

a. The SQL queries

```
/*Task D.1*/
select
v2.date as 'Observation Date 1 (OD1)',
v2.c_name as 'Country Name (CN)',
v2.total_vaccinations as 'Administered Vaccine on OD1 (VOD1)',
v1.date as 'Observation Date 2 (OD2)',
v1.total_vaccinations as 'Administered Vaccine on OD2 (VOD2)',
v1.total_vaccinations - v2.total_vaccinations as 'Difference of totals (VOD2-VOD1)'
from
(select * from vaccination v1 where date =
(select v2.date from vaccination v2
where v2.c_name = v1.c_name and v2.date <= '2022-05-31' and v2.total_vaccinations != ''
order by v2.date desc limit 1))
v1 join
(select * from vaccination v3 where date =
(select v4.date from vaccination v4
where v4.c_name = v3.c_name and v4.date <= '2022-04-30' and v4.total_vaccinations != ''
order by v4.date desc limit 1))
v2 on v1.c_name = v2.c_name;
```

```
/*Task D.2*/
select v1.c_name as 'Country',
v1.total_vaccinations as 'Cumulative Doses'
from vaccination v1
where v1.date = (select max(date) from vaccination v2 where v2.c_name = v1.c_name and
v2.total_vaccinations != '')
and v1.total_vaccinations > (select avg(v3.total_vaccinations) from vaccination v3
where v3.date = (select max(date) from vaccination v4 where v4.c_name = v3.c_name and
v4.total_vaccinations != ''));
```

```
/*Task D.3*/
select c_name as 'Country',
v_name as 'Vaccine Type'
from country_vaccine
where c_name
in (select c_name from country_vaccine
group by c_name
order by count(*)
desc limit 10);
```

```
/*Task D.4*/
select c1.source_name as 'Source Name',
v1.total_vaccinations as 'Total Administered Vaccines',
c1.source_url as 'Source URL'
from vaccination v1 join country c1 on v1.c_name = c1.c_name
where v1.date = (select max(date) from vaccination v2
```

```
where v2.c_name = v1.c_name and v2.total_vaccinations != "")
order by c1.source_name, c1.source_url;
```

/*Task D.5*/

```
select d.date as 'Date',
v1.people_fully_vaccinated as 'Australia',
v2.people_fully_vaccinated as 'China',
v3.people_fully_vaccinated as 'England',
v4.people_fully_vaccinated as 'United States'
from (((((select distinct date from country_data order by date) d left join (select * from
vaccination where vaccination.C_name = 'Australia') v1 on d.date = v1.date)
left join (select * from vaccination where vaccination.C_name = 'China') v2 on d.date =
v2.date)
left join (select * from vaccination where vaccination.C_name = 'England') v3 on d.date =
v3.date)
left join (select * from vaccination where vaccination.C_name = 'United States') v4 on d.date
= v4.date)
where d.date like '2022%';
```

b. a snapshot of the first 10 results of your query

Task D.1:

Grid view Form view						
Total rows loaded: 223						
	Observation	Country Name (CN)	Administere	Observation	Administere	Difference
1	2022-05-23	Afghanistan	6118557	2022-04-27	5986139	132418
2	2022-05-15	Albania	2840948	2022-04-20	2801345	39603
3	2022-05-01	Algeria	15205854	2022-04-24	13772044	1433810
4	2022-05-01	Andorra	152694	2022-04-24	152463	231
5	2022-05-22	Angola	18431807	2022-04-26	17896626	535181
6	2022-05-27	Anguilla	23601	2022-04-08	23126	475
7	2022-05-30	Antigua and Barbuda	125877	2022-03-31	125605	272
8	2022-05-31	Argentina	101389384	2022-04-30	97556875	3832509
9	2022-04-17	Armenia	2149195	2022-04-17	2149195	0
10	2022-05-31	Aruba	171159	2022-04-29	170323	836
11	2022-05-31	Australia	57642872	2022-04-30	57229797	413075

Task D.2:









Grid view Form view		
Total rows loaded: 35		
	Country	Cumulative Dose
1	Argentina	101389384
2	Australia	57656265
3	Bangladesh	261364230
4	Brazil	441279964
5	Canada	85516090
6	Chile	56137553
7	China	3381314000
8	Colombia	83585958
9	Egypt	82907695
10	England	120018239
11	France	144549367

Task D.3:

Grid view Form view		
Total rows loaded: 100		
	Country	Vaccine Type
1	Afghanistan	CanSino
2	Afghanistan	Covaxin
3	Afghanistan	Johnson&Johnson
4	Afghanistan	Moderna
5	Afghanistan	Oxford/AstraZeneca
6	Afghanistan	Pfizer/BioNTech
7	Afghanistan	Sinopharm/Beijing
8	Afghanistan	Sinovac
9	Afghanistan	Sputnik Light
10	Afghanistan	Sputnik V
11	Djibouti	CanSino

Task D.4:

Grid view Form view



Total rows loaded: 223

	Source Name	Total Administered Vaccine	Source URL
1	Africa Centres for Disease Control and Prevention	2330589	https://covid19.who.int/
2	Africa Centres for Disease Control and Prevention	1185512	https://covid19.who.int/
3	Africa Centres for Disease Control and Prevention	2352921	https://covid19.who.int/
4	Africa Centres for Disease Control and Prevention	830379	https://covid19.who.int/
5	Africa Centres for Disease Control and Prevention	558456	https://covid19.who.int/
6	Africa Centres for Disease Control and Prevention	720000	https://covid19.who.int/
7	Africa Centres for Disease Control and Prevention	2650000	https://covid19.who.int/
8	Africa Centres for Disease Control and Prevention	834756	https://covid19.who.int/
9	COVID-19 Malta Public Health Response Team	1300807	https://github.com/COVID19-Malta/COVID19-Cases
10	COVID-19 Vaccine Information Platform	147734958	https://covid19asi.saglik.gov.tr/
11	Centers for Disease Control and Prevention	587821663	https://data.cdc.gov/Vaccinations/COVID-19-Vaccination-Trends-in-the-United-States

Task D.5:

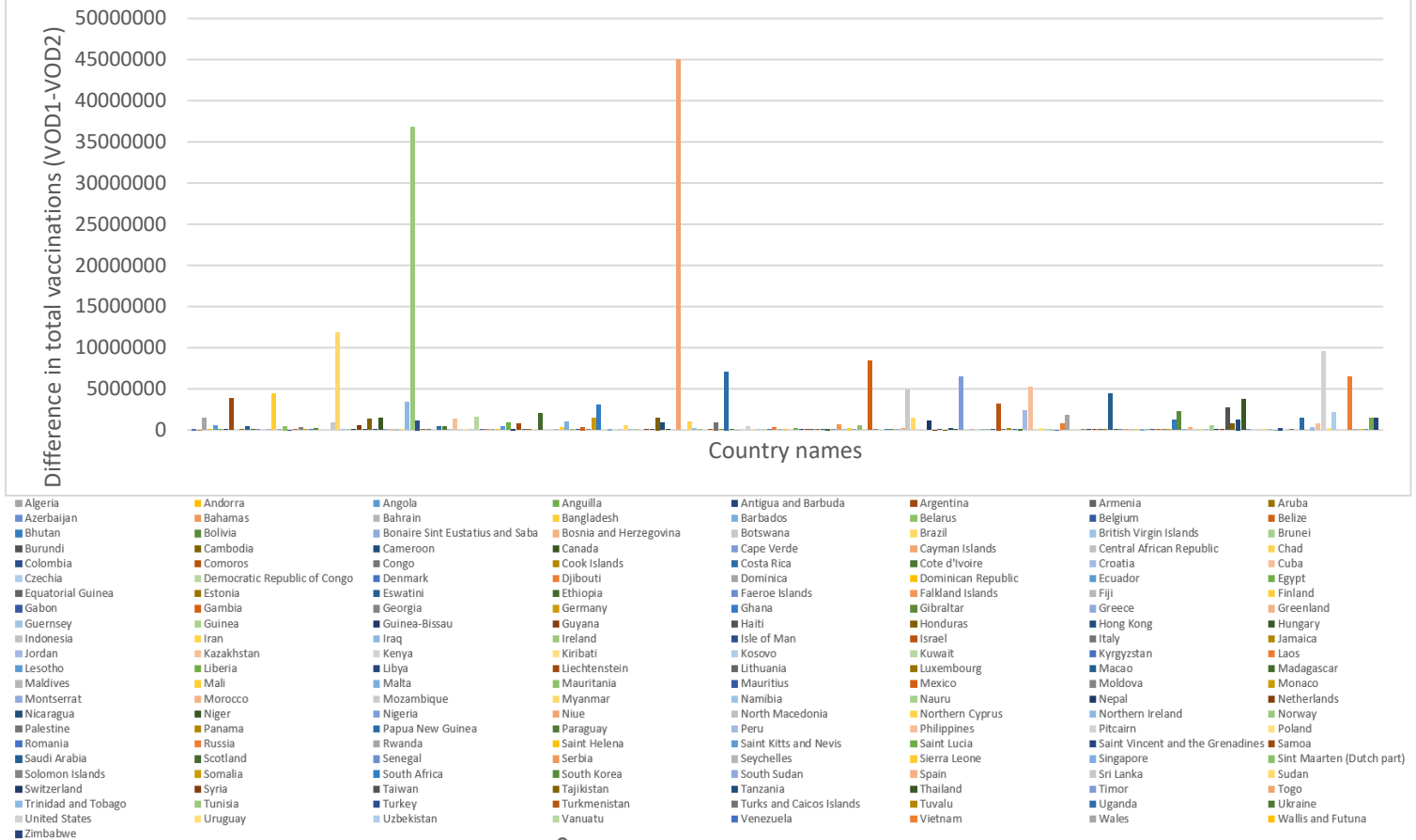
Grid view

Form view

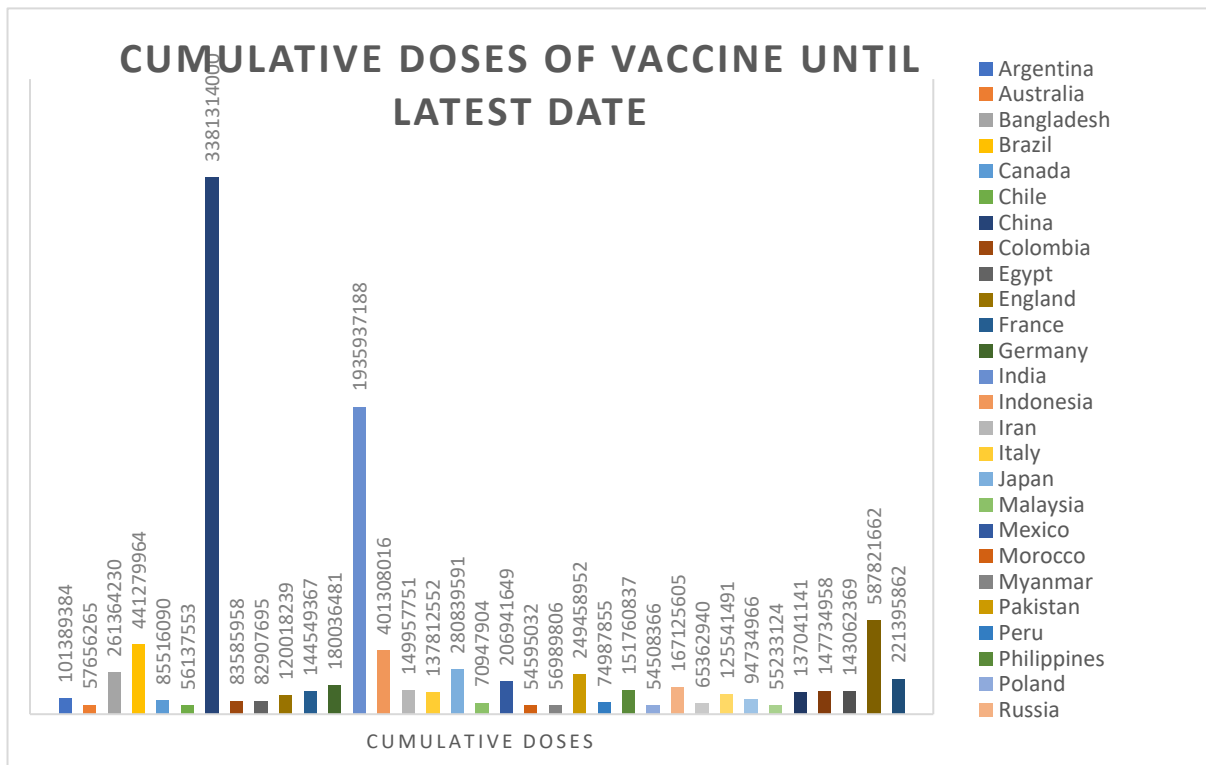
c. Data visualization

Task D.1:

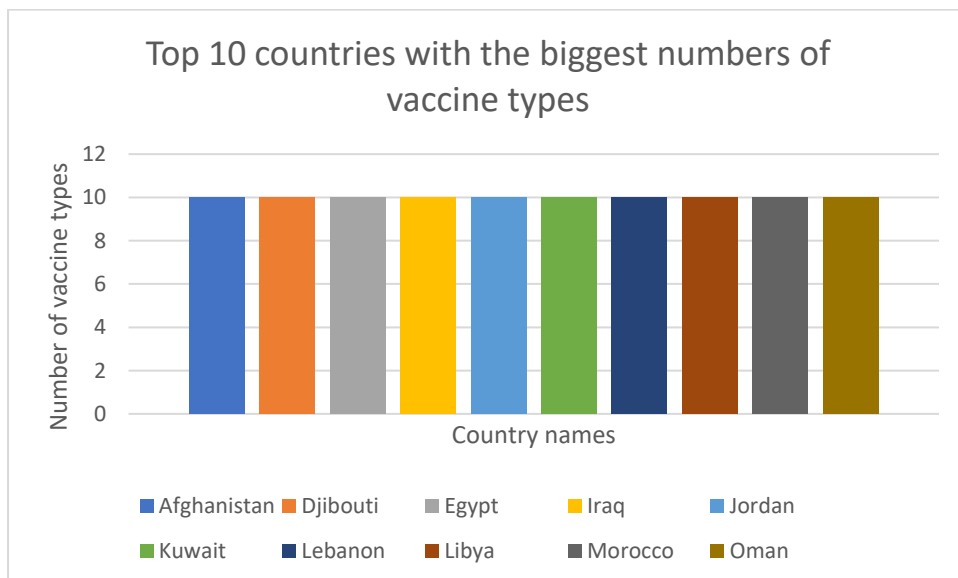
Difference of total vaccination between 2022-04-30 and 2022-05-31



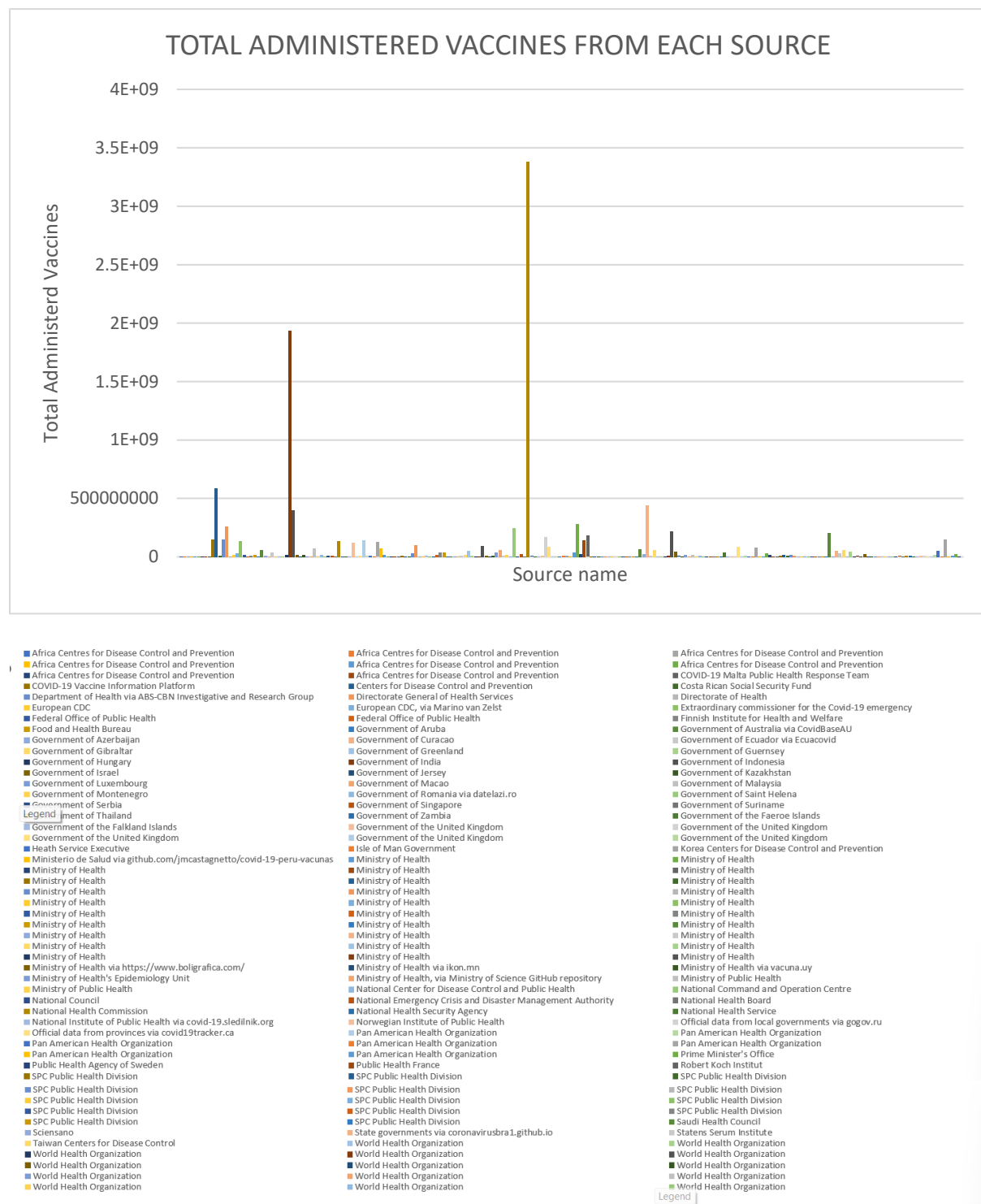
Task D.2:



Task D.3:



Task D.4:



Task D.5:

