Project: Road Accident Data Analysis Using SQL

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Step 1: Create Database Schema

```
CREATE TABLE accidents_data (
    id INT PRIMARY KEY AUTO_INCREMENT,
    state VARCHAR(50),
    year INT,
    accidents INT,
    deaths INT,
    injuries INT
);
```

Step 2: Insert Cleaned Data (Sample)

```
INSERT INTO accidents_data (state, year, accidents, deaths, injuries) VALUES
('Maharashtra', 2020, 32000, 12500, 18000),
('Uttar Pradesh', 2020, 31000, 14000, 17000),
('Tamil Nadu', 2020, 30000, 11000, 16000),
('Delhi', 2020, 28000, 10500, 15000),
('Rajasthan', 2020, 27000, 9800, 14000);
```

Step 3: Perform SQL Queries

Top 5 states with most accidents in 2020

```
SELECT state, accidents
FROM accidents_data
WHERE year = 2020
ORDER BY accidents DESC
LIMIT 5;
```

Total deaths grouped by year

```
SELECT year, SUM(deaths) AS total_deaths
FROM accidents_data
GROUP BY year
ORDER BY year;
```

Trend in accident-to-death ratio

```
SELECT year,
    SUM(accidents) AS total_accidents,
    SUM(deaths) AS total_deaths,
    ROUND(SUM(accidents)*1.0 / SUM(deaths), 2) AS accident_death_ratio
FROM accidents_data
```

```
GROUP BY year
ORDER BY year;
```

States with consistent decrease in injuries (sample logic)

```
SELECT state
FROM accidents_data
GROUP BY state
HAVING MIN(year) < MAX(year)
AND COUNT(*) >= 2
AND MAX(injuries) > MIN(injuries);
```