiates a shop from a restaurant. `COUNT(DISTINCT r.outlet_id)` gives us the total number of restaurants in each mall, as `total_restaurants`.

We then join MallRestaurants to UserRestaurants, and now each row there is a num_visited_restaurants and a total_restaurants. We select the users (phone_numbers) that meet the following criteria:

```
HAVING COUNT(ur.phone_number) <> (SELECT COUNT(DISTINCT mall_id) FROM mall)
```

This selects users that do not have an entry for every distinct mall_id (ie. have not dined at least 1 restaurant in every mall). This fulfills criteria b) outlined above.

```
SUM(CASE WHEN ur.num_restaurants_visited = mr.total_restaurants THEN 1 ELSE 0 END) >= 1;
```

This selects users that have at least one entry where num_restaurants_visited is equal to total_restaurants (ie. have dined at every restaurant in that mall). This fulfills criteria a) outlined above.

6. What are the top 3 highest earning malls and restaurants?

```
WITH MallEarnings AS (
    SELECT TOP 3
        m.mall_id,
        m.mall_name,
        SUM(ofr.price * p.quantity) AS total_earnings
    FROM
        Mall m
    JOIN Outlet o ON m.mall_id = o.mall_id
    JOIN Purchase p ON o.outlet_id = p.outlet_id
    JOIN Offered ofr ON p.product_id = ofr.product_id AND o.outlet_id = ofr.outlet_id
    GROUP BY
        m.mall_id, m.mall_name
    ORDER BY
        total_earnings DESC
),
RestaurantEarnings AS (
    SELECT TOP 3
        r.outlet_id,
        o.outlet_name,
        SUM(ofr.price * p.quantity) AS total_earnings
    FROM
        Restaurant r
    JOIN Outlet o ON r.outlet_id = o.outlet_id
    JOIN Purchase p ON o.outlet_id = p.outlet_id
    JOIN Offered ofr ON p.product_id = ofr.product_id AND o.outlet_id = ofr.outlet_id
    GROUP BY
        r.outlet_id, o.outlet_name
    ORDER BY
        total_earnings DESC
)
SELECT
    'Mall' AS type,
    mall_id,
    mall_name AS name,
    total_earnings
FROM
    MallEarnings

UNION ALL

SELECT
    'Restaurant' AS type,
    outlet_id,
```

```
    outlet_name AS name,
    total_earnings
FROM
    RestaurantEarnings;
```

OUTPUT:

	type	mall_id	name	total_eamings
1	Mall	1	Bugis Junction	600030
2	Mall	2	Bugis+	56
3	Mall	31	Millenia Walk	10
4	Restaurant	70	Kopitiam	20
5	Restaurant	99	Kopitiam	10
6	Restaurant	72	Kopitiam	5

`WITH MallEarnings AS` finds the top 3 earning malls by combining Mall, Outlet, Purchase, Offered using `INNER JOIN` and finding their earnings using `SUM(ofr.price * p.quantity)`

`RestaurantEarnings AS` does the same by combining Restaurant, Outlet, Purchase, Offered using `INNER JOIN` and finding their earnings using `SUM(ofr.price * p.quantity)`

Then, we extract the relevant columns from `MallEarnings` and `RestaurantEarnings` using `SELECT` and combines them using `UNION ALL`

Mall: Mall id
Outlet: Different stores (retail and restaurant) and their corresponding malls
Purchase: Each individual purchase, with corresponding product_id, outlet_id & quantity
Offered: Product + price offered at each individual outlet
Restaurant: corresponding outlet_id and franchise

Q7 (ADDITIONAL QUERY). Which types of vouchers have the highest take-up rates

```
WITH UserCash AS (
    SELECT vi.vouch_id, COUNT(CASE WHEN vi.status = 1 THEN 1 ELSE NULL END) AS
used_vouchers, COUNT(*) AS total_vouchers, 'Cash' AS vouchtype
    FROM
        Voucher_Instance vi
    JOIN Cash_Voucher cv ON vi.vouch_id = cv.vouch_id
    GROUP BY
        vi.vouch_id
),
UserPurchase AS (
    SELECT vi.vouch_id, COUNT(CASE WHEN vi.status = 1 THEN 1 ELSE NULL END) AS
used_vouchers, COUNT(*) AS total_vouchers, 'Purchase' AS vouchtype
    FROM
        Voucher_Instance vi
    JOIN Purchase_Voucher pv ON vi.vouch_id = pv.vouch_id
    GROUP BY
        vi.vouch_id
)

SELECT vouch_id, used_vouchers as Used, total_vouchers as Total, 'Cash' as vouchtype,
CAST(used_vouchers AS DECIMAL) / total_vouchers AS take_up_rate FROM UserCash
UNION ALL
SELECT vouch_id, used_vouchers as Used, total_vouchers as Total, 'Purchase' as
vouchtype, CAST(used_vouchers AS DECIMAL) / total_vouchers AS take_up_rate FROM
UserPurchase
ORDER BY take_up_rate DESC
```

Assumption Made:

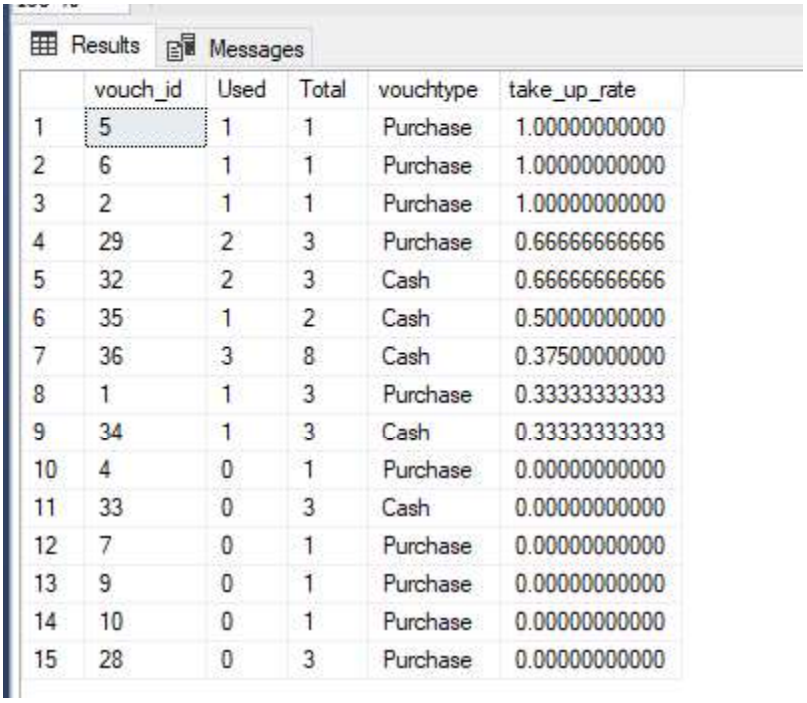
Vouchers are not ‘unique’ and they have templated vouchers to be disseminated/copied. So there can be a template “$10 Jurong Point Voucher”, and multiple copies of this voucher can be disseminated. We are doing this query based on the assumption that the types of vouchers are for these individual templates. Each template has its own vouch_id.

We created two new tables, UserCash and UserPurchase. We discriminate between the two by JOINing the Cash_Voucher and Purchase_Voucher respectively. `COUNT(CASE WHEN vi.status = 1 THEN 1 ELSE NULL END)` returns the total number of Voucher_Instances (individual copies of that particular voucher) that are used (status = 1) and `COUNT(*) AS total_vouchers` returns the total number of copies of that vouch_id.

We union both tables together, with ‘Cash’ and ‘Purchase’ in the vouchtype respectively, then `CAST(used_vouchers AS DECIMAL) / total_vouchers AS take_up_rate` calculates the take up

rate per individual voucher ‘template’.

Output:



Results | Messages

	vouch_id	Used	Total	vouchtype	take_up_rate
1	5	1	1	Purchase	1.00000000000
2	6	1	1	Purchase	1.00000000000
3	2	1	1	Purchase	1.00000000000
4	29	2	3	Purchase	0.66666666666
5	32	2	3	Cash	0.66666666666
6	35	1	2	Cash	0.50000000000
7	36	3	8	Cash	0.37500000000
8	1	1	3	Purchase	0.33333333333
9	34	1	3	Cash	0.33333333333
10	4	0	1	Purchase	0.00000000000
11	33	0	3	Cash	0.00000000000
12	7	0	1	Purchase	0.00000000000
13	9	0	1	Purchase	0.00000000000
14	10	0	1	Purchase	0.00000000000
15	28	0	3	Purchase	0.00000000000

Lab 5 - Printout of All Table Records

Cash_Voucher:

vouch_id	outlet_id
32	20
33	64
34	65
35	66
36	40

Complaint:

complaint_id	status	description	date_time	phone_number	outlet_id
3	1	Slow cashier	2024-01-01 12:0...	81293410	1
4	1	Slow cashier	2024-01-01 13:0...	81828956	1
5	1	Dirty place	2024-01-01 13:0...	82619921	1
6	1	Dirty place	2024-01-01 13:0...	83832791	2
7	1	Wet toilet	2024-01-01 14:0...	87009010	2
8	1	Smelly toilet	2024-01-01 14:3...	87892132	2
11	1	Dirty toilet	2024-01-01 15:0...	88239018	3
12	2	Smelly toilet	2024-01-01 13:0...	90182314	4
13	2	Slow cashier	2024-01-01 14:3...	90681022	4
14	2	Dirty place	2024-01-01 17:0...	90883124	4
15	2	Slow cashier	2024-01-02 09:0...	91112398	5
16	2	Overpriced	2024-01-02 10:0...	91112398	6

Complaint_Status:

complaint_status_id	complaint_status_name
1	PENDING
2	RESOLVED

Day_Package:

package_id	package_pax	package_name	package_description
1	60	CapitalLand Me...	Come and visit everyt...
2	30	WestSide Tour	Drop by the places w...
3	60	Jurong Point N...	Shuttle Bus from NTU...
4	60	City Shoppers' ...	Shop in The City in th...
5	10	Cardholders' Elite	Luxury Chartered Co...
6	30	Tech Tips Packa...	Get around the best t...

