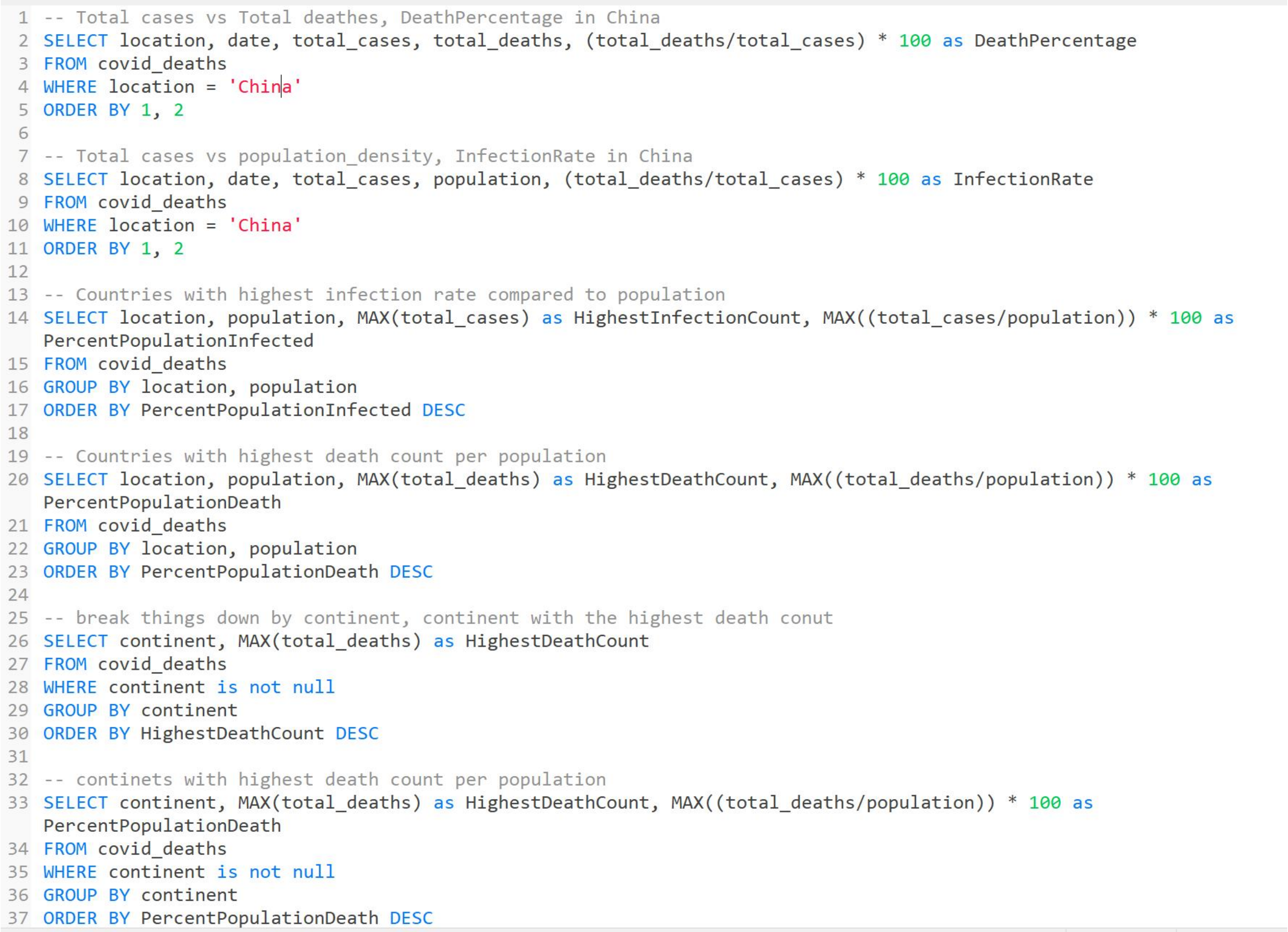
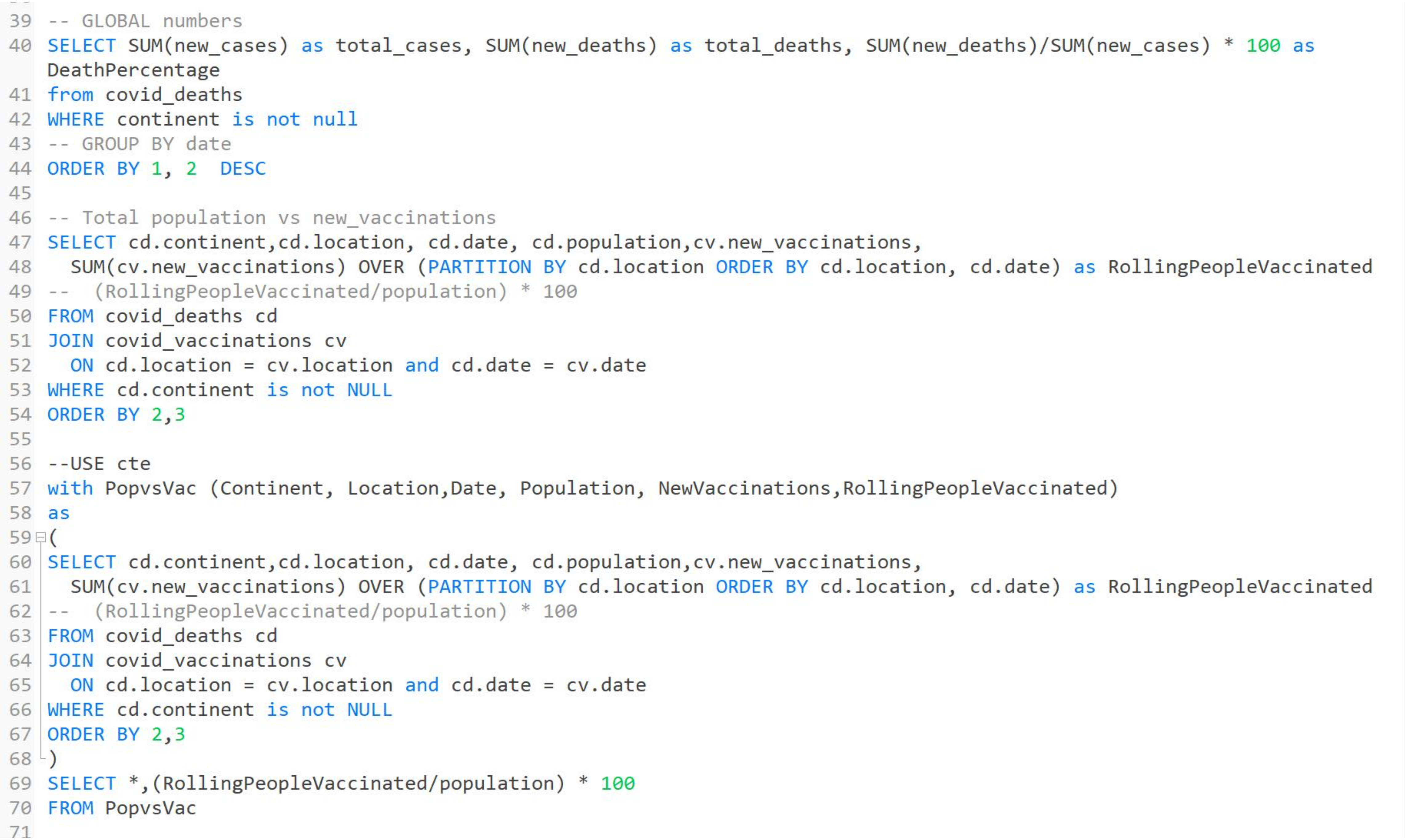
COVID-19 Data Analysis

Analyze by SQL and Tableau

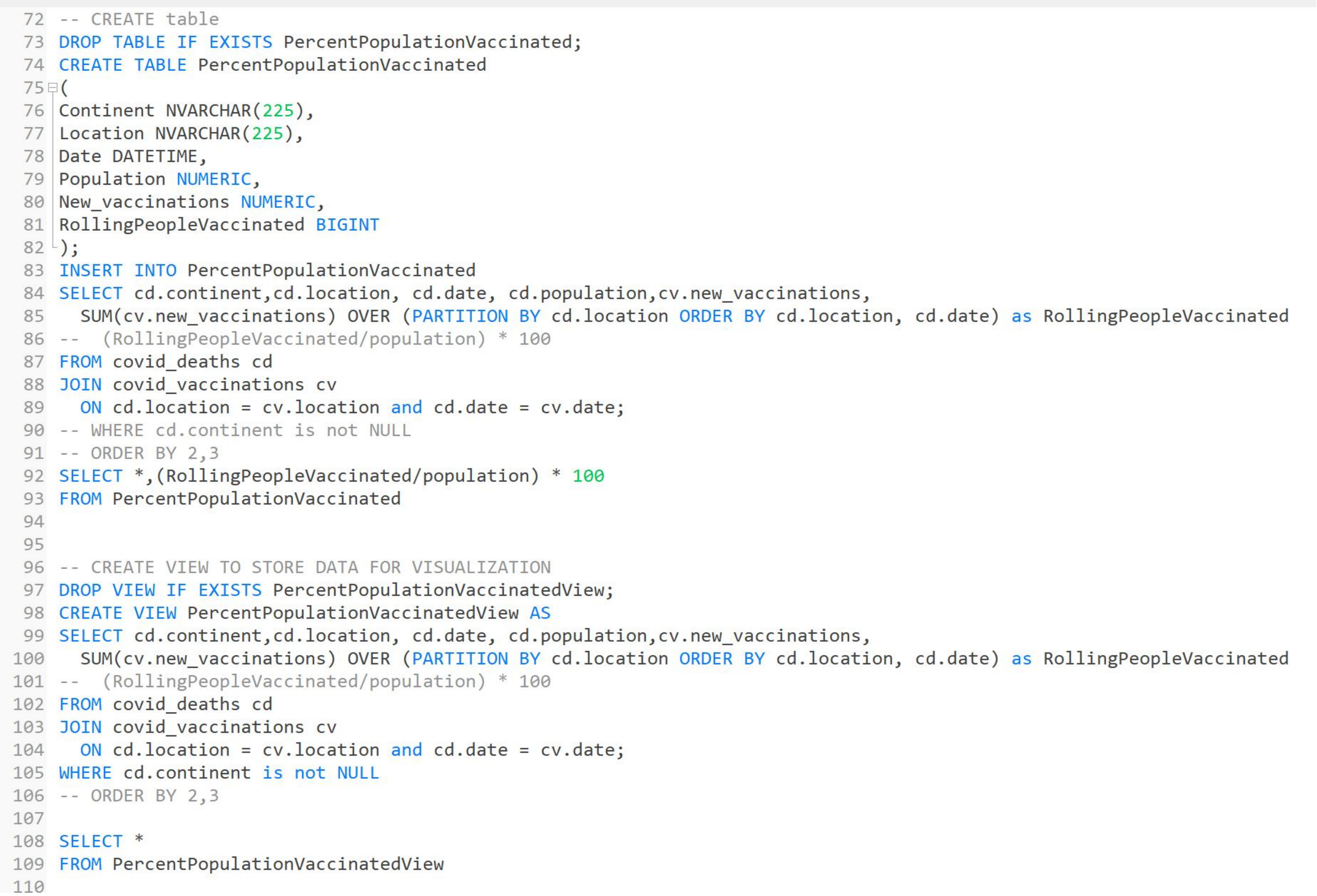
SQL



```
-- Total cases vs Total deathes, DeathPercentage in China
SELECT location, date, total_cases, total_deaths, (total_deaths/total_cases) * 100 as DeathPercentage
FROM covid_deaths
WHERE location = 'China'
ORDER BY 1, 2

-- Total cases vs population_density, InfectionRate in China
SELECT location, date, total_cases, population, (total_deaths/total_cases) * 100 as InfectionRate
FROM covid_deaths
WHERE location = 'China'
ORDER BY 1, 2

-- Countries with highest infection rate compared to population
SELECT location, population, MAX(total_cases) as HighestInfectionCount, MAX((total_cases/population)) * 100 as
PercentPopulationInfected
FROM covid_deaths
GROUP BY location, population
ORDER BY PercentPopulationInfected DESC

-- Countries with highest death count per population
SELECT location, population, MAX(total_deaths) as HighestDeathCount, MAX((total_deaths/population)) * 100 as
PercentPopulationDeath
FROM covid_deaths
GROUP BY location, population
ORDER BY PercentPopulationDeath DESC

-- break things down by continent, continent with the highest death conut
SELECT continent, MAX(total_deaths) as HighestDeathCount
FROM covid_deaths
WHERE continent is not null
GROUP BY continent
ORDER BY HighestDeathCount DESC

-- continets with highest death count per population
SELECT continent, MAX(total_deaths) as HighestDeathCount, MAX((total_deaths/population)) * 100 as
PercentPopulationDeath
FROM covid_deaths
WHERE continent is not null
GROUP BY continent
ORDER BY PercentPopulationDeath DESC
```

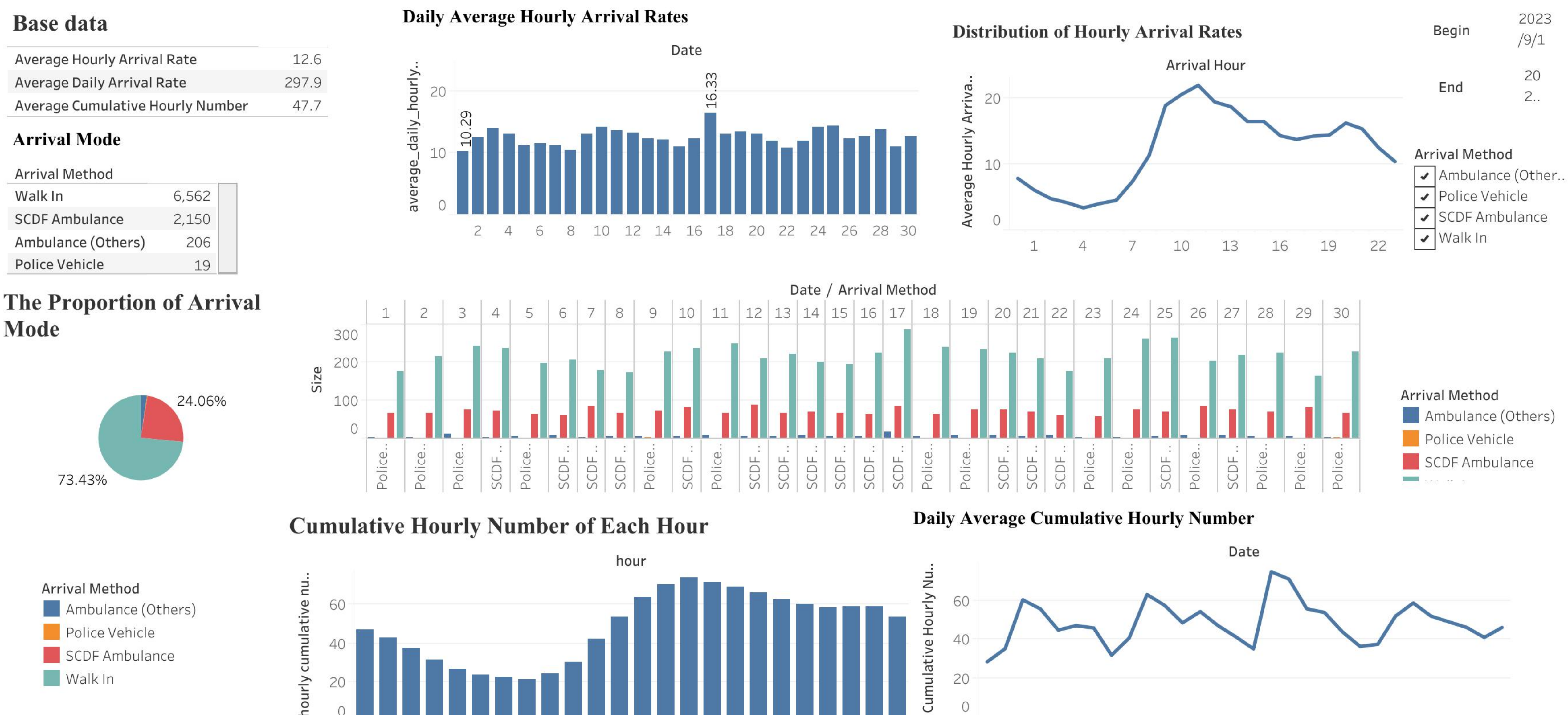


```
-- GLOBAL numbers
SELECT SUM(new_cases) as total_cases, SUM(new_deaths) as total_deaths, SUM(new_deaths)/SUM(new_cases) * 100 as DeathPercentage
from covid_deaths
WHERE continent is not null
-- GROUP BY date
ORDER BY 1, 2  DESC

-- Total population vs new_vaccinations
SELECT cd.continent,cd.location, cd.date, cd.population,cv.new_vaccinations,
  SUM(cv.new_vaccinations) OVER (PARTITION BY cd.location ORDER BY cd.location, cd.date) as RollingPeopleVaccinated
--  (RollingPeopleVaccinated/population) * 100
FROM covid_deaths cd
JOIN covid_vaccinations cv
  ON cd.location = cv.location and cd.date = cv.date
WHERE cd.continent is not NULL
ORDER BY 2,3

--USE cte
with PopvsVac (Continent, Location,Date, Population, NewVaccinations,RollingPeopleVaccinated)
as
(
SELECT cd.continent,cd.location, cd.date, cd.population,cv.new_vaccinations,
  SUM(cv.new_vaccinations) OVER (PARTITION BY cd.location ORDER BY cd.location, cd.date) as RollingPeopleVaccinated
--  (RollingPeopleVaccinated/population) * 100
FROM covid_deaths cd
JOIN covid_vaccinations cv
  ON cd.location = cv.location and cd.date = cv.date
WHERE cd.continent is not NULL
ORDER BY 2,3
)
SELECT *,(RollingPeopleVaccinated/population) * 100
FROM PopvsVac

```



```
-- CREATE table
DROP TABLE IF EXISTS PercentPopulationVaccinated;
CREATE TABLE PercentPopulationVaccinated
(
Continent NVARCHAR(225),
Location NVARCHAR(225),
Date DATETIME,
Population NUMERIC,
New_vaccinations NUMERIC,
RollingPeopleVaccinated BIGINT
);
INSERT INTO PercentPopulationVaccinated
SELECT cd.continent,cd.location, cd.date, cd.population,cv.new_vaccinations,
  SUM(cv.new_vaccinations) OVER (PARTITION BY cd.location ORDER BY cd.location, cd.date) as RollingPeopleVaccinated
--  (RollingPeopleVaccinated/population) * 100
FROM covid_deaths cd
JOIN covid_vaccinations cv
  ON cd.location = cv.location and cd.date = cv.date;
-- WHERE cd.continent is not NULL
-- ORDER BY 2,3
SELECT *,(RollingPeopleVaccinated/population) * 100
FROM PercentPopulationVaccinated


-- CREATE VIEW TO STORE DATA FOR VISUALIZATION
DROP VIEW IF EXISTS PercentPopulationVaccinatedView;
CREATE VIEW PercentPopulationVaccinatedView AS
SELECT cd.continent,cd.location, cd.date, cd.population,cv.new_vaccinations,
  SUM(cv.new_vaccinations) OVER (PARTITION BY cd.location ORDER BY cd.location, cd.date) as RollingPeopleVaccinated
--  (RollingPeopleVaccinated/population) * 100
FROM covid_deaths cd
JOIN covid_vaccinations cv
  ON cd.location = cv.location and cd.date = cv.date;
WHERE cd.continent is not NULL
-- ORDER BY 2,3

SELECT *
FROM PercentPopulationVaccinatedView

```

Tableau- Dashboard



Base data

Average Hourly Arrival Rate	12.6
Average Daily Arrival Rate	297.9
Average Cumulative Hourly Number	47.7

Arrival Mode

Arrival Method	
Walk In	6,562
SCDF Ambulance	2,150
Ambulance (Others)	206
Police Vehicle	19

The Proportion of Arrival Mode

Daily Average Hourly Arrival Rates

Distribution of Hourly Arrival Rates

Begin 2023 /9/1

End 20 2..

Arrival Method

☑ Ambulance (Other..

☑ Police Vehicle

☑ SCDF Ambulance

☑ Walk In

Cumulative Hourly Number of Each Hour

Daily Average Cumulative Hourly Number