Sql query

```
create database group_project;
use group_project;
show tables;
select * from covid_data;

select * from vaccine_data;
alter table covid_data
rename column `state/unionterritory` to state ;
alter table vaccine_data
rename column `covaxin (doses administered)` to `covaxin_(doses_administered)`;
alter table vaccine_data
rename column `sputnik v (doses administered)` to `sputnik_v(doses_administered)`;
# Insights Queries

# 1. highest number of confirmed cases in state
SELECT state, SUM(confirmed) AS total_cases
FROM covid_data
GROUP BY state
ORDER BY total_cases DESC
LIMIT 1;
# state         total_cases
# Maharashtra   621539441

# 2.lowest number of confirmed cases in state
SELECT state, SUM(confirmed) AS total_cases
FROM covid_data
GROUP BY state
ORDER BY total_cases
LIMIT 1;
# state         total_cases
# Daman & Diu     2

# 3. Day with the Highest Number of Vaccinations Administered
SELECT vaccine_date, SUM(total_doses_administered) AS total
FROM vaccine_data
GROUP BY vaccine_date
ORDER BY total DESC
LIMIT 1;
# vaccine_date    total
# 09/08/2021    509780506

# 4. Top 5 states by vaccine coverage
SELECT state, SUM(total_doses_administered) AS total_vaccines
FROM vaccine_data
GROUP BY state
ORDER BY total_vaccines DESC
LIMIT 5;
# state         total_vaccines
# Maharashtra     3497245417
# Uttar Pradesh    3342846470
# Gujarat              2732064385
# Rajasthan            2692747175
```

```
# West Bengal      2382596869

# 5. Gender-wise vaccination summary
SELECT
   sum(`male_(doses_administered)`) AS male,
   SUM(`female_(doses_administered)`) AS female,
   SUM(`transgender_(doses_administered)`) AS transgender
FROM vaccine_data;
#  MALE           FEMALE        TRANSGENDER
# 17072685545  14979137345       5327448

# 6.Most used vaccine type
SELECT
   SUM(`covaxin_(doses_administered)`) AS covaxin_total,
   SUM(`covishield_(doses_administered)`) AS covishield_total,
   SUM(`sputnik_v(doses_administered)`) AS sputnikv_total
FROM vaccine_data;
# covaxin_total  covishield_total     sputnikv_total
#  3980450783     30963371665          14459217

# 7.  Recovery vs Deaths state-wise
SELECT
   state,
   SUM(cured) AS total_cured,
   SUM(deaths) AS total_deaths
FROM covid_data
GROUP BY state
ORDER BY total_cured DESC limit 5;
# state         total_cured     total_deaths
# Maharashtra     541262076          14068585
# Karnataka         226189912          3274525
# Andhra Pradesh          222440263             1904323
# Kerala                188133411       804737
```

Data Analysis Summary

1. Highest Confirmed Cases

- **State:** Maharashtra
- **Total Confirmed Cases:** Approx. 621.5 million
- **Insight:** Maharashtra had the highest number of COVID-19 cases, indicating it was a major hotspot during the pandemic.

2. Lowest Confirmed Cases

- **State:** Daman & Diu
- **Total Confirmed Cases:** Only 2
- **Insight:** This region was nearly unaffected, possibly due to a smaller population or effective early containment measures.

3. Day with the Highest Vaccination

- **Date:** 09/08/2021
- **Total Vaccinations:** Approx. 509.7 million
- **Insight:** This day marked a record-breaking vaccination drive, likely due to a nationwide campaign or special initiative.

4. Top 5 States by Vaccine Coverage

1. Maharashtra
2. Uttar Pradesh
3. Gujarat
4. Rajasthan
5. West Bengal

- **Insight:** These states conducted large-scale vaccination drives, reflecting strong health policy execution and administrative efficiency.

5. Gender-wise Vaccination Summary

- **Male:** 1.707 billion
- **Female:** 1.497 billion
- **Transgender:** 5.32 million
- **Insight:** There's a slight gender gap in vaccination, but female vaccination numbers are also substantial.

6. Most Used Vaccine Type

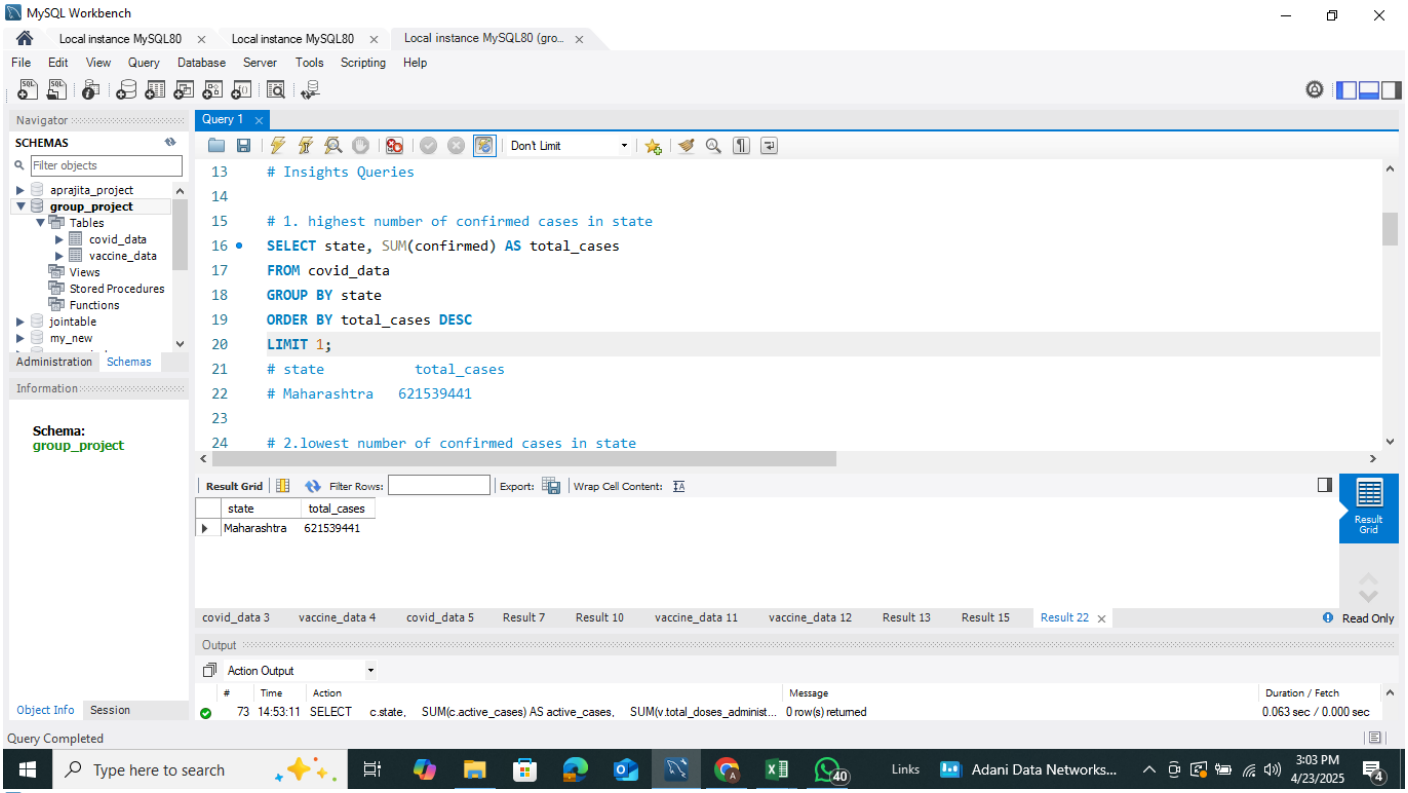
- **Covishield:** ~3.096 billion doses
- **Covaxin:** ~398 million doses
- **Sputnik V:** ~14.45 million doses
- **Insight:** Covishield was the most widely used vaccine, possibly due to better availability and longer dose intervals.

7. Recovery vs Deaths (Top 5 States)

- **Top Recoveries:** Maharashtra, Karnataka, Andhra Pradesh, Kerala
- **Insight:** States with high caseloads also reported high recoveries, but the death toll remains a serious concern—especially in Maharashtra.

Recommendations Based on Analysis

1. **High-Caseload States (e.g., Maharashtra):**
    - Strengthen healthcare infrastructure and surveillance systems for future preparedness.
    - Continue public awareness and education campaigns, especially in densely populated areas.
2. **Low-Caseload States (e.g., Daman & Diu):**
    - Study their successful containment strategies to replicate in other regions.
3. **Vaccination Campaigns:**
    - Work to reduce the gender gap in vaccination, especially in remote or backward regions.
    - Reassess the role of less-used vaccines like Sputnik V—understand if the issue is supply-based or due to public preference.
4. **Public Policy Suggestions:**
    - **Data-driven decisions** should continue to be at the core of health policy to combat any future waves effectively.
    - Local-level micro-planning is essential for targeting underperforming districts.
5. **Technology & Integration:**
    - Integrate health data with central systems for real-time tracking and decision-making.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Query 1
Don't Limit
13 # Insights Queries
14
15 # 1. highest number of confirmed cases in state
16 SELECT state, SUM(confirmed) AS total_cases
17 FROM covid_data
18 GROUP BY state
19 ORDER BY total_cases DESC
20 LIMIT 1;
21 # state total_cases
22 # Maharashtra 621539441
23
24 # 2.lowest number of confirmed cases in state
Result Grid
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state total_cases
Maharashtra 621539441
Result Grid
covid_data 3 vaccine_data 4 covid_data 5 Result 7 Result 10 vaccine_data 11 vaccine_data 12 Result 13 Result 15 Result 22
Read Only
Output
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73 14:53:11 SELECT c.state, SUM(c.active_cases) AS active_cases, SUM(v.total_doses_administ... 0 row(s) returned 0.063 sec / 0.000 sec
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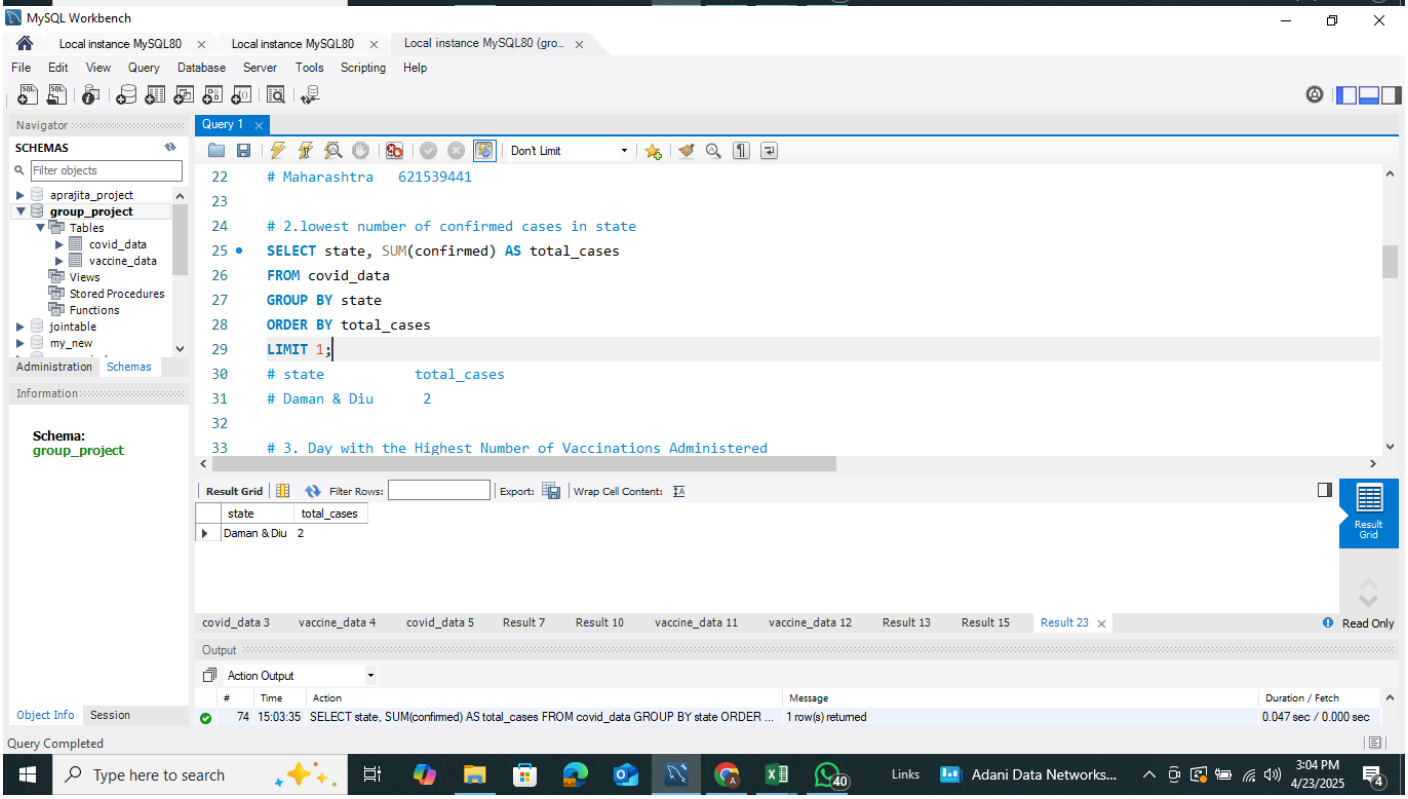
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Don't Limit
22 # Maharashtra 621539441
23
24 # 2.lowest number of confirmed cases in state
25 SELECT state, SUM(confirmed) AS total_cases
26 FROM covid_data
27 GROUP BY state
28 ORDER BY total_cases
29 LIMIT 1;
30 # state total_cases
31 # Daman & Diu 2
32
33 # 3. Day with the Highest Number of Vaccinations Administered
Result Grid
Filter Rows:
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Wrap Cell Content:
state total_cases
Daman & Diu 2
Result Grid
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Read Only
Output
Action Output
Time Action Message Duration / Fetch
74 15:03:35 SELECT state, SUM(confirmed) AS total_cases FROM covid_data GROUP BY state ORDER ... 1 row(s) returned 0.047 sec / 0.000 sec
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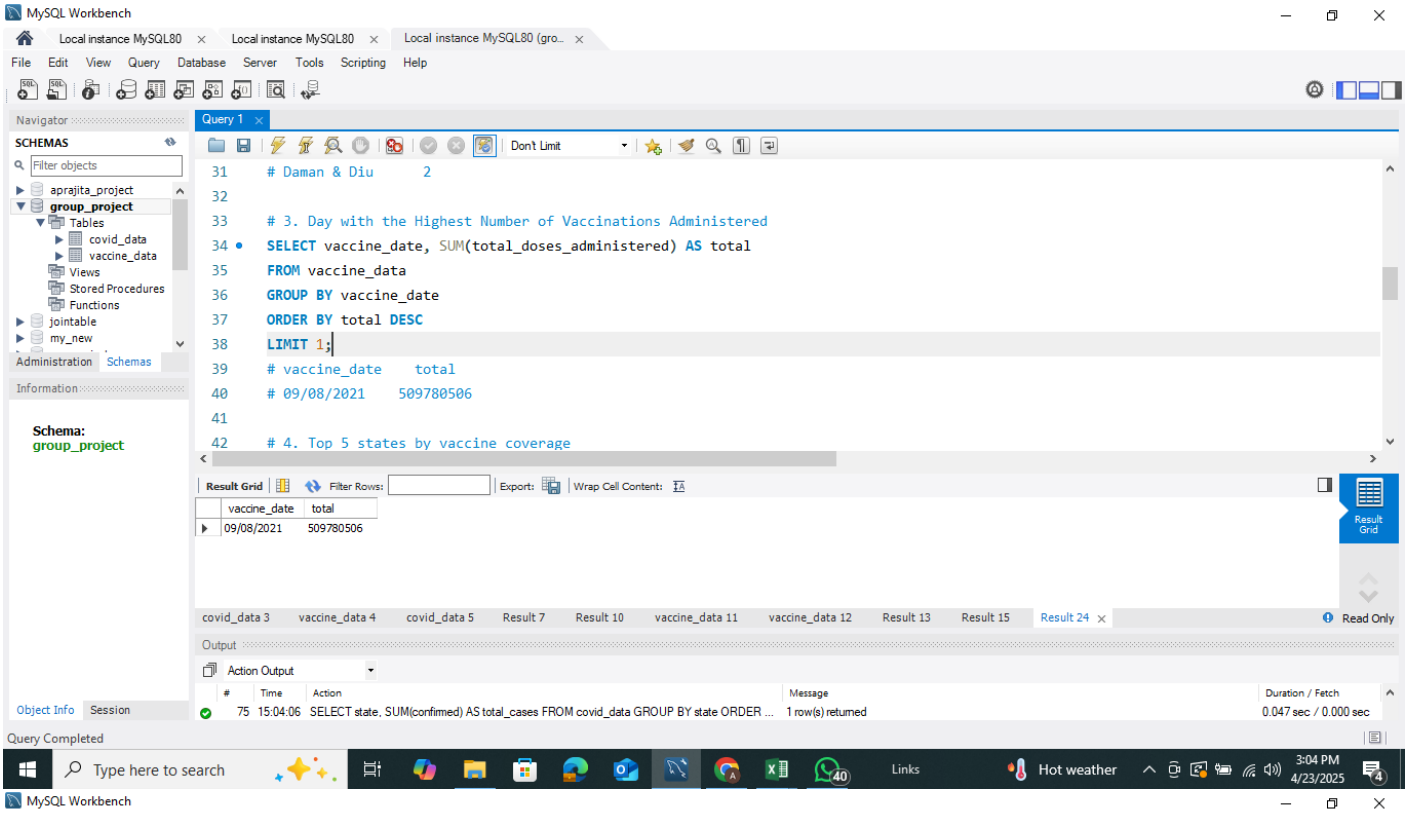
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Query 1
Don't Limit
31 # Daman & Diu 2
32
33 # 3. Day with the Highest Number of Vaccinations Administered
34 SELECT vaccine_date, SUM(total_doses_administered) AS total
35 FROM vaccine_data
36 GROUP BY vaccine_date
37 ORDER BY total DESC
38 LIMIT 1;
39 # vaccine_date total
40 # 09/08/2021 509780506
41
42 # 4. Top 5 states by vaccine coverage
Result Grid Filter Rows: Export: Wrap Cell Content:
vaccine_date total
09/08/2021 509780506
Result Grid
covid_data 3 vaccine_data 4 covid_data 5 Result 7 Result 10 vaccine_data 11 vaccine_data 12 Result 13 Result 15 Result 24
Read Only
Output
Action Output
Time Action Message Duration / Fetch
75 15:04:06 SELECT state, SUM(confirmed) AS total_cases FROM covid_data GROUP BY state ORDER ... 1 row(s) returned 0.047 sec / 0.000 sec
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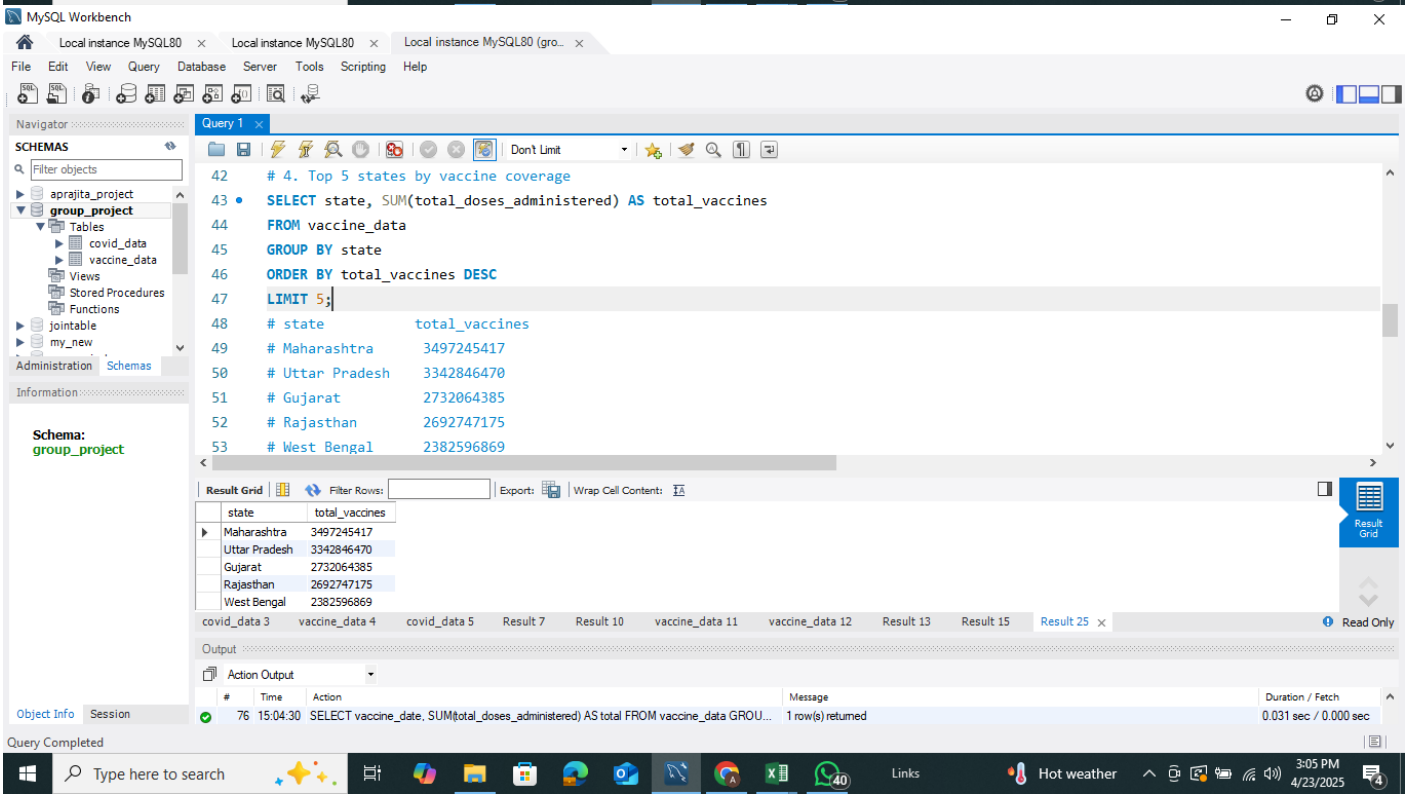
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Query 1
Don't Limit
42 # 4. Top 5 states by vaccine coverage
43 SELECT state, SUM(total_doses_administered) AS total_vaccines
44 FROM vaccine_data
45 GROUP BY state
46 ORDER BY total_vaccines DESC
47 LIMIT 5;
48 # state total_vaccines
49 # Maharashtra 3497245417
50 # Uttar Pradesh 3342846470
51 # Gujarat 2732064385
52 # Rajasthan 2692747175
53 # West Bengal 2382596869
Result Grid Filter Rows: Export: Wrap Cell Content:
state total_vaccines
Maharashtra 3497245417
Uttar Pradesh 3342846470
Gujarat 2732064385
Rajasthan 2692747175
West Bengal 2382596869
Result Grid
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Read Only
Output
Action Output
Time Action Message Duration / Fetch
76 15:04:30 SELECT vaccine_date, SUM(total_doses_administered) AS total FROM vaccine_data GROU... 1 row(s) returned 0.031 sec / 0.000 sec
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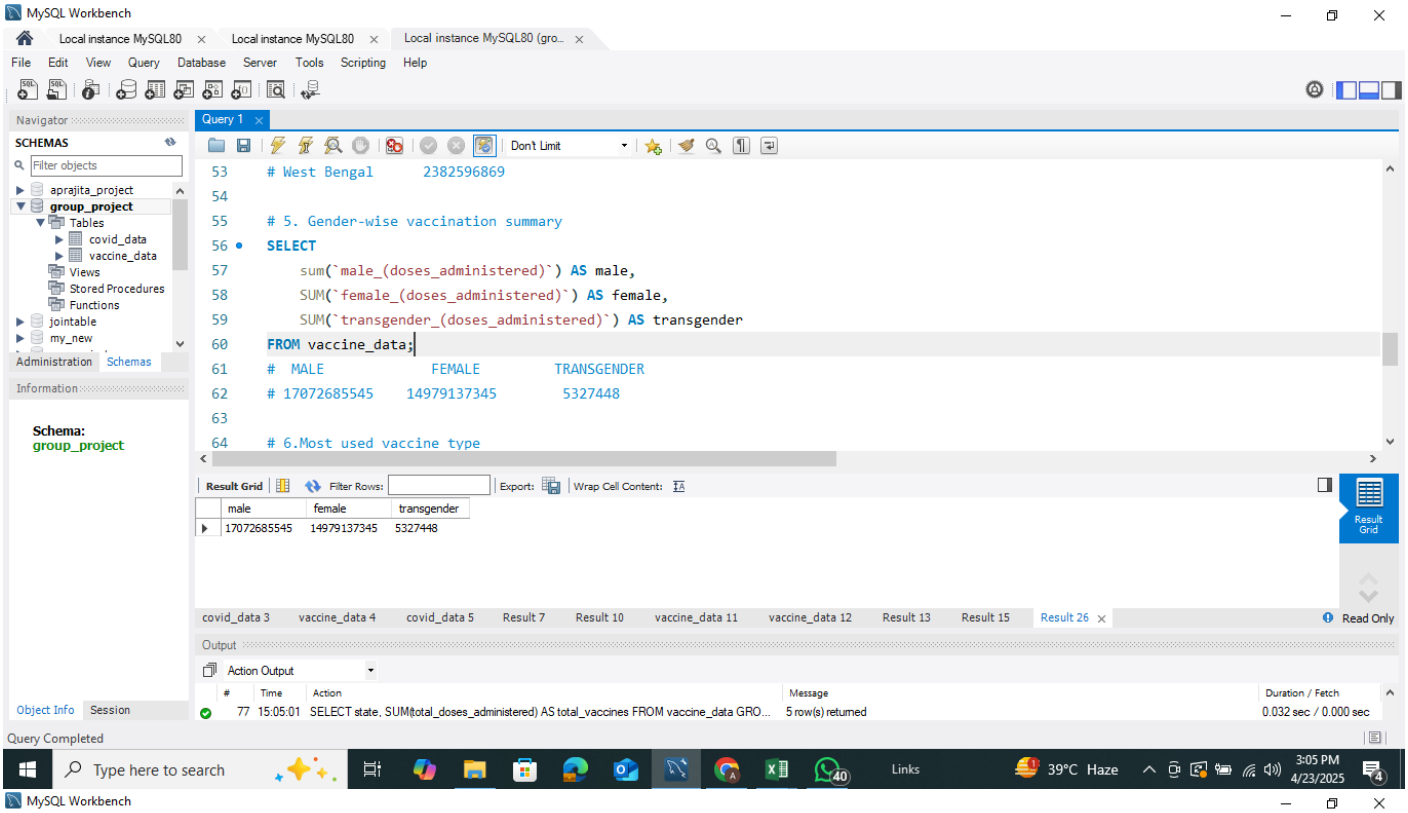
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Query 1
Don't Limit
53 # West Bengal 2382596869
54
55 # 5. Gender-wise vaccination summary
56 SELECT
57 sum(`male_(doses_administered)`) AS male,
58 SUM(`female_(doses_administered)`) AS female,
59 SUM(`transgender_(doses_administered)`) AS transgender
60 FROM vaccine_data;
61 # MALE FEMALE TRANSGENDER
62 # 17072685545 14979137345 5327448
63
64 # 6.Most used vaccine type
Result Grid Filter Rows: Export: Wrap Cell Content:
male female transgender
17072685545 14979137345 5327448
Result Grid
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Action Output
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77 15:05:01 SELECT state, SUM(total_doses_administered) AS total_vaccines FROM vaccine_data GRO... 5 row(s) returned 0.032 sec / 0.000 sec
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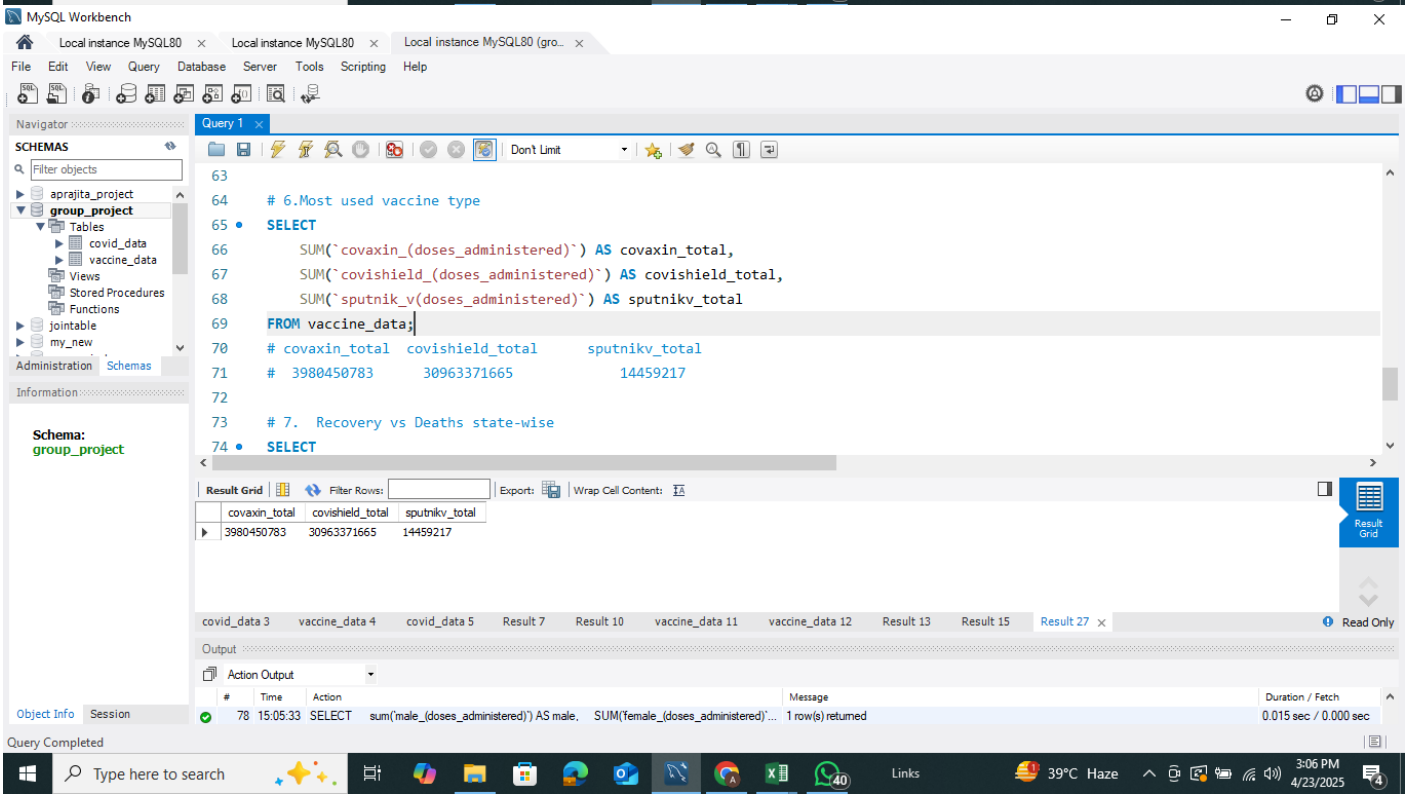
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63
64 # 6.Most used vaccine type
65 SELECT
66 SUM(`covaxin_(doses_administered)`) AS covaxin_total,
67 SUM(`covishield_(doses_administered)`) AS covishield_total,
68 SUM(`sputnik_v(doses_administered)`) AS sputnikv_total
69 FROM vaccine_data;
70 # covaxin_total covishield_total sputnikv_total
71 # 3980450783 30963371665 14459217
72
73 # 7. Recovery vs Deaths state-wise
74 SELECT
Result Grid Filter Rows: Export: Wrap Cell Content:
covaxin_total covishield_total sputnikv_total
3980450783 30963371665 14459217
Result Grid
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78 15:05:33 SELECT sum('male_(doses_administered)') AS male, SUM('female_(doses_administered)`... 1 row(s) returned 0.015 sec / 0.000 sec
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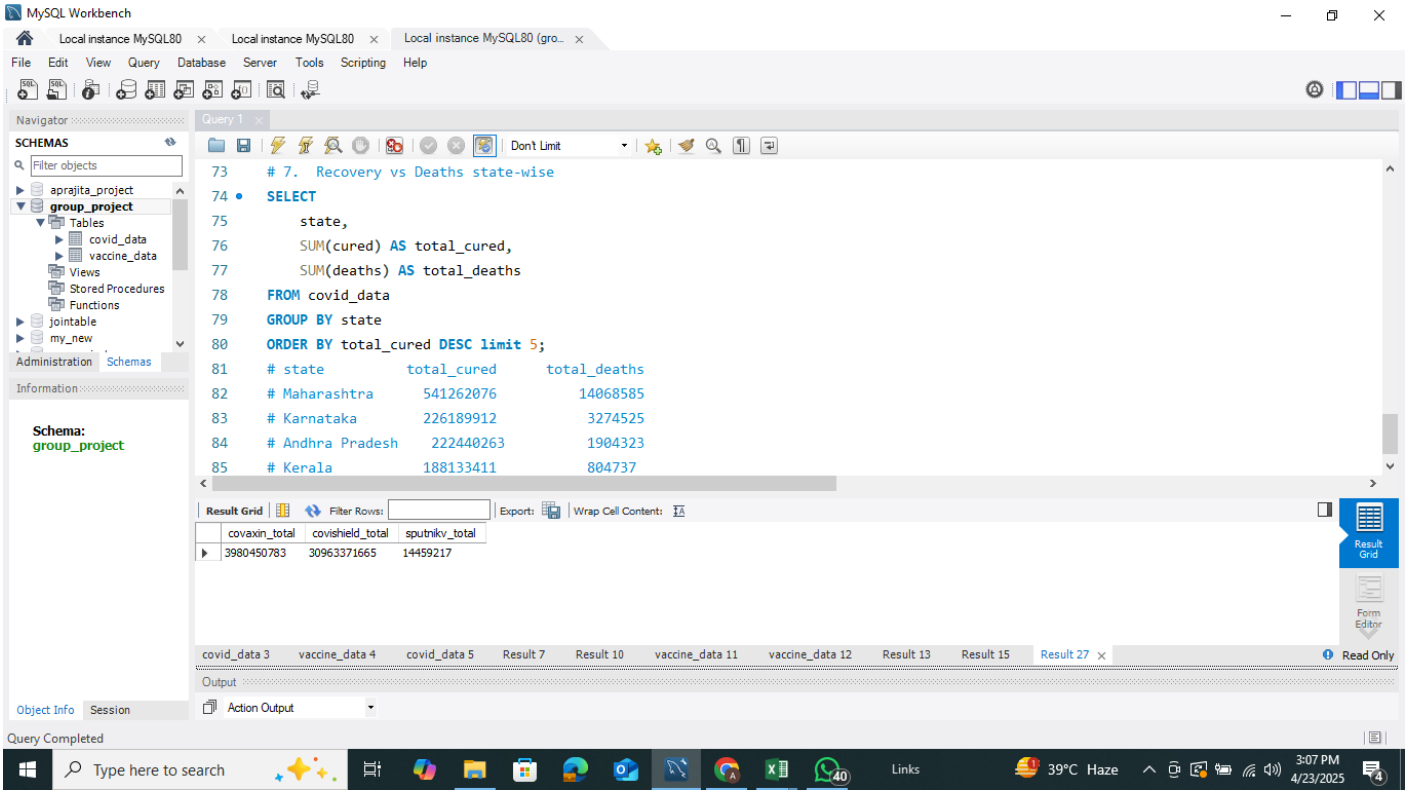
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73 # 7. Recovery vs Deaths state-wise
74 • SELECT
75 state,
76 SUM(cured) AS total_cured,
77 SUM(deaths) AS total_deaths
78 FROM covid_data
79 GROUP BY state
80 ORDER BY total_cured DESC limit 5;
81 # state total_cured total_deaths
82 # Maharashtra 541262076 14068585
83 # Karnataka 226189912 3274525
84 # Andhra Pradesh 222440263 1904323
85 # Kerala 188133411 804737
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