

## Part D: Data Retrieval and Visualisation

Anandh S | S3976934

### Part D: SQL Queries

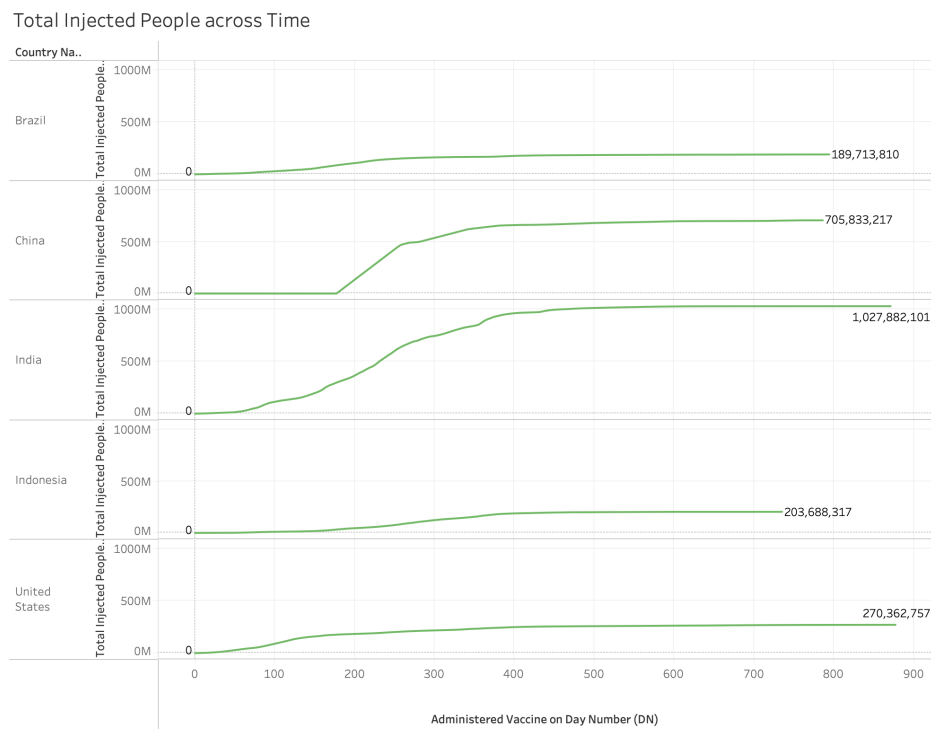
Task D.1:

```
SELECT
    l.LocationName AS 'Country Name (CN)',
    ROW_NUMBER() OVER (PARTITION BY l.ISO_Code
ORDER BY
    DATE) - 1 AS 'Administered Vaccine on Day Number (DN)',
    SUM(v.daily_people_vaccinated) OVER (PARTITION BY l.ISO_Code
ORDER BY
    DATE) AS 'Total Injected People'
FROM
    Location l
JOIN
    VaccinationStatusPerCountry v
ON l.ISO_Code = v.ISO_Code;
```

Output Snapshot:

Total rows loaded: 166570			
	Country Name (CN)	Administered Vaccine on Day Number (DN)	Total Injected People
1	Aruba	0	0
2	Aruba	1	1133
3	Aruba	2	2266
4	Aruba	3	3399
5	Aruba	4	4532
6	Aruba	5	5665
7	Aruba	6	6798
8	Aruba	7	7931
9	Aruba	8	9064
10	Aruba	9	10197
11	Aruba	10	11330