Franchise:

franchise_id	franchise_name
1	McDonalds
2	Subway
3	Jack's Place
4	Hai Di Lao
5	Hot Hideout
6	Encik Tan
7	Eighteen Chefs
8	The Tea Party
9	LiHo Tea
10	Genki Sushi
11	KFC
12	Burger King
13	Soup Restaurant
14	Kopitiam

Gender:

gender_id	gender_name
1	Female
0	Male
2	Other
3	Prefer Not To Say

GPT_Chat:

chat_id	input	output	date_time	phone_number
1	how increase sa...	be creative	2024-01-01 09:0...	81293410
2	how increase re...	be unique	2024-01-01 09:0...	81828956
3	best mall	jem	2024-01-01 10:0...	82619921
4	best shop	nike	2024-01-01 11:0...	83832791
5	best restaurant	genki sushi	2024-01-01 12:0...	87892132

Group_Membership:

group_id	phone_number
1	87892132
1	93208810
1	96102231
1	98892100
2	90182314
2	99102334
3	87009010
3	92009129
3	94509214
4	82619921
4	91112398
4	94562800
4	98129980
5	88239018
5	94104434
6	91208900
6	92834412
6	99812314
7	90883124
7	92834412
8	81828956
9	90681022
10	92703145
11	81293410

Group_Name:

group_id	group_name
1	Family
2	Family
3	Family
4	Family
5	Family
6	Friends
7	Club
8	Individual
9	Family
10	Individual
11	Individual

Mall:

mall_id	mall_name	physical_addre...	mall_chain_id
1	Bugis Junction	200 Victoria Str...	1
2	Bugis+	200 Victoria Str...	1
3	Bukit Panjang P...	1 Jelebu Road, ...	1
4	Funan	107 North Bridg...	1
5	IMM	2 Jurong East St...	1
6	ION Orchard	2 Orchard Turn,...	1
7	Jewel Changi Ai...	78 Airport Boul...	1
8	Junction 8	9 Bishan Place, ...	1
9	Lot One Shopp...	21 Choa Chu K...	1
10	Plaza Singapura	68 Orchard Roa...	1
11	Raffles City Sho...	252 North Bridg...	1
12	Westgate	3 Gateway Driv...	1
13	313@Somerset	313 Orchard Ro...	2
14	JEM	50 Jurong Gate...	2
15	Parkway Parade	80 Marine Para...	2
16	Paya Lebar Qua...	10 Paya Lebar R...	2
17	Clarke Quay Ce...	6 Eu Tong Sen S...	3
18	HillV2	4 Hillview Rise, ...	3
19	Junction 10	1 Woodlands R...	3
20	Orchard Central	181 Orchard Ro...	3
21	West Coast Plaza	154 West Coast ...	3
22	Hougang 1	1 Hougang Stre...	3
23	Causeway Point	1 Woodlands S...	4
24	NEX	23 Serangoon C...	4
25	Northpoint City	930 Yishun Ave...	4
26	Waterway Point	83 Punggol Ce...	4
27	White Sands	1 Pasir Ris Cent...	4
28	Hillion Mall	17 Petir Road, S...	*NULL*
29	Yew Tee Point	21 Choa Chu K...	*NULL*
30	Jurong Point	1 Jurong West ...	5
31	Millenia Walk	9 Raffles Blvd, S...	*NULL*

Mall_Chain:

mall_chain_id	chain_name
1	CaptialLand
2	LendLease
3	Far East Malls
4	Frasers Singapore
5	Link Reit

Mall_Recommendation:

	recommendation_id	mall_id	purchase_voucher_id
1	10	1	1
2	11	3	5

Offered:

	product_id	outlet_id	price
1	1	1	100000
2	2	1	110000
3	15	1	5
4	16	1	4
5	17	3	3
6	18	3	8
7	19	69	5
8	19	70	5
9	19	71	5
10	19	72	5
11	19	73	5
12	19	74	5
13	19	75	5
14	19	76	5
15	19	77	5
16	19	78	5
17	19	79	5
18	19	80	5
19	19	81	5
20	19	82	5
21	19	83	5
22	19	84	5
23	19	85	5
24	19	86	5
25	19	87	5
26	19	88	5
27	19	89	5
28	19	90	5
29	19	91	5
30	19	92	5
31	19	93	5
32	19	94	5
33	19	95	5
34	19	96	5
35	19	97	5

36	19	98	5
37	19	99	5
38	19	100	6

Outlet:

	outlet_id	unit_number	outlet_name	mall_id
1	1	#01-94	Tesla Experience Centre	1
2	2	#01-95	Nike Factory Store	1
3	3	#02-84	Adidas Outlet	2
4	4	#02-85	Toys'R'Us Outlet	2
5	5	#03-74	Shaw Theatres	3
6	6	#03-75	DonDonDonkey	3
7	7	#04-64	Uniqlo Outlet	4
8	8	#04-65	Popular Book Store	4
9	9	#05-54	Decathalon	5
10	10	#05-55	LiHo Tea	5
11	11	#06-44	Tesla Experience Centre	6
12	12	#06-45	Nike Factory Store	6
13	13	#07-34	Adidas Outlet	7
14	14	#07-35	Toys'R'Us Outlet	7
15	15	#08-24	Shaw Theatres	8
16	16	#08-25	DonDonDonkey	8
17	17	#09-14	Uniqlo Outlet	9
18	18	#09-15	Popular Book Store	9
19	19	#10-04	Decathalon	10
20	20	#10-05	LiHo Tea	10
21	21	#01-10	Tesla Experience Centre	11
22	22	#01-40	Nike Factory Store	11
23	23	#02-30	Adidas Outlet	12
24	24	#02-29	Toys'R'Us Outlet	12
25	25	#03-10	Shaw Theatres	13
26	26	#03-15	DonDonDonkey	13
27	27	#04-20	Uniqlo Outlet	14
28	28	#04-15	Popular Book Store	14
29	29	#05-17	Decathalon	15
30	30	#05-40	LiHo Tea	15
31	31	#06-17	Tesla Experience Centre	16
32	32	#06-50	Nike Factory Store	16
33	33	#07-10	Adidas Outlet	17
34	34	#07-20	Toys'R'Us Outlet	17
35	35	#08-15	Shaw Theatres	18

55	55	#08-99	DonDonDonkey	28
56	56	#08-88	Uniqlo Outlet	28
57	57	#09-10	Popular Book Store	29
58	58	#09-40	Decathalon	29
59	59	#10-17	LiHo Tea	30
60	60	#10-20	Soup Restaurant	30
61	61	#11-25	Tesla Experience Centre	31
62	63	#11-30	Nike Factory Store	31
63	64	#12-10	McDonalds	31
64	65	#01-20	KFC	31
65	66	#02-40	Burger King	31
66	68	#11-25	Tesla Experience Centre	31
67	69	#03-69	Kopitiam	1
68	70	#03-69	Kopitiam	2
69	71	#03-69	Kopitiam	3
70	72	#03-69	Kopitiam	4
71	73	#03-69	Kopitiam	5
72	74	#03-69	Kopitiam	6
73	75	#03-69	Kopitiam	7
74	76	#03-69	Kopitiam	8
75	77	#03-69	Kopitiam	9
76	78	#03-69	Kopitiam	10
77	79	#03-69	Kopitiam	11
78	80	#03-69	Kopitiam	12
79	81	#03-69	Kopitiam	13
80	82	#03-69	Kopitiam	14
81	83	#03-69	Kopitiam	15
82	84	#03-69	Kopitiam	16
83	85	#03-69	Kopitiam	17
84	86	#03-69	Kopitiam	18
85	87	#03-69	Kopitiam	19
86	88	#03-69	Kopitiam	20
87	89	#03-69	Kopitiam	21
88	90	#03-69	Kopitiam	22
89	91	#03-69	Kopitiam	23

90	92	#03-69	Kopitiam	24
91	93	#03-69	Kopitiam	25
92	94	#03-69	Kopitiam	26
93	95	#03-69	Kopitiam	27
94	96	#03-69	Kopitiam	28
95	97	#03-69	Kopitiam	29
96	98	#03-69	Kopitiam	30
97	99	#03-69	Kopitiam	31
98	100	#03-69	Koufu	31

Package_Visits:

	outlet_id	unit_number	outlet_name	mall_id
1	1	#01-94	Tesla Experience Centre	1
2	2	#01-95	Nike Factory Store	1
3	3	#02-84	Adidas Outlet	2
4	4	#02-85	Toys'R'Us Outlet	2
5	5	#03-74	Shaw Theatres	3
6	6	#03-75	DonDonDonkey	3
7	7	#04-64	Uniqlo Outlet	4
8	8	#04-65	Popular Book Store	4
9	9	#05-54	Decathalon	5
10	10	#05-55	LiHo Tea	5
11	11	#06-44	Tesla Experience Centre	6
12	12	#06-45	Nike Factory Store	6
13	13	#07-34	Adidas Outlet	7
14	14	#07-35	Toys'R'Us Outlet	7
15	15	#08-24	Shaw Theatres	8
16	16	#08-25	DonDonDonkey	8
17	17	#09-14	Uniqlo Outlet	9
18	18	#09-15	Popular Book Store	9
19	19	#10-04	Decathalon	10
20	20	#10-05	LiHo Tea	10
21	21	#01-10	Tesla Experience Centre	11
22	22	#01-40	Nike Factory Store	11
23	23	#02-30	Adidas Outlet	12
24	24	#02-29	Toys'R'Us Outlet	12
25	25	#03-10	Shaw Theatres	13
26	26	#03-15	DonDonDonkey	13
27	27	#04-20	Uniqlo Outlet	14
28	28	#04-15	Popular Book Store	14
29	29	#05-17	Decathalon	15
30	30	#05-40	LiHo Tea	15
31	31	#06-17	Tesla Experience Centre	16
32	32	#06-50	Nike Factory Store	16

33	33	#07-10	Adidas Outlet	17
34	34	#07-20	Toys'R'Us Outlet	17
35	35	#08-15	Shaw Theatres	18
36	36	#08-21	DonDonDonkey	18
37	37	#09-40	Uniqlo Outlet	19
38	38	#09-28	Popular Book Store	19
39	39	#10-11	Decathalon	20
40	40	#10-20	Genki Sushi	20
41	41	#01-15	Tesla Experience Centre	21
42	42	#01-10	Nike Factory Store	21
43	43	#02-09	Adidas Outlet	22
44	44	#02-01	Toys'R'Us Outlet	22
45	45	#03-10	Shaw Theatres	23
46	46	#03-13	DonDonDonkey	23
47	47	#04-15	Uniqlo Outlet	24
48	48	#04-25	Popular Book Store	24
49	49	#05-13	Decathalon	25
50	50	#05-11	LiHo Tea	25
51	51	#06-40	Tesla Experience Centre	26
52	52	#06-50	Nike Factory Store	26
53	53	#07-60	Adidas Outlet	27
54	54	#07-90	Shaw Theatres	27
55	55	#08-99	DonDonDonkey	28
56	56	#08-88	Uniqlo Outlet	28
57	57	#09-10	Popular Book Store	29
58	58	#09-40	Decathalon	29
59	59	#10-17	LiHo Tea	30
60	60	#10-20	Soup Restaurant	30
61	61	#11-25	Tesla Experience Centre	31
62	63	#11-30	Nike Factory Store	31
63	64	#12-10	McDonalds	31
64	65	#01-20	KFC	31

65	66	#02-40	Burger King	31
66	68	#11-25	Tesla Experience Centre	31
67	69	#03-69	Kopitiam	1
68	70	#03-69	Kopitiam	2
69	71	#03-69	Kopitiam	3
70	72	#03-69	Kopitiam	4
71	73	#03-69	Kopitiam	5
72	74	#03-69	Kopitiam	6
73	75	#03-69	Kopitiam	7
74	76	#03-69	Kopitiam	8
75	77	#03-69	Kopitiam	9
76	78	#03-69	Kopitiam	10
77	79	#03-69	Kopitiam	11
78	80	#03-69	Kopitiam	12
79	81	#03-69	Kopitiam	13
80	82	#03-69	Kopitiam	14
81	83	#03-69	Kopitiam	15
82	84	#03-69	Kopitiam	16
83	85	#03-69	Kopitiam	17
84	86	#03-69	Kopitiam	18
85	87	#03-69	Kopitiam	19
86	88	#03-69	Kopitiam	20
87	89	#03-69	Kopitiam	21
88	90	#03-69	Kopitiam	22
89	91	#03-69	Kopitiam	23
90	92	#03-69	Kopitiam	24
91	93	#03-69	Kopitiam	25
92	94	#03-69	Kopitiam	26
93	95	#03-69	Kopitiam	27
94	96	#03-69	Kopitiam	28
95	97	#03-69	Kopitiam	29
96	98	#03-69	Kopitiam	30
97	99	#03-69	Kopitiam	31
98	100	#03-69	Koufu	31

Product:

	product_id	name	description
1	1	Tesla Model 3	RWD 60 kWh (A)
2	2	Tesla Model Y	RWD (A)
3	3	Pikachu Toy	It is a pikachu toy
4	4	Snorlax Toy	It is a snorlax toy
5	5	Dining Bench	It is a dining bench
6	6	Dining Table	It is a dining table
7	7	Dining Chair	It is a dining chair
8	8	Dining Lamp	It is a dining lamp
9	9	Adidas Slides	It is an adidas slides
10	10	Adidas Ultraboost	It is an adidas shoes
11	11	Nike Airmax 97	It is a nike shoes
12	12	Apple Pie	It is an apple pie
13	13	Peanut Waffle	It is a peanut waffle
14	14	Chocolate Ice Cream	It is a chocolate ice cream
15	15	Spoon	It is a spoon
16	16	Fork	It is a fork
17	17	Knife	It is a knife
18	18	Chopsticks	It is a chopsticks
19	19	Kaya Toast Set	Kaya Toast with softboiled egg and coffee/tea

Purchase:

	visit_id	product_id	date_time	quantity	outlet_id
1	1	1	2024-01-01 10:00:00.000	5	1
2	2	4	2024-01-01 11:00:00.000	8	4
3	38	1	2023-12-01 09:00:00.000	1	1
4	39	15	2023-12-02 09:00:00.000	1	1
5	40	15	2023-12-03 09:00:00.000	1	1
6	41	15	2023-12-04 09:00:00.000	1	1
7	42	15	2023-12-05 09:00:00.000	1	1
8	43	15	2023-12-06 09:00:00.000	1	1
9	44	17	2023-12-01 09:00:00.000	2	3
10	45	17	2023-12-02 09:00:00.000	2	3
11	46	17	2023-12-03 09:00:00.000	2	3
12	47	17	2023-12-04 09:00:00.000	2	3
13	48	17	2023-12-05 09:00:00.000	2	3
14	49	17	2023-12-06 09:00:00.000	2	3
15	50	19	2023-12-01 10:00:00.000	1	69
16	51	19	2023-12-01 10:00:00.000	1	70
17	52	19	2023-12-01 10:00:00.000	1	71
18	53	19	2023-12-01 10:00:00.000	1	72
19	54	19	2023-12-01 10:00:00.000	1	73
20	55	19	2023-12-01 10:00:00.000	1	74
21	56	19	2023-12-01 10:00:00.000	1	75
22	57	19	2023-12-01 10:00:00.000	1	76
23	58	19	2023-12-01 10:00:00.000	1	77
24	59	19	2023-12-01 10:00:00.000	1	78
25	60	19	2023-12-01 10:00:00.000	1	79
26	61	19	2023-12-01 10:00:00.000	1	80
27	62	19	2023-12-01 10:00:00.000	1	81
28	63	19	2023-12-01 10:00:00.000	1	82
29	64	19	2023-12-01 10:00:00.000	1	83
30	65	19	2023-12-01 10:00:00.000	1	84
31	66	19	2023-12-01 10:00:00.000	1	85
32	67	19	2023-12-01 10:00:00.000	1	86

33	68	19	2023-12-01 10:00:00.000	1	87
34	69	19	2023-12-01 10:00:00.000	1	88
35	70	19	2023-12-01 10:00:00.000	1	89
36	71	19	2023-12-01 10:00:00.000	1	90
37	72	19	2023-12-01 10:00:00.000	1	91
38	73	19	2023-12-01 10:00:00.000	1	92
39	74	19	2023-12-01 10:00:00.000	1	93
40	75	19	2023-12-01 10:00:00.000	1	94
41	76	19	2023-12-01 10:00:00.000	1	95
42	77	19	2023-12-01 10:00:00.000	1	96
43	78	19	2023-12-01 10:00:00.000	1	97
44	79	19	2023-12-01 10:00:00.000	1	98
45	80	19	2023-12-01 10:00:00.000	2	99
46	81	19	2023-12-01 10:00:00.000	3	70

Purchase_Voucher:

	vouch_id	mall_id
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16
17	17	17
18	18	18
19	19	19
20	20	20
21	21	21
22	22	22
23	23	23
24	24	24
25	25	25
26	26	26
27	27	27
28	28	28
29	29	29
30	30	30
31	31	31

Recommendation:

	recommendation_id	start_date	end_date	start_time	end_time	phone_number	serial_id
1	2	2024-01-01	2024-01-03	09:00:00.0000000	12:00:00.0000000	81293410	4
2	3	2024-01-01	2024-01-04	09:00:00.0000000	12:00:00.0000000	82619921	5
3	4	2024-01-01	2024-01-04	09:00:00.0000000	12:00:00.0000000	90182314	2
4	5	2024-01-01	2024-01-04	09:00:00.0000000	12:00:00.0000000	90681022	3
5	6	2024-01-01	2024-01-04	09:00:00.0000000	12:00:00.0000000	90883124	6
6	7	2024-01-01	2024-01-04	09:00:00.0000000	15:00:00.0000000	91112398	7
7	8	2024-01-01	2024-01-04	09:00:00.0000000	15:00:00.0000000	91208900	8
8	9	2024-01-01	2024-01-04	09:00:00.0000000	15:00:00.0000000	93208810	8
9	10	2024-01-01	2024-01-04	09:00:00.0000000	15:00:00.0000000	94509214	9
10	11	2024-01-01	2024-01-04	09:00:00.0000000	18:00:00.0000000	98129980	10
11	12	2024-01-01	2024-01-04	09:00:00.0000000	18:00:00.0000000	99812314	11

Restaurant:

	outlet_id	franchise_id
1	10	9
2	20	9
3	30	9
4	40	10
5	50	9
6	59	9
7	60	13
8	64	1
9	65	11
10	66	12
11	69	14
12	70	14
13	71	14
14	72	14
15	73	14
16	74	14
17	75	14
18	76	14
19	77	14
20	78	14
21	79	14
22	80	14
23	81	14
24	82	14
25	83	14
26	84	14
27	85	14
28	86	14
29	87	14
30	88	14
31	89	14
32	90	14

33	91	14
34	92	14
35	93	14
36	94	14
37	95	14
38	96	14
39	97	14
40	98	14
41	99	14
42	100	NULL

Restaurant_Recommendation:

	recommendation_id	restaurant_id	cash_voucher_id
1	2	10	1
2	3	10	2
3	4	10	3
4	5	10	5
5	6	20	6
6	7	20	7
7	8	20	8
8	9	30	9

Shop:

	outlet_id
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	11
11	12
12	13
13	14
14	15
15	16
16	17
17	18
18	19
19	21
20	22
21	23
22	24
23	25
24	26
25	27
26	28
27	29
28	31
29	32
30	33
31	34
32	35

33	36
34	37
35	38
36	39
37	41
38	42
39	43
40	44
41	45
42	46
43	47
44	48
45	49
46	51
47	52
48	53
49	54
50	55
51	56
52	57
53	58
54	61
55	63

Tour_Instance:

	tour_id	date	time	package_id	bus_number	serial_id	group_id
1	2	2024-01-01	10:00:00.0000000	1	1	2	1
2	3	2024-01-01	10:00:00.0000000	1	1	3	2
3	4	2024-01-01	10:00:00.0000000	1	1	4	3
4	5	2024-01-02	10:00:00.0000000	1	1	5	4
5	6	2024-01-03	12:00:00.0000000	2	2	6	5
6	7	2024-01-03	12:00:00.0000000	2	2	7	6
7	8	2024-01-03	12:00:00.0000000	2	2	8	7
8	9	2024-01-03	12:00:00.0000000	2	2	9	1
9	10	2024-01-03	12:00:00.0000000	3	3	10	1
10	11	2024-01-03	12:00:00.0000000	3	3	11	1
11	12	2024-01-03	12:00:00.0000000	3	3	12	1
12	13	2024-01-03	12:00:00.0000000	4	4	12	1
13	14	2024-01-04	12:00:00.0000000	4	4	13	4
14	15	2024-01-04	12:00:00.0000000	4	4	14	4
15	16	2024-01-04	12:00:00.0000000	4	4	15	5
16	17	2024-01-04	12:00:00.0000000	4	4	16	5

User_Details:

	phone_number	user_name	date_of_birth	home_address	gender_id
1	81293410	Aaron Goh	2000-02-18	Blk 38A Margaret Dr, #03-21, Singapore 142038	0
2	81828956	Brad Goh	2010-01-10	244 Bukit Batok East Ave 5, Singapore 650244	0
3	82619921	Felicia Ng	2004-01-10	30 Kelantan Rd, Singapore 200030	1
4	83832791	Li Sien Long	2001-09-11	21 Teck Whye Walk, Singapore 688258	2
5	87009010	Sophia	1973-12-28	263 Bukit Batok East Ave 4, Singapore 650263	1
6	87892132	Ong Ming Soon	2001-06-30	453 Clementi Ave 3, Singapore 120453	0
7	88239018	Claudia Ng	1976-10-06	60 Bukit Batok West Ave. 8, Singapore 658965	1
8	90182314	Lim Ah Ming	1988-01-25	208 Jurong East Street 21, Singapore 600208	0
9	90681022	Aaron Seng	1985-05-14	3 Queen's Rd, Singapore 260003	0
10	90883124	Georgia Tan	2001-01-10	232 Jurong East Street 21, Singapore 600232	1
11	91112398	Lee Jia Rong	1976-10-06	30 Kelantan Rd, Singapore 200030	2
12	91208900	Charlotte	1988-07-25	105 Jurong E St 13, Singapore 600105	1
13	92009129	Isabella	1998-08-03	263 Bukit Batok East Ave 4, Singapore 650263	1
14	92703145	Zen Tay	2001-01-10	49 Strathmore Ave, Singapore 140049	0
15	92834412	Goh Xiao Ming	1997-06-24	190 Lor 6 Toa Payoh, #04-510, Singapore 310190	0
16	93208810	Sophia	2001-01-10	453 Clementi Ave 3, Singapore 120453	3
17	94104434	Benjamin Tan	1995-03-12	60 Bukit Batok West Ave. 8, Singapore 658965	0
18	94509214	Eleanor	2000-02-18	263 Bukit Batok East Ave 4, Singapore 650263	1
19	94562800	Valerie	2001-01-10	30 Kelantan Rd, Singapore 200030	1
20	96102231	Clara	1981-04-21	453 Clementi Ave 3, Singapore 120453	1
21	98129980	Lee Siang Meng	2001-01-10	30 Kelantan Rd, Singapore 200030	0
22	98892100	Tan Ah Beng	2001-01-10	453 Clementi Ave 3, Singapore 120453	0
23	99102334	Lee Jia Rong	2004-05-25	208 Jurong East Street 21, Singapore 600208	0
24	99812314	Ng Ah Seng	1969-12-30	13 St George's Rd, Singapore 320013	0

User_Relationship:

	user1	user2	relationship
1	81293410	81828956	Parent/Child
2	81293410	82619921	Partner
3	82619921	83832791	Friend
4	83832791	87892132	Friend
5	87009010	94509214	Sibling
6	88239018	99812314	Parent/Child
7	90182314	99102334	Cousin
8	90883124	92009129	Friend
9	91208900	87009010	Relative
10	92703145	92834412	Cousin
11	94104434	94509214	Colleague
12	94562800	96102231	Colleague
13	96102231	87892132	Spouse
14	98129980	91112398	Friend

Visit:

	visit_id	mall_id	group_id	date_time	tour_instance
1	1	1	1	2024-01-01	2
2	2	2	1	2024-01-01	2
3	3	3	1	2024-01-01	2
4	4	4	1	2024-01-01	2
5	5	5	1	2024-01-01	2
6	6	6	1	2024-01-01	2
7	7	7	1	2024-01-01	2
8	8	8	1	2024-01-01	2
9	9	9	1	2024-01-01	2
10	10	10	1	2024-01-01	2
11	11	11	1	2024-01-01	2
12	12	12	1	2024-01-01	2
13	13	1	2	2024-01-01	3
14	14	2	2	2024-01-01	3
15	15	3	2	2024-01-01	3
16	16	4	2	2024-01-01	3
17	17	5	2	2024-01-01	3
18	18	6	2	2024-01-01	3
19	19	7	2	2024-01-01	3
20	20	8	2	2024-01-01	3
21	21	9	2	2024-01-01	3
22	22	10	2	2024-01-01	3
23	23	1	3	2024-01-01	4
24	24	1	4	2024-01-02	5
25	25	2	4	2024-01-02	5
26	26	3	4	2024-01-02	5
27	27	4	4	2024-01-02	5
28	28	5	4	2024-01-02	5
29	29	6	4	2024-01-02	5
30	30	7	4	2024-01-02	5
31	31	8	4	2024-01-02	5
32	32	9	5	2024-01-03	6

33	33	12	5	2024-01-03	6
34	34	14	5	2024-01-03	6
35	35	28	5	2024-01-03	6
36	36	29	5	2024-01-03	6
37	37	25	5	2024-01-03	6
38	38	1	10	2023-12-01	NULL
39	39	1	10	2023-12-02	NULL
40	40	1	10	2023-12-03	NULL
41	41	1	10	2023-12-04	NULL
42	42	1	10	2023-12-05	NULL
43	43	1	10	2023-12-06	NULL
44	44	2	11	2023-12-01	NULL
45	45	2	11	2023-12-02	NULL
46	46	2	11	2023-12-03	NULL
47	47	2	11	2023-12-04	NULL
48	48	2	11	2023-12-05	NULL
49	49	2	11	2023-12-06	NULL
50	50	1	9	2023-12-01	NULL
51	51	2	9	2023-12-01	NULL
52	52	3	9	2023-12-01	NULL
53	53	4	9	2023-12-01	NULL
54	54	5	9	2023-12-01	NULL
55	55	6	9	2023-12-01	NULL
56	56	7	9	2023-12-01	NULL
57	57	8	9	2023-12-01	NULL
58	58	9	9	2023-12-01	NULL
59	59	10	9	2023-12-01	NULL
60	60	11	9	2023-12-01	NULL
61	61	12	9	2023-12-01	NULL
62	62	13	9	2023-12-01	NULL
63	63	14	9	2023-12-01	NULL
64	64	15	9	2023-12-01	NULL

65	65	16	9	2023-12-01	NULL
66	66	17	9	2023-12-01	NULL
67	67	18	9	2023-12-01	NULL
68	68	19	9	2023-12-01	NULL
69	69	20	9	2023-12-01	NULL
70	70	21	9	2023-12-01	NULL
71	71	22	9	2023-12-01	NULL
72	72	23	9	2023-12-01	NULL
73	73	24	9	2023-12-01	NULL
74	74	25	9	2023-12-01	NULL
75	75	26	9	2023-12-01	NULL
76	76	27	9	2023-12-01	NULL
77	77	28	9	2023-12-01	NULL
78	78	29	9	2023-12-01	NULL
79	79	30	9	2023-12-01	NULL
80	80	31	9	2023-12-01	NULL
81	81	2	8	2023-12-01	NULL

Voucher:

	vouch_id	terms	value
1	1	$10 Bugis Junction Voucher	10
2	2	$10 Bugis+ voucher	10
3	3	$10 Bukit Panjang Plaza voucher	10
4	4	$10 Funan voucher	10
5	5	$10 IMM voucher	10
6	6	$10 ION Orchard voucher	10
7	7	$10 Jewel Changi Airport voucher	10
8	8	$10 Junction 8 voucher	10
9	9	$10 Lot One Shoppers' Mall voucher	10
10	10	$10 Plaza Singapura voucher	10
11	11	$10 Raffles City Shopping Centre voucher	10
12	12	$10 Westgate voucher	10
13	13	$10 313@Somerset voucher	10
14	14	$10 JEM voucher	10
15	15	$10 Parkway Parade voucher	10
16	16	$10 Paya Lebar Quarter voucher	10
17	17	$10 Clarke Quay Central voucher	10
18	18	$10 HillV2 voucher	10
19	19	$10 Junction 10 voucher	10
20	20	$10 Orchard Central voucher	10
21	21	$10 West Coast Plaza voucher	10
22	22	$10 Hougang 1 voucher	10
23	23	$10 Causeway Point voucher	10
24	24	$10 NEX voucher	10
25	25	$10 Northpoint City voucher	10
26	26	$10 Waterway Point voucher	10
27	27	$10 White Sands voucher	10
28	28	$10 Hillion Mall voucher	10
29	29	$10 Yew Tee Point voucher	10
30	30	$10 Jurong Point voucher	10
31	31	$10 Millenia Walk voucher	10
32	32	$2 LiHo Tea @ Plaza Singapura voucher	10
33	33	$5 McDonalds @ Millenia Walk voucher	10
34	34	$5 KFC @ Millenia Walk voucher	10
35	35	$5 Buger King Millenia Walk voucher	10
36	36	$10 Genki Sushi @ Orchard Central vou...	10

Voucher_Instance:

	serial_id	vouch_id	status	expiry_date
1	2	1	0	2024-02-10 12:00:00.000
2	3	1	0	2024-02-10 12:00:00.000
3	4	1	0	2024-02-10 12:00:00.000
4	5	2	0	2024-02-10 12:00:00.000
5	6	28	0	2024-02-10 12:00:00.000
6	7	28	0	2024-02-10 12:00:00.000
7	8	28	0	2024-02-10 12:00:00.000
8	9	29	0	2024-02-10 12:00:00.000
9	10	29	0	2024-02-10 12:00:00.000
10	11	29	0	2024-02-10 12:00:00.000
11	12	36	0	2024-02-10 12:00:00.000
12	13	36	0	2024-02-10 12:00:00.000
13	14	36	0	2024-02-10 12:00:00.000
14	15	36	0	2024-02-10 12:00:00.000
15	16	36	0	2024-02-10 12:00:00.000
16	17	36	0	2024-02-10 12:00:00.000