1. Descriptive Analysis

```
/*the average rating of all eateries*/
select eatery_id, avg(rating) as Avg_rating from reviews
group by eatery_id;
```

eatery_id	Avg_rating
1	4.450000047683716
2	4.25
3	1.100000023841858
4	1.550000011920929
5	4.1499998569488525

```
/*Count the number of reviews per eatery*/
select eatery_id, count(*) as review_count from reviews
group by eatery_id;
```

eatery_id	review_count
1	2
2	2
3	2
4	2
5	2

```
/*the distribution of male vs. female users*/
select gender, count(*) as Gender_Distribution from users
group by gender;
```

gender	Gender_Distribution
Female	20
Male	20

```
/*Determine the most common type of eatery in the database*/
select type_name, count(*) as type_count from eatery_types
group by type_name
having type_count =
(select max(type_count) from
(select count(*) as type_count from eatery_types
group by type_name) as inner_query);
```

type_name	type_count
Italian Restaurant	1
Asian Fusion Café	1
Bakery and Coffee Shop	1
Mexican Fast Food	1
Seafood Restaurant	1

2. Temporal Analysis

```
/*the highest number of new user registrations*/

select month(joining_date) as month, year(joining_date) as year, count(id)
as no_of_registrations

from users

group by year,month

order by no_of_registrations desc

limit 1;
```

	month	year	no_of_registrations
▶	11	2022	6

```
/*Determine if there's a particular month or season where more reviews are
written*/

SELECT month(date_reviewed) as month, year(date_reviewed) as year,
count(*) as no_of_reviews from reviews

group by year,month

order by no_of_reviews desc

limit 1;
```

	month	year	no_of_reviews
▶	12	2022	3

3. Eateries Popularity and Performance

```
/*Rank Eateries by No.of Ratings*/

select et.type_name, r.eatery_id, count(r.review_id) as no_of_reviews from
reviews as r

join eatery_types et on et.type_id=r.eatery_id

group by r.eatery_id,et.type_name

order by no_of_reviews desc;
```

	type_name	eatery_id	no_of_reviews
▶	Italian Restaurant	1	2
	Asian Fusion Café	2	2
	Bakery and Coffee Shop	3	2
	Mexican Fast Food	4	2
	Seafood Restaurant	5	2

```
/*Rank Eateries by Average Ratings*/
select et.type_name, r.eatery_id, avg(r.review_id) as avg_of_reviews from
reviews as r
join eatery_types et on et.type_id=r.eatery_id
group by r.eatery_id,et.type_name
order by avg_of_reviews desc;
```

type_name	eatery_id	avg_of_reviews
Seafood Restaurant	5	7.5000
Mexican Fast Food	4	6.5000
Bakery and Coffee Shop	3	5.5000
Asian Fusion Café	2	4.5000
Italian Restaurant	1	3.5000

```
/*Identify Under-reviewed Eateries*/
select e.eatery_id, e.name,avg(r.rating) as avg_rating,
case
when avg(r.rating) between 4.5 and 5 then 'excellent'
when avg(r.rating) between 3.5 and 4.4 then 'good'
when avg(r.rating) between 2.5 and 3.4 then 'average'
when avg(r.rating) between 1.5 and 2.4 then 'below average'
else 'poor'
end as rating_category
from eateries as e
join reviews r on r.eatery_id=e.eatery_id
group by e.eatery_id,e.name
order by avg_rating desc;
```

eatery_id	name	avg_rating	rating_category
1	Pasta Paradiso	4.450000047683716	poor
2	Bamboo Bites	4.25	good
5	Seaside Grille	4.1499998569488525	good
4	Taco Terrain	1.550000011920929	below average
3	Sunrise Bakery	1.100000023841858	poor

4. User Behaviour Analysis:

```
/*Identify the Top 5 Most Active Users*/

select u.id, u.full_name, count(r.review_id) as no_of_reviews from users
as u

join reviews as r on u.id=r.user_id

group by u.id, u.full_name

order by no_of_reviews desc

limit 5;
```

id	full_name	no_of_reviews
1	Rebecka Colenutt	1
2	Adrianne Bearfoot	1
3	Kathy Linklater	1
4	Aili Gruszecki	1
5	Pren Keniwell	1

```
/* Gender-Based Analysis of Reviews*/

select u.gender, count(r.review_id) as no_of_reviews from users as u

join reviews as r on u.id=r.user_id

group by u.gender

order by no_of_reviews desc;
```

gender	no_of_reviews
Female	8
Male	2

5. Correlation Analysis:

```
/* correlation between day of week and average rating*/

select dayofweek(date_reviewed) as dayofweek, avg(rating) as avgrating
from reviews

group by dayofweek

order by avgrating desc;
```

dayofweek	avgrating
2	4.5
1	4.299999952316284
4	3.333333373069763
7	2.1333332856496177
3	1.5

```
/* Correlation between the frequency of reviews and average rating for eateries*/

select e.eatery_id, e.name, count(r.review_id) as no_of_reviews,
avg(rating) as avgrating from eateries as e

join reviews as r on r.eatery_id = e.Eatery_id

group by e.eatery_id, e.name

order by no_of_reviews, avgrating desc;
```

eatery_id	name	no_of_reviews	avgrating
1	Pasta Paradiso	2	4.450000047683716
2	Bamboo Bites	2	4.25
5	Seaside Grille	2	4.1499998569488525
4	Taco Terrain	2	1.550000011920929
3	Sunrise Bakery	2	1.100000023841858

6. Gap Analysis:

```
/*Identify eateries that haven't received a review for the longest time*/

select e.eatery_id,e.name, max(date_reviewed) as latest_review from
reviews as r

join eateries as e on r.eatery_id=e.Eatery_id

group by e.Eatery_id, e.name

order by latest_review asc;
```

eatery_id	name	latest_review
2	Bamboo Bites	2022-12-18
3	Sunrise Bakery	2023-03-25
1	Pasta Paradiso	2023-05-14
4	Taco Terrain	2023-06-13
5	Seaside Grille	2023-07-19

7. Trend Identification:

```
/*Extracting monthly average ratings for each eatery*/

select e.eatery_id, e.name, month(r.date_reviewed) as month,
year(r.date_reviewed) as year, avg(r.rating) as avg_rating

from eateries as e

join reviews as r on e.Eatery_id=r.eatery_id

group by e.Eatery_id, e.Name, month, year

order by e.Eatery_id, year, month;
```

eatery_id	name	month	year	avg_rating
1	Pasta Paradiso	12	2022	4.5
1	Pasta Paradiso	5	2023	4.400000095367432
2	Bamboo Bites	12	2022	4.25
3	Sunrise Bakery	10	2022	1
3	Sunrise Bakery	3	2023	1.2000000476837158
4	Taco Terrain	9	2022	1.600000023841858
4	Taco Terrain	6	2023	1.5
5	Seaside Grille	9	2022	4.199999809265137
5	Seaside Grille	7	2023	4.099999904632568