## Data Visualisation:

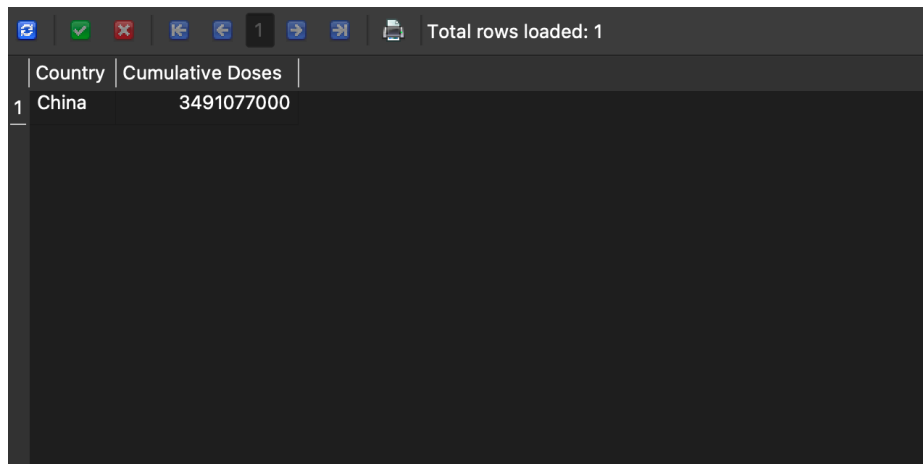


Viz 1: Total Injected People across time | Top 5 Countries

## Task D.2:

```
SELECT
    l.LocationName AS Country,
    MAX(v.total_vaccinations + 0 ) AS `Cumulative Doses`
FROM
    Location l
    JOIN
        VaccinationStatusPerCountry v
    ON l.ISO_Code = v.ISO_Code
WHERE
    l.ISO_Code NOT IN
    (
        'OWID_AFR',
        'OWID_ASI',
        'OWID_EUR',
        'OWID_EUN',
        'OWID_NAM',
        'OWID_OCE',
        'OWID_SAM',
        'OWID_WRL'
    )
ORDER BY
    `Cumulative Doses` DESC;
```

## Output Snapshot:

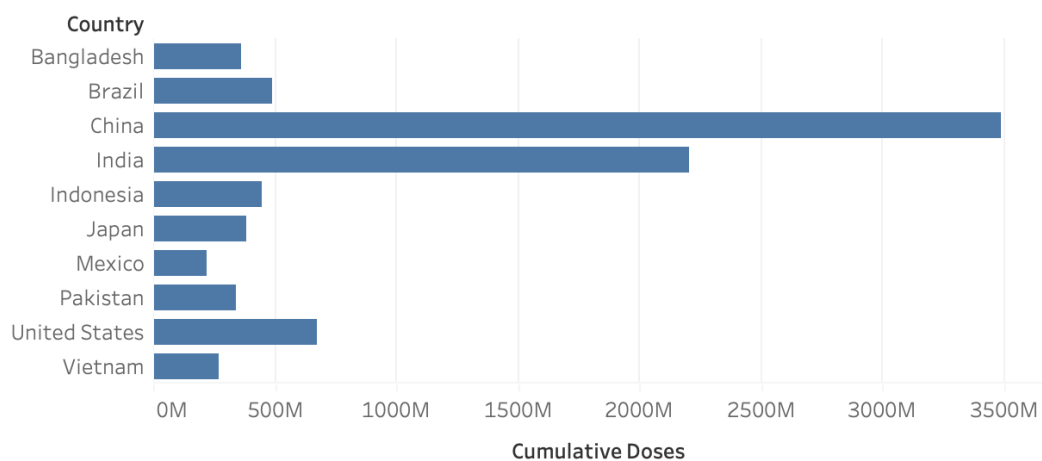


The screenshot shows a data table with two columns: 'Country' and 'Cumulative Doses'. The first row shows 'China' with a value of 3491077000. The table is displayed in a dark-themed application window with a toolbar at the top. The status bar at the top right indicates 'Total rows loaded: 1'.

	Country	Cumulative Doses
1	China	3491077000

## Data Visualisation

### Highest Cumulative Doses by Country



*Viz 2: Top 10 countries by Highest Cumulative Doses*

## Task D.3:

```
SELECT DISTINCT
(V.Vaccine) AS 'Vaccine Type',
  L.LocationName AS Country
FROM
  VaccinesByLocation V
  JOIN
    Location L
    ON V.ISO_Code = L.ISO_Code
ORDER BY
  V.Vaccine,
  L.LocationName;
```

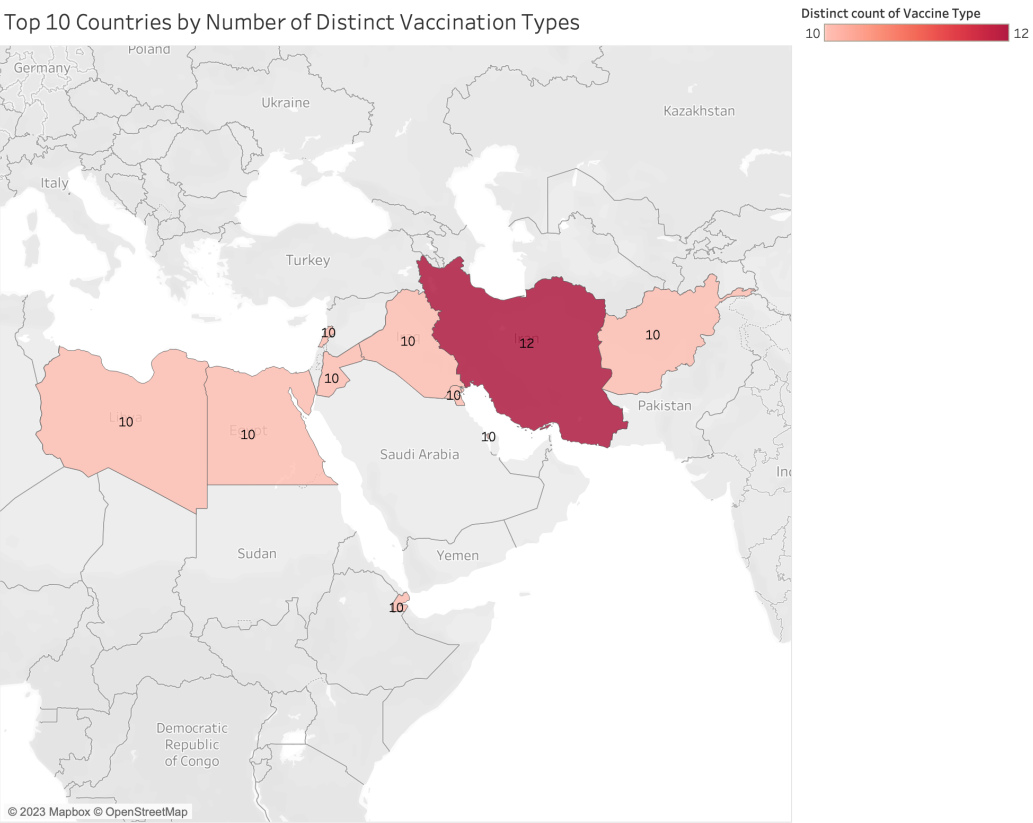
Output Snapshot:

1

Total rows loaded: 953

	Vaccine Type	Country
1	Abdala	Cuba
2	Abdala	Nicaragua
3	Abdala	Venezuela
4	Abdala	Vietnam
5	COVIran Barekat	Iran
6	CanSino	Afghanistan
7	CanSino	Argentina
8	CanSino	Bahrain
9	CanSino	Chile
10	CanSino	China
11	CanSino	Djibouti

Data Visualisation:



Viz 3: Geographical distribution of countries using the most number of vaccine variants

#### Task D.4:

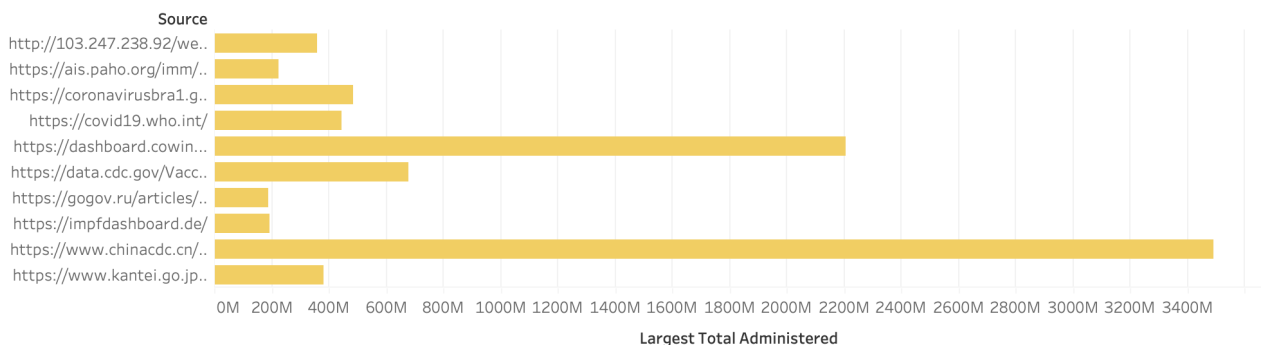
```
SELECT DISTINCT
(SourceURL) AS Source,
  MAX(total_vaccinations + 0) AS LargestTotalAdministered
FROM
  Location
  JOIN
    VaccinationStatusPerCountry
  ON Location.ISO_Code = VaccinationStatusPerCountry.ISO_Code
WHERE
  SourceURL IS NOT NULL
GROUP BY
  SourceURL
ORDER BY
  LargestTotalAdministered DESC;
```

#### Output Snapshot:

Total rows loaded: 83	
Source	LargestTotalAdministered
1 https://www.chinacdc.cn/jkzt/crb/zl/szkb_11803/jszl_13141/202302/t20230211_263697.html	3491077000
2 https://dashboard.cowin.gov.in/	2206685870
3 https://data.cdc.gov/Vaccinations/COVID-19-Vaccination-Trends-in-the-United-States-N/...	676728782
4 https://coronavirusbra1.github.io	486436436
5 https://covid19.who.int/	444303130
6 https://www.kantei.go.jp/jp/headline/kansensho/vaccine.html	383747738
7 http://103.247.238.92/webportal/pages/covid19-vaccination-update.php	358729841
8 https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp	223158993
9 https://impfdashboard.de/	192221468
10 https://gogov.ru/articles/covid-v-stats	186692479
11 https://www.data.gouv.fr/fr/datasets/donnees-relatives-aux-personnes-vaccinees-contre-la-...	154462264

#### Data Visualisation:

Top 10 Sources by Highest Number of Vaccines administered



Task D.5:

```
SELECT
    ObservationMonth AS 'Date',
    MAX(
        CASE
            WHEN
                ISO_Code = 'AUS'
            THEN
                COALESCE(people_fully_vaccinated, 0)
            ELSE
                0
        END
    ) AS 'Australia', MAX(
        CASE
            WHEN
                ISO_Code = 'NZL'
            THEN
                COALESCE(people_fully_vaccinated, 0)
            ELSE
                0
        END
    ) AS 'New Zealand', MAX(
        CASE
            WHEN
                ISO_Code = 'OWID_ENG'
            THEN
                COALESCE(people_fully_vaccinated, 0)
            ELSE
                0
        END
    ) AS 'England', MAX(
        CASE
            WHEN
                ISO_Code = 'USA'
            THEN
                COALESCE(people_fully_vaccinated, 0)
            ELSE
                0
        END
    ) AS 'USA'
FROM
    (
        SELECT
            substr(DATE, 6, 2) AS ObservationMonth,
            ISO_Code,
            people_fully_vaccinated
        FROM
            VaccinationStatusPerCountry
        WHERE
            substr(DATE, 0, 5) = '2022'
```

```

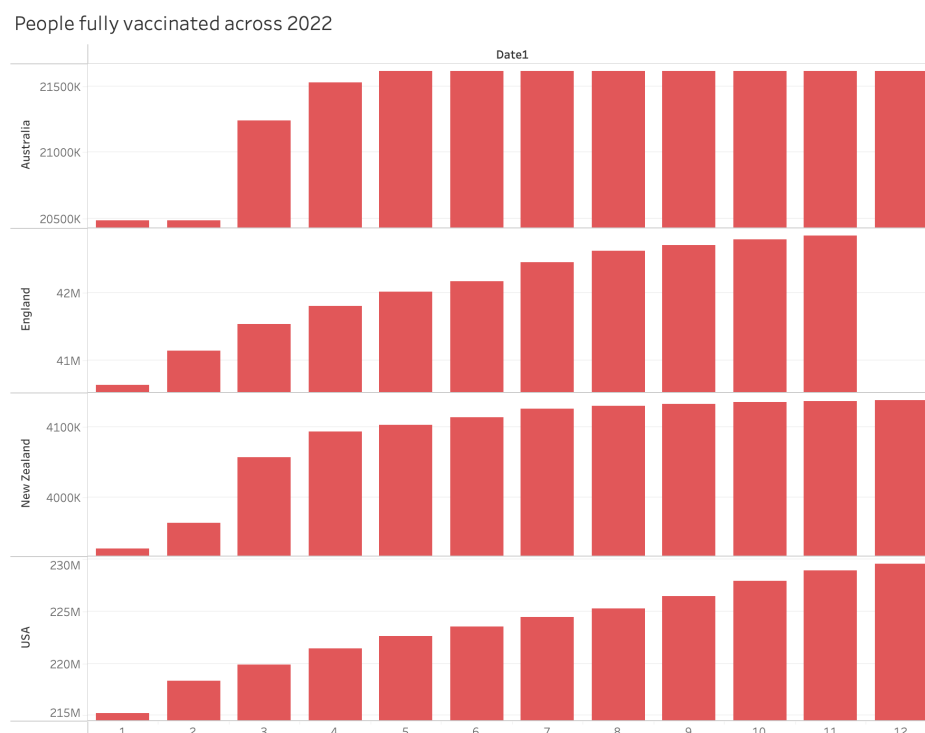
)
AS subquery
GROUP BY
  ObservationMonth;

```

### Output Snapshot:

	Date	Australia	New Zealand	England	USA
1	01		3926219	40630005	215215443
2	02	20483240	3963541	41146925	218330536
3	03	21240452	4056323	41533968	219898973
4	04	21527099	4093200	41808368	221433810
5	05	21614599	4103068	42026346	222623670
6	06		4113618	42170260	223512235
7	07		4126090	42463117	224439379
8	08		4130291	42634817	225287976
9	09		4132703	42709856	226506045
10	10		4134917	42800762	227924209
11	11		4136754	42858653	228900198

### Data Visualisation:



Viz 5: Bar Chart of vaccination trends in AU, NZ, ENG and USA