--COVID-19 Data Exploration

--Skill used: JOIN, CTEs, Temp Table, Window Functions, Aggregate Functions, Creating Views, Converting Data Types

--Source used: ourworldindata.org

SELECT location, date, total\_cases, new\_cases, total\_deaths, population

FROM CovidDeaths

ORDER BY 1,2

SELECT location, date, total\_cases, total\_deaths, (total\_deaths/total\_cases)

FROM CovidDeaths

ORDER BY 1,2

SELECT location, date, total\_cases, total\_deaths, (total\_deaths/total\_cases)\*100 AS DeathPercentage

FROM CovidDeaths

ORDER BY 1,2

SELECT location, date, total\_cases, population, (total\_cases/population)\*100 AS PercentInfection

FROM CovidDeaths

WHERE location like '%viet%'

ORDER BY 1,2

SELECT location, population, MAX(total\_cases), MAX((total\_cases/population))\*100 AS PercentPopulartionInfected

FROM CovidDeaths

GROUP BY location, population

ORDER BY PercentPopulartionInfected DESC

SELECT location, MAX(CAST(total\_deaths as int)) as TotalDeathCount

FROM CovidDeaths

WHERE continent is not null

GROUP BY location

ORDER BY TotalDeathCount DESC

SELECT location, MAX(CONVERT(int, total\_deaths)) as TotalDeathCount

FROM CovidDeaths

WHERE continent is not null

GROUP BY location

ORDER BY TotalDeathCount DESC

SELECT location, MAX(CAST(total\_deaths as int)) as TotalDeathCount

FROM CovidDeaths

WHERE continent is null

GROUP BY location

ORDER BY TotalDeathCount DESC

SELECT SUM(new\_cases) as total\_cases, SUM(Cast(new\_deaths as int)) as total\_deaths, SUM(Cast(new\_deaths as int))/SUM(new\_cases)\*100 as DeathPercentage

WHERE continent is not null

ORDER BY 1,2

SELECT dea.continent, dea.location, dea.date, dea.population, vac.new\_vaccinations

FROM CovidDeaths dea

JOIN CovidVaccinations vac

ON dea.location = vac.location

AND dea.date = vac.date

WHERE dea.continent is not NULL

ORDER BY 2,3

SELECT dea.continent, dea.location, dea.date, dea.population, vac.new\_vaccinations,

SUM(CONVERT(int,vac.new\_vaccinations)) OVER(PARTITION BY dea.location ORDER BY dea.location, dea.date)

as RollingPeopleVactinated

, (RollingPeopleVactinated)/(population)\*100

FROM CovidDeaths dea

JOIN CovidVaccinations vac

ON dea.location = vac.location

AND dea.date = vac.date

WHERE dea.continent is not NULL

ORDER BY 2,3

WITH PopvsVac (continent, location, date, population, new\_vaccinations, RollingPeopleVactinated)

AS

(SELECT dea.continent, dea.location, dea.date, dea.population, vac.new\_vaccinations,

SUM(CONVERT(int,vac.new\_vaccinations)) OVER(PARTITION BY dea.location ORDER BY dea.location, dea.date)

as RollingPeopleVactinated

FROM CovidDeaths dea

JOIN CovidVaccinations vac

ON dea.location = vac.location

AND dea.date = vac.date

WHERE dea.continent is not NULL

)

SELECT \*, (RollingPeopleVactinated/population)\*100

FROM PopvsVac

CREATE TABLE #PercentPopulationVaccinated

(

Continent nvarchar(255),

Location nvarchar(255),

Date datetime,

Population numeric,

New\_vaccinations numeric,

RollingPeopleVactinated numeric

)

INSERT INTO #PercentPopulationVaccinated

SELECT dea.continent, dea.location, dea.date, dea.population, vac.new\_vaccinations,

SUM(CONVERT(int,vac.new\_vaccinations)) OVER(PARTITION BY dea.location ORDER BY dea.location, dea.date)

as RollingPeopleVactinated

FROM CovidDeaths dea

JOIN CovidVaccinations vac

ON dea.location = vac.location

AND dea.date = vac.date

WHERE dea.continent is not NULL

SELECT \*, (RollingPeopleVactinated/population)\*100

FROM #PercentPopulationVaccinated

DROP TABLE IF EXISTS #PercentPopulationVaccinated

CREATE TABLE #PercentPopulationVaccinated

(

Continent nvarchar(255),

Location nvarchar(255),

Date datetime,

Population numeric,

New\_vaccinations numeric,

RollingPeopleVactinated numeric

)

INSERT INTO #PercentPopulationVaccinated

SELECT dea.continent, dea.location, dea.date, dea.population, vac.new\_vaccinations,

SUM(CONVERT(int,vac.new\_vaccinations)) OVER(PARTITION BY dea.location ORDER BY dea.location, dea.date)

as RollingPeopleVactinated

FROM CovidDeaths dea

JOIN CovidVaccinations vac

ON dea.location = vac.location

AND dea.date = vac.date

SELECT \*, (RollingPeopleVactinated/population)\*100

FROM #PercentPopulationVