

1.What are the top 5 hotels by average cleanliness rating according to user reviews?

```
SELECT Hotels.HotelName, AVG(HotelReviews.Cleanliness) as AvgCleanliness
FROM Hotels
JOIN HotelReviews ON Hotels.HotelId = HotelReviews.HotelId
GROUP BY Hotels.HotelName
ORDER BY AvgCleanliness DESC
LIMIT 5;
```

HotelName	AvgCleanliness
University Plaza Hotel	4.900000095367432
Holiday Inn Express Hotel & Suites North Seattl...	4.900000095367432
University Motel Suites	4.800000190734863
Italia Motel	4.800000190734863
Travelodge Seattle by the Space Needle	4.699999809265137

2.What are the top 10 crimes by zip code?


```
SELECT ZipCode, COUNT(*) AS CrimeCount
FROM Crimes
GROUP BY ZipCode
ORDER BY CrimeCount DESC
LIMIT 10;
```


ZipCode	CrimeCount
98188	7656
98168	6959
98166	6514
98133	6487
98042	5919
98146	5364
98038	3844
98155	3781
98072	3598
98178	3427

3.Which restaurants have the highest average food quality rating?

```
SELECT Restaurants.RestaurantName, AVG(RestaurantReviews.food_quality) as AvgFoodQuality
FROM Restaurants
JOIN RestaurantReviews ON Restaurants.RestaurantId = RestaurantReviews.RestaurantID
GROUP BY Restaurants.RestaurantName
ORDER BY AvgFoodQuality DESC;
```

Result Grid





Filter Rows:

RestaurantName	AvgFoodQuality
Mariscos Culiacan	4.70000
The Cheesecake Factory - Lynnwood	4.60000
IHOP	4.30000
El Charro Mexican Restaurant	4.05000
Tides	3.00000
Azteca Mexican Restaurant	2.50000
STK Steakhouse Bellevue	1.80000
Buffalo Wild Wings	1.70000

4.Average rating of each hotel

```
SELECT HotelReviews.HotelId, Hotels.HotelName, AVG(Reviews.Rating) AS AverageRating
FROM Reviews
JOIN HotelReviews ON Reviews.ReviewId = HotelReviews.ReviewId
LEFT JOIN Hotels ON Hotels.HotelId = HotelReviews.HotelId
GROUP BY HotelId
ORDER BY AVG(Reviews.Rating)
```



Result Grid   Filter Rows: <input type="text" value="Search"/> Export: 			
	HotelId	HotelName	AverageRating
	3695	Doubletree by Hilton Seattle Airport	1.00000
	3801	The Fairmont Olympic Seattle	1.10000
	3697	Four Points by Sheraton Downtown Seattle Cen...	1.30000
	3698	Hotel Max	1.30000
	3754	Red Roof Inn Seattle Airport - SEATAC	1.30000
	3806	The Maxwell Hotel Seattle	1.35000
	3760	University Motel Suites	1.40000
	3763	Embassy Suites Seattle - Tacoma International...	1.65000
	3714	Aurora Nites Inn Motel	1.70000
	3788	Ace Hotel	1.80000
	3719	Star Motel	1.80000
	3807	The Sorrento Hotel	1.90000
	3774	Hotel Five Seattle	1.90000
	3752	Holiday Inn Express Hotel & Suites North Seattl...	1.90000
	3786	Hotel Deca, Seattle	2.00000
	3749	Extended Stay America - Seattle - Northgate	2.00000
	3731	Commodore Hotel	2.05000
	3707	Marriott Seattle Sea-Tac Airport	2.20000
	3733	Continental Plaza Seattle	2.50000
	3781	Roosevelt Hotel	2.56667
	3809	Four Seasons Hotel Seattle	2.60000
	3722	Hotel Seattle	2.60000
	3741	Days Inn South Seattle	2.75000
	3702	The Grove, West Seattle Inn	2.75000
	3759	Holiday Inn Express Seattle City Center	2.80000
	3787	Silver Cloud Hotel - Broadway	2.80000
	3784	Homewood Suites Seattle Convention Center Pi...	2.93333
	3730	Baroness Hotel	2.95000
	3746	Sunhill Motel	3.00000
	3798	Hyatt At Olive 8	3.00000
	3717	Aero Motel	3.05000
	3712	National at Archstone Belltown	3.10000

5.What is the average duration visitors spend at attractions, sorted by the attraction's overall rating?

```

SELECT Attractions.Name, AVG(CAST(AttractionReviews.duration AS DECIMAL(10,2))) as
AvgDuration
FROM Attractions
JOIN AttractionReviews ON Attractions.AttractionId = AttractionReviews.AttractionID
GROUP BY Attractions.Name
ORDER BY AvgDuration DESC;

```

Result Grid   Filter Rows: <input type="text" value="Search"/>			
	AttractionsName	AvgDuration	
<input type="checkbox"/>	Pacific Northwest Ballet	277.000000	
<input type="checkbox"/>	Pacific Science Center	238.000000	
<input type="checkbox"/>	Space Needle	218.000000	
<input type="checkbox"/>	Museum of Pop Culture	215.000000	
<input type="checkbox"/>	Seattle Art Museum	184.000000	
<input type="checkbox"/>	Pike Place Market	150.000000	
<input type="checkbox"/>	Seattle Asian Art Museum	74.000000	
<input type="checkbox"/>	Seattle Center Monorail	69.000000	
<input type="checkbox"/>	Chihuly Garden and Glass	57.000000	
<input type="checkbox"/>	Olympic Sculpture Park	46.000000	
<input type="checkbox"/>			

6.How has the average hotel review rating trended over the last year by month?

```

SELECT YEAR(Reviews.CreatedTime) as Year, MONTH(Reviews.CreatedTime) as Month,
AVG(Reviews.Rating) as AvgRating
FROM Reviews
JOIN HotelReviews ON Reviews.ReviewId = HotelReviews.ReviewId
WHERE Reviews.CreatedTime >= DATE_SUB(CURDATE(), INTERVAL 1 YEAR)
GROUP BY Year, Month
ORDER BY Year, Month;

```

Result Grid   Filter Row			
	Year	Month	AvgRating
<input type="checkbox"/>	2023	2	4.60000
<input type="checkbox"/>	2023	3	3.46667
<input type="checkbox"/>	2023	4	3.60000
<input type="checkbox"/>	2023	5	3.15000
<input type="checkbox"/>	2023	6	2.92857
<input type="checkbox"/>	2023	7	2.38571
<input type="checkbox"/>	2023	8	3.21667
<input type="checkbox"/>	2023	9	2.76667
<input type="checkbox"/>	2023	10	1.72500
<input type="checkbox"/>	2023	11	2.10000
<input type="checkbox"/>	2023	12	3.78000
<input type="checkbox"/>	2024	1	3.91667
<input type="checkbox"/>	2024	2	2.50000
<input type="checkbox"/>			

7.Top 10 users who have made the most reviews ?

```
SELECT UserName, COUNT(*) AS ReviewCount
FROM Reviews
GROUP BY UserName
ORDER BY ReviewCount DESC
LIMIT 10;
```

	UserName	ReviewCount	
	james67	5	
	munozjeffrey	4	
	vkirk	4	
	shelley06	4	
	vargaskarla	4	
	dennisallen	4	
	rcox	4	
	sarah84	4	
	kyleortega	4	
	tsanchez	3	

8.Which users use more than one credit card?

```
SELECT UserName, COUNT(*) AS CardCount
FROM CreditCards
GROUP BY UserName
HAVING CardCount > 1;
```

	UserName	CardCount	
	cody52	2	
	dennisroberson	2	
	grantmichelle	2	
	jamesthornton	2	
	joel93	2	
	kenneth39	2	
	kenneth41	2	
	mullinscory	2	
	phillipchen	2	
	reevesgregory	2	

9.In which month do users tend to post the most reviews?

```
SELECT MONTH(createdTime) AS Month, COUNT(*) AS ReviewCount
```

```

FROM Reviews
GROUP BY MONTH(createdTime)
ORDER BY ReviewCount DESC;

```

	Month	ReviewCount	
	6	16	
	7	16	
	9	14	
	1	12	
	8	11	
	2	10	
	11	9	
	3	8	
	10	7	
	12	6	
	4	5	
	5	5	

10.What is the most common category of restaurants reviewed?

```

SELECT Category, COUNT(*) AS Count
FROM Restaurants
GROUP BY Category
ORDER BY Count DESC
LIMIT 1;

```

	Category	Count	
	['Mexican']	60	

```

CREATE SCHEMA IF NOT EXISTS SeattleTravelKit;
USE SeattleTravelKit;

```

```

DROP TABLE IF EXISTS HotelReviews;
DROP TABLE IF EXISTS Hotels;
DROP TABLE IF EXISTS Reviews;
DROP TABLE IF EXISTS RestaurantReviews;
DROP TABLE IF EXISTS AttractionReviews;
DROP TABLE IF EXISTS Attractions;
DROP TABLE IF EXISTS Crimes;

```

```
DROP TABLE IF EXISTS Restaurants;
DROP TABLE IF EXISTS Address;
DROP TABLE IF EXISTS CreditCards;
DROP TABLE IF EXISTS Users;
```

```
CREATE TABLE Hotels (
    HotelId INT NOT NULL auto_increment,
    HotelName VARCHAR(255),
    Rating DECIMAL(3, 2),
    Website VARCHAR(255),
    Phone VARCHAR(20),
    Details TEXT,
    Address TEXT,
    PostalCode VARCHAR(20),
    City VARCHAR(255),
    CONSTRAINT pk_Hotels_HotelId PRIMARY KEY (HotelId)
);
```

```
CREATE TABLE HotelReviews (
    ReviewId INT PRIMARY KEY,
    HotelId INT,
    Service FLOAT,
    Cleanliness FLOAT,
    Location FLOAT,
    SleepQuality FLOAT,
    CONSTRAINT fk_HotelReviews_HotelId FOREIGN KEY (HotelId)
        REFERENCES Hotels (HotelId)
        ON UPDATE CASCADE ON DELETE CASCADE
);
```

```
CREATE TABLE Attractions (
    AttractionId INT AUTO_INCREMENT PRIMARY KEY,
    AttractionsName VARCHAR(255),
    Phone VARCHAR(50),
    Website VARCHAR(2048),
    PostalCode VARCHAR(20),
    Area VARCHAR(255)
);
```

```
CREATE TABLE Reviews (
    ReviewId INT PRIMARY KEY,
    UserName VARCHAR(255) NOT NULL,
    CreatedTime TIMESTAMP NOT NULL,
    Content TEXT NOT NULL,
    Rating DECIMAL(3, 1) NOT NULL
);
```

);

```
CREATE TABLE RestaurantReviews (  
    reviewID INT PRIMARY KEY,  
    RestaurantID INT NOT NULL,  
    service DECIMAL(2,1) NOT NULL,  
    food_quality DECIMAL(2,1) NOT NULL,  
    Operation_time VARCHAR(11) NOT NULL  
);
```

```
CREATE TABLE AttractionReviews (  
    reviewID INT NOT NULL,  
    AttractionID INT NOT NULL,  
    duration VARCHAR(15) NOT NULL,  
    PRIMARY KEY (reviewID, AttractionID)  
);
```

```
CREATE TABLE Crimes (  
    CaseNumber VARCHAR(50),  
    CreatedDateTime DATETIME,  
    Address VARCHAR(255),  
    ZipCode VARCHAR(10),  
    CONSTRAINT pk_Crimes_CaseNumber PRIMARY KEY (CaseNumber)  
);
```

```
CREATE TABLE Restaurants (  
    RestaurantID INT NOT NULL AUTO_INCREMENT,  
    RestaurantName VARCHAR(255),  
    Address TEXT,  
    Rating DECIMAL(3, 2),  
    Area VARCHAR(255),  
    Category VARCHAR(255), -- Changed from ENUM to VARCHAR for broader compatibility  
    Service TEXT,  
    ZipCode VARCHAR(10),  
    CONSTRAINT pk_Restaurants_RestaurantID PRIMARY KEY (RestaurantID)  
);
```

```
CREATE TABLE IF NOT EXISTS Users (  
    UserName VARCHAR(50) UNIQUE,  
    Email VARCHAR(100) UNIQUE,  
    Password VARCHAR(255),  
    FirstName VARCHAR(50),  
    LastName VARCHAR(50),  
    Phone VARCHAR(20),  
    CONSTRAINT pk_Users_UserName PRIMARY KEY (UserName)
```

);

```
CREATE TABLE IF NOT EXISTS Address (  
    UserName VARCHAR(255),  
    City VARCHAR(255),  
    Street1 VARCHAR(255),  
    Street2 VARCHAR(255),  
    State VARCHAR(255),  
    ZipCode VARCHAR(20),  
    Country VARCHAR(255),  
    CONSTRAINT pk_Address_UserName PRIMARY KEY (UserName),  
    CONSTRAINT fk_Address_UserName FOREIGN KEY (UserName)  
        REFERENCES Users (UserName)  
        ON UPDATE CASCADE ON DELETE CASCADE  
);
```

```
CREATE TABLE CreditCards (  
    UserName VARCHAR(255),  
    CardNumber BIGINT NOT NULL,  
    Expiration VARCHAR(5),  
    CONSTRAINT pk_CreditCard_CardNumber PRIMARY KEY (CardNumber),  
    CONSTRAINT fk_CreditCard_UserName FOREIGN KEY (UserName)  
        REFERENCES Users (UserName)  
        ON UPDATE CASCADE ON DELETE CASCADE  
);
```

```
LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/Hotels.csv' INTO TABLE Hotels  
FIELDS TERMINATED BY ',' ENCLOSED BY '"'  
LINES TERMINATED BY '\n'  
IGNORE 1 LINES  
(HotelName,Rating,Website,Phone,Details,Address,PostalCode,City);
```

```
LOAD DATA LOCAL INFILE "/Users/a123/Desktop/5200/PM2/HotelReviews.csv" INTO TABLE  
HotelReviews  
FIELDS TERMINATED BY ',' OPTIONALLY ENCLOSED BY '"'  
LINES TERMINATED BY '\n'  
IGNORE 1 LINES  
(ReviewId,HotelId,Service,Cleanliness,Location,SleepQuality);
```

```
LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/Reviews.csv' INTO TABLE Reviews  
FIELDS TERMINATED BY ',' ENCLOSED BY '"'  
LINES TERMINATED BY '\n'  
IGNORE 1 LINES  
(ReviewId, UserName, CreatedTime, Content, Rating);
```



```

LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/RestaurantReviews.csv' INTO TABLE
RestaurantReviews
    FIELDS TERMINATED BY ',' ENCLOSED BY '"'
    LINES TERMINATED BY '\n'
    IGNORE 1 LINES
    (ReviewId, RestaurantID, service, food_quality, Operation_time);

LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/Reviews.csv' INTO TABLE Reviews
    FIELDS TERMINATED BY ',' ENCLOSED BY '"'
    LINES TERMINATED BY '\n'
    IGNORE 1 LINES
    (ReviewId, UserName, CreatedTime, Content, Rating);

LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/RestaurantReviews.csv' INTO TABLE
RestaurantReviews
    FIELDS TERMINATED BY ',' ENCLOSED BY '"'
    LINES TERMINATED BY '\n'
    IGNORE 1 LINES
    (reviewID,RestaurantID,service,food_quality,Operation_time);

LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/Attractions.csv' INTO TABLE
Attractions
    FIELDS TERMINATED BY ',' ENCLOSED BY '"'
    LINES TERMINATED BY '\n'
    IGNORE 1 ROWS
    ( AttractionsName,Phone, Website, PostalCode, Area);

LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/AttractionReviews.csv' INTO TABLE
AttractionReviews
    FIELDS TERMINATED BY ',' ENCLOSED BY '"'
    LINES TERMINATED BY '\n'
    IGNORE 1 LINES
    (reviewID,AttractionID,duration);

LOAD DATA LOCAL INFILE "/Users/a123/Desktop/5200/PM2/Crimes.csv" INTO TABLE Crimes
    FIELDS TERMINATED BY ',' OPTIONALLY ENCLOSED BY '\"'
    LINES TERMINATED BY '\n'
    IGNORE 1 LINES
    (CaseNumber,CreatedDateTime,Address,ZipCode);

LOAD DATA LOCAL INFILE "/Users/a123/Desktop/5200/PM2/Restaurants.csv" INTO TABLE
Restaurants
    FIELDS TERMINATED BY ',' OPTIONALLY ENCLOSED BY '\"'
    LINES TERMINATED BY '\n'
    IGNORE 1 LINES;

LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/Users.csv' INTO TABLE Users
    FIELDS TERMINATED BY ',' ENCLOSED BY '"'
    LINES TERMINATED BY '\n'

```

IGNORE 1 ROWS;

LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/Address.csv' INTO TABLE Address
FIELDS TERMINATED BY ';' ENCLOSED BY ''"
LINES TERMINATED BY '\n'
IGNORE 1 ROWS;

LOAD DATA LOCAL INFILE '/Users/a123/Desktop/5200/PM2/CreditCards.csv' INTO TABLE
CreditCards
FIELDS TERMINATED BY ';' ENCLOSED BY ''"
LINES TERMINATED BY '\n'
IGNORE 1 ROWS;