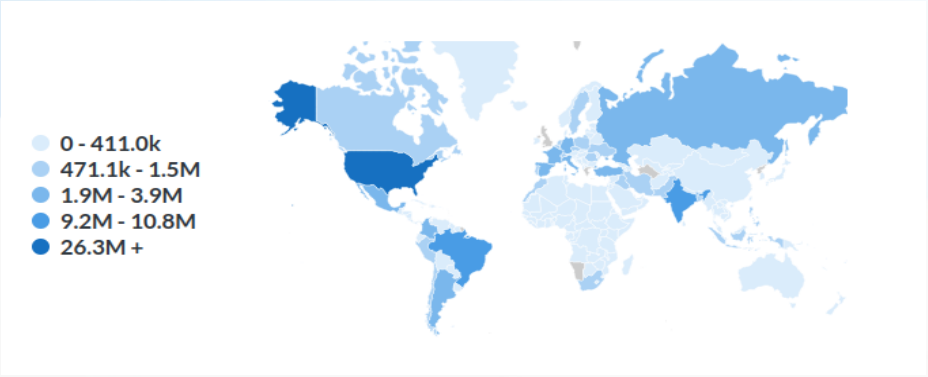
PROJECT 5: Dashboard

COVID_19 Dashboard



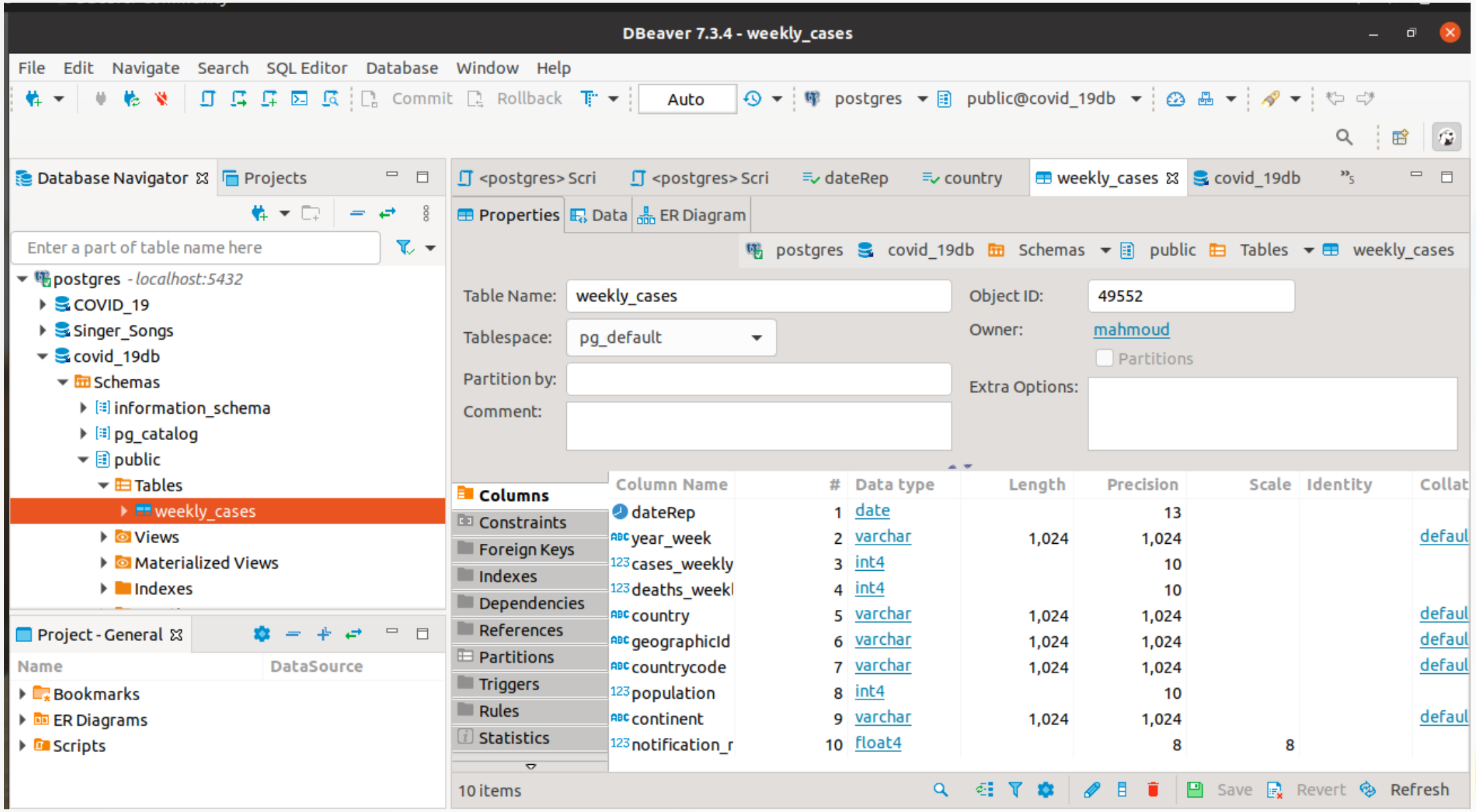
Main WorkFlow:

- Get the Data:
- https://data.europa.eu/euodp/en/data/dataset/covid-19-coronavirus-data
- based on weekly measurment.
- in csv File.

- Data Modeling:
- create a Database covid_19db
- create a table : weekly_case
- Modifying Table.
- Import COVID_19 data into databse.

COVID_19DB

DBeaver



COVID_19DB

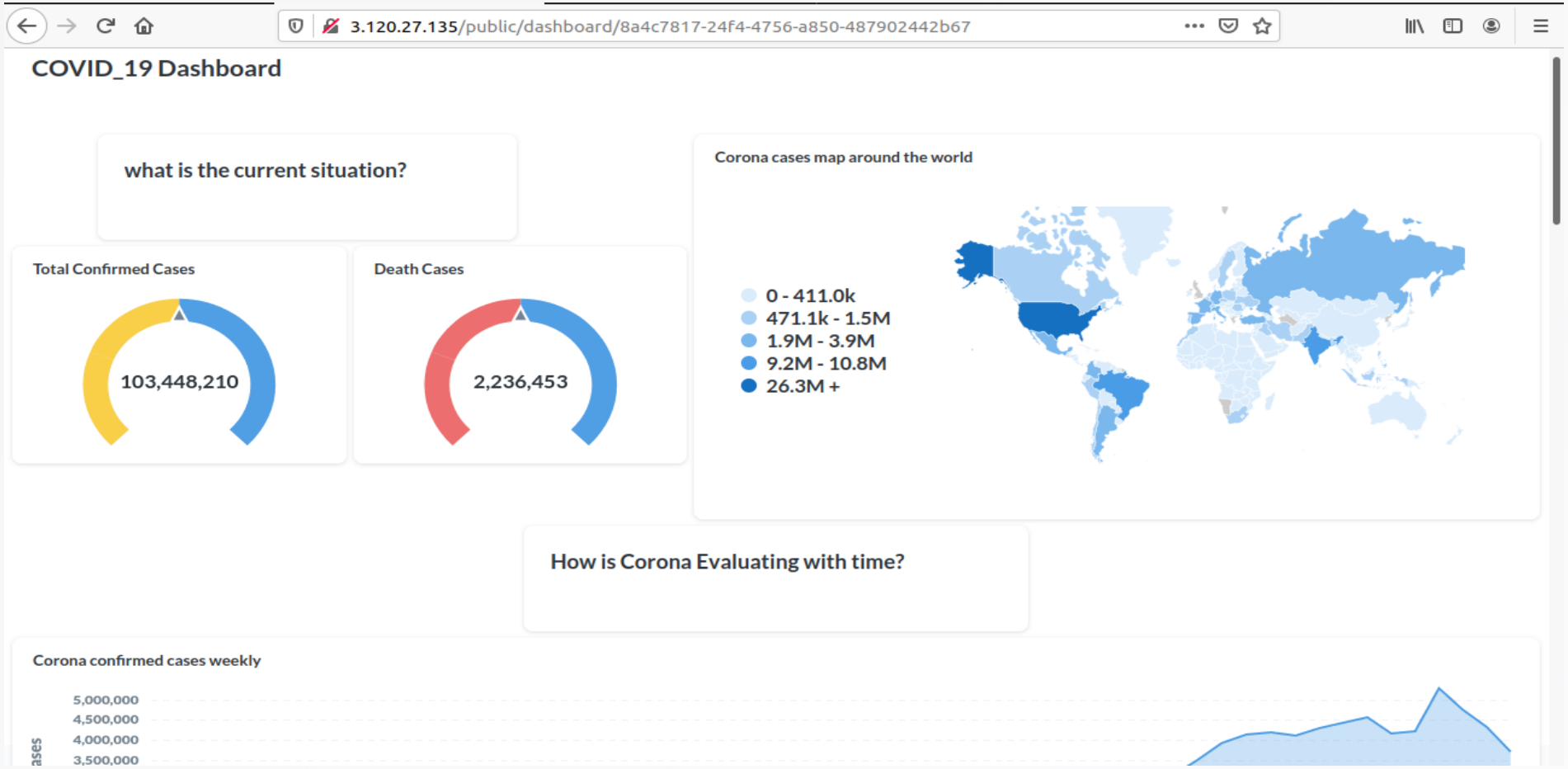
	dateRep	year_week	cases_weekly	deaths_weekly	country	geographicId	countrycode	population	A
1	2021-02-01	2021-04	267	16	Afghanistan	AF	AFG	38,041,757	A
2	2021-01-25	2021-03	713	43	Afghanistan	AF	AFG	38,041,757	A
3	2021-01-18	2021-02	557	45	Afghanistan	AF	AFG	38,041,757	A
4	2021-01-11	2021-01	675	71	Afghanistan	AF	AFG	38,041,757	A
5	2021-01-04	2020-53	902	60	Afghanistan	AF	AFG	38,041,757	A
6	2020-12-28	2020-52	1,994	88	Afghanistan	AF	AFG	38,041,757	A
7	2020-12-21	2020-51	740	111	Afghanistan	AF	AFG	38,041,757	A
8	2020-12-14	2020-50	1,757	71	Afghanistan	AF	AFG	38,041,757	A
9	2020-12-07	2020-49	1,672	137	Afghanistan	AF	AFG	38,041,757	A
10	2020-11-30	2020-48	1,073	68	Afghanistan	AF	AFG	38,041,757	A
11	2020-11-23	2020-47	1,368	69	Afghanistan	AF	AFG	38,041,757	A
12	2020-11-16	2020-46	1,164	61	Afghanistan	AF	AFG	38,041,757	A
13	2020-11-09	2020-45	606	24	Afghanistan	AF	AFG	38,041,757	A
14	2020-11-02	2020-44	800	27	Afghanistan	AF	AFG	38,041,757	A
15	2020-10-26	2020-43	633	22	Afghanistan	AF	AFG	38,041,757	A
16	2020-10-19	2020-42	401	15	Afghanistan	AF	AFG	38,041,757	A
17	2020-10-12	2020-41	458	15	Afghanistan	AF	AFG	38,041,757	A
18	2020-10-05	2020-40	114	9	Afghanistan	AF	AFG	38,041,757	A

Main WorkFlow:

- Create RDS instancs on AWS.
- Deploy the local database to RDS.
- Create Elastic Cloud instance IC2 on AWS.
- Install METABASE server on EC2.

Build a Dashboard:

- build a public Dashboard on METABASE server.
- deploy Dashboard.
- http://3.120.27.135/public/dashboard/8a4c7817-24f4-4756-a850-487902442b67



Update Dashboard

- Update DB on RDS DB_update.py

DB_update.py

home > mahmoud > Downloads > DB_update.py > DB_update

```
11  def DB_update(csv_file):
12      #read data as csv into a pandas dataframe
13      df=pd.read_csv(csv_file)
14      #change names for easy interept
15      df.columns=['daterep','year_week','cases_weekly','deaths_weekly','country','geographicId','countrycode','population','c
16
17      df['daterep']=pd.to_datetime(df['daterep'],format ='%d/%m/%Y')
18
19      #connection string details
20      HOST = 'postgresdbinstance.ctk9165nwoff.eu-central-1.rds.amazonaws.com'
21      PORT = '5432'
22      USERNAME = 'postgres'
23      PASSWORD = os.getenv('DB_password')
24      DB = 'covid_19db'
25      conn_string=f'postgres://{USERNAME}:{PASSWORD}@{HOST}:{PORT}/{DB}'
26      #create engine with the connection to the remore DB
27      engine=create_engine(conn_string)
28      #convert the dataframe to SQL table
29      df.to_sql('weekly_cases',con=engine,index=False,if_exists='replace',dtype={
30          'dateRep':DateTime() ,
31          'year_week':String(),
32          'cases_weekly':Integer(),
33          'deaths_weekly' :Integer(),
34          'country' :String() ,
35          'geographicId':String(),
36          'countryCode':String(),
37          'population': Integer(),
```

Update Dashboard

```
(base) mahmoud@mahmoud-pc:~/Downloads$
(base) mahmoud@mahmoud-pc:~/Downloads$
(base) mahmoud@mahmoud-pc:~/Downloads$
(base) mahmoud@mahmoud-pc:~/Downloads$ python DB_update.py 'covid_19_1_Feb.csv'
Database updated
(base) mahmoud@mahmoud-pc:~/Downloads$
```