

SQL Assignment_2337014

Q1: Find the total number of hospital beds in each state.

```
---Find the total number of hospital beds in each state.  
SELECT state_name, SUM(total_hospital_beds) AS total_beds  
FROM `bigquery-public-data.covid19_aha.hospital_beds`  
GROUP BY state_name;
```

The screenshot shows the Google Cloud BigQuery Studio interface. The Explorer panel on the left displays the project structure, including the dataset `bigquery-public-data.covid19_aha` and the table `hospital_beds`. The query editor shows a query named `q2` with the following SQL code:

```
1 ---Which counties have more than 500 total hospital beds?  
2 SELECT county_name  
3 FROM `bigquery-public-data.covid19_aha.hospital_beds`  
4 WHERE total_hospital_beds > 500;  
5
```

The Query results panel shows the results of the query, displaying a table with 3 rows and 1 column:

Row	county_name
1	Sonoma County
2	Snohomish County
3	Norfolk County

The interface also includes a top navigation bar with the Google Cloud logo, a search bar, and a bottom status bar showing the temperature and time.

Q.2) ---Which counties have more than 500 total hospital beds?

```
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Q.3) What is the average number of physicians and dentists (in full-time equivalents) per state?

---What is the average number of physicians and dentists (in full-time equivalents) per state?

```
SELECT state_name, AVG(physicians_and_dentists_ft) AS avg_physicians_dentists
FROM `bigquery-public-data.covid19_aha.staffing`
GROUP BY state_name;
```

The screenshot shows the Google Cloud BigQuery Studio interface. At the top, there's a header with 'Google Cloud' and a search bar. Below that, a sidebar on the left lists various datasets under 'covid19_aha', including 'hospital_beds' and 'staffing'. The main area displays a query titled 'Untitled 2' with the following SQL code:

```
1 --What is the average number of physicians and dentists (in full-time equivalents) per state?
2 SELECT state_name, AVG(physicians_and_dentists_ft) AS avg_physicians_dentists
3 FROM `bigquery-public-data.covid19_aha.staffing`
4 GROUP BY state_name;
5
```

Below the query editor, the 'Query results' section shows a table with two columns: 'state_name' and 'avg_physicians_dentists'. The results are as follows:

Row	state_name	avg_physicians_dentists
1	Minnesota	65.25316455696...
2	Massachusetts	516.26666666666...
3	South Dakota	31.8000000000000...

The interface also includes a 'Job history' section at the bottom and a status bar at the very bottom showing system information like time and date.

Q.4) Join the hospital_beds and staffing tables to find counties with more beds than staff (assuming a staffing field exists):

---Join the hospital_beds and staffing tables to find counties with more beds than staff (assuming a staffing field exists):

```
SELECT h.county_fips_code, h.county_name, h.state_name, h.total_hospital_beds,
s.total_personnel_ft
FROM `bigquery-public-data.covid19_aha.hospital_beds` h
LEFT JOIN `bigquery-public-data.covid19_aha.staffing` s ON h.county_fips_code =
s.county_fips_code
WHERE h.total_hospital_beds > s.total_personnel_ft;
```

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- covid19_aha
 - hospital_beds
 - staffing
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ENABLE NOW DISMISS

Untitled 4 RUN SAVE DOWNLOAD SHARE SCHEDULE MORE Query completed.

```

1 ---Join the hospital_beds and staffing tables to find counties with more beds than staff (assuming a staffing field exists):
2 SELECT h.county_fips_code, h.county_name, h.state_name, h.total_hospital_beds, s.total_personnel_ft
3 FROM `bigquery-public-data.covid19_aha.hospital_beds` h
4 LEFT JOIN `bigquery-public-data.covid19_aha.staffing` s ON h.county_fips_code = s.county_fips_code
5 WHERE h.total_hospital_beds > s.total_personnel_ft;

```

Query results SAVE RESULTS EXPLORE DATA

JOB INFORMATION RESULTS CHART PREVIEW JSON EXECUTION DETAILS EXECUTION GRAPH

Row	county_fips_code	county_name	state_name	total_hospital_beds	total_personnel_ft
1	13139	Hall County	Georgia	887	505
2	08123	Weld County	Colorado	236	145
3	22061	Lincoln Parish	Louisiana	177	80

Results per page: 50 1 - 26 of 26

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Q.5) Compare the total number of beds across different care types (e.g., medical-surgical, intensive care) for all counties:

---Compare the total number of beds across different care types (e.g., medical-surgical, intensive care) for all counties:

```

SELECT county_fips_code, county_name, state_name,
       SUM(gen_medical_surgical_adult_beds + gen_medical_surgical_pediatric_beds)
AS gen_med_beds,
       SUM(medical_surgical_intensive_care_beds + pediatric_intensive_care_beds) AS
icu_beds
FROM `bigquery-public-data.covid19_aha.hospital_beds`
GROUP BY county_fips_code, county_name, state_name;

```

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ENABLE NOW DISMISS

Untitled 6 RUN SAVE DOWNLOAD SHARE SCHEDULE MORE Query completed.

```

1 ---Compare the total number of beds across different care types (e.g., medical-surgical, intensive care) for all counties:
2 SELECT county_fips_code, county_name, state_name,
3       SUM(gen_medical_surgical_adult_beds + gen_medical_surgical_pediatric_beds) AS gen_med_beds,
4       SUM(medical_surgical_intensive_care_beds + pediatric_intensive_care_beds) AS icu_beds
5 FROM `bigquery-public-data.covid19_aha.hospital_beds`
6 GROUP BY county_fips_code, county_name, state_name;
7

```

Query results SAVE RESULTS EXPLORE DATA

JOB INFORMATION RESULTS CHART PREVIEW JSON EXECUTION DETAILS EXECUTION GRAPH

Row	county_fips_code	county_name	state_name	gen_med_beds	icu_beds
1	06097	Sonoma County	California	391	56
2	53061	Snohomish County	Washington	327	61
3	25021	Norfolk County	Massachusetts	345	23

Results per page: 50 1 - 50 of 2503

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Q.6) What is the total number of psychiatric care beds in states with more than 1000 total hospital beds?

---What is the total number of psychiatric care beds in states with more than 1000 total hospital beds?

```

SELECT state_name, SUM(psychiatric_care_beds) AS total_psychiatric_beds

```

```
FROM `bigquery-public-data.covid19_aha.hospital_beds`
WHERE total_hospital_beds > 1000
GROUP BY state_name;
```

The screenshot shows the Google Cloud BigQuery Studio interface. The Explorer panel on the left lists resources including 'covid19_aha' and 'hospital_beds'. The main editor displays a query titled 'Untitled 7' with the following SQL:

```
1 --What is the total number of psychiatric care beds in states with more than 1000 total hospital beds?
2 SELECT state_name, SUM(psychiatric_care_beds) AS total_psychiatric_beds
3 FROM `bigquery-public-data.covid19_aha.hospital_beds`
4 WHERE total_hospital_beds > 1000
5 GROUP BY state_name;
```

The query results are displayed in a table with the following data:

Row	state_name	total_psychiatric_beds
1	California	5017
2	Massachusetts	1250
3	Maryland	940

The interface also shows a 'Job history' section and a status bar at the bottom indicating the system temperature and time.

Q.7) Which states have a higher ratio of total nursing home personnel in full-time positions to part-time positions?

--Which states have a higher ratio of total nursing home personnel in full-time positions to part-time positions?

```
SELECT state_name
FROM `bigquery-public-data.covid19_aha.staffing`
WHERE (total_nursing_home_personnel_ft / NULLIF(total_nursing_home_personnel_pt,
0)) > 1;
```

The screenshot shows the Google Cloud BigQuery Studio interface. The Explorer panel on the left lists resources including 'covid19_aha' and 'staffing'. The main editor displays a query titled 'Untitled 8' with the following SQL:

```
1 --Which states have a higher ratio of total nursing home personnel in full-time positions to part-time positions?
2 SELECT state_name
3 FROM `bigquery-public-data.covid19_aha.staffing`
4 WHERE (total_nursing_home_personnel_ft / NULLIF(total_nursing_home_personnel_pt, 0)) > 1;
```

The query results are displayed in a table with the following data:

Row	state_name
1	Idaho
2	New York
3	California

The interface also shows a 'Job history' section and a status bar at the bottom indicating the system temperature and time.

Q.8) Identify counties where the number of neonatal care beds is greater than 20% of the total staffing in full-time positions.

---Identify counties where the number of neonatal care beds is greater than 20% of the total staffing in full-time positions.

```
SELECT h.county_name
FROM `bigquery-public-data.covid19_aha.hospital_beds` h
JOIN `bigquery-public-data.covid19_aha.staffing` s ON h.county_fips_code =
s.county_fips_code
WHERE h.neonatal_intensive_care_beds > 0
      AND (h.neonatal_intensive_care_beds / NULLIF(s.total_personnel_ft, 0)) > 0.2;
```

The screenshot displays the Google Cloud BigQuery interface. On the left, the 'Explorer' pane shows a list of datasets under 'covid19_aha', including 'hospital_beds' and 'staffing'. The main editor area shows a SQL query (Untitled 9) that identifies counties where neonatal intensive care beds exceed 20% of full-time staffing. The query is executed, and the 'Query results' pane shows a single row for 'Pima County'. The bottom status bar indicates the query completed successfully.

Query results table:

Row	county_name
1	Pima County

Q.9) Retrieve the total number of hospital beds and staffing personnel (full-time and part-time) for each county.

---Retrieve the total number of hospital beds and staffing personnel (full-time and part-time) for each county.

```
SELECT h.county_name,
       SUM(h.total_hospital_beds) AS total_beds,
       SUM(s.total_personnel_ft + s.total_personnel_pt) AS total_personnel
FROM `bigquery-public-data.covid19_aha.hospital_beds` h
JOIN `bigquery-public-data.covid19_aha.staffing` s ON h.county_fips_code =
s.county_fips_code
GROUP BY h.county_name;
```

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ENABLE NOW DISMISS

Untitled 11 RUN SAVE DOWNLOAD SHARE SCHEDULE MORE Query completed.

```

1 ---Retrieve the total number of hospital beds and staffing personnel (full-time and part-time) for each county.
2 SELECT h.county_name,
3       SUM(h.total_hospital_beds) AS total_beds,
4       SUM(s.total_personnel_ft + s.total_personnel_pt) AS total_personnel
5 FROM `bigquery-public-data.covid19_aha.hospital_beds` h
6 JOIN `bigquery-public-data.covid19_aha.staffing` s ON h.county_fips_code = s.county_fips_code
7 GROUP BY h.county_name;

```

Query results

JOB INFORMATION RESULTS CHART PREVIEW JSON EXECUTION DETAILS EXECUTION GRAPH

Row	county_name	total_beds	total_personnel
1	Sonoma County	1367	7786
2	Snohomish County	1662	12314
3	Norfolk County	1411	9957

Results per page: 50 1 - 50 of 1586

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Q.10) Identify counties with the highest ratio of specific care type beds to staff (e.g., medical-surgical beds per nurse):

```

---Identify counties with the highest ratio of specific care type beds to staff
(e.g., medical-surgical beds per nurse):
SELECT h.county_fips_code, h.county_name, h.state_name,
       h.gen_medical_surgical_adult_beds + h.gen_medical_surgical_pediatric_beds AS
       gen_med_beds,
       s.medical_surgical_intensive_care_fte
FROM `bigquery-public-data.covid19_aha.hospital_beds` h
INNER JOIN `bigquery-public-data.covid19_aha.staffing` s ON h.county_fips_code =
s.county_fips_code
WHERE s.medical_surgical_intensive_care_fte > 0
ORDER BY (gen_med_beds / s.medical_surgical_intensive_care_fte) DESC;

```

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ENABLE NOW DISMISS

Untitled 12 RUN SAVE DOWNLOAD SHARE SCHEDULE MORE Query completed.

```

1 ---Identify counties with the highest ratio of specific care type beds to staff (e.g., medical-surgical beds per nurse):
2 SELECT h.county_fips_code, h.county_name, h.state_name, h.gen_medical_surgical_adult_beds + h.gen_medical_surgical_pediatric_beds AS gen_med_beds,
3       s.medical_surgical_intensive_care_fte
4 FROM `bigquery-public-data.covid19_aha.hospital_beds` h
5 INNER JOIN `bigquery-public-data.covid19_aha.staffing` s ON h.county_fips_code = s.county_fips_code
6 WHERE s.medical_surgical_intensive_care_fte > 0
7 ORDER BY (gen_med_beds / s.medical_surgical_intensive_care_fte) DESC;
8

```

Query results

JOB INFORMATION RESULTS CHART PREVIEW JSON EXECUTION DETAILS EXECUTION GRAPH

Row	county_fips_code	county_name	state_name	gen_med_beds	medical_surgical_int
1	12071	Lee County	Florida	1102	1
2	25005	Bristol County	Massachusetts	498	1
3	72127	San Juan Municipio	Puerto Rico	453	1

Results per page: 50 1 - 50 of 701

Job history REFRESH

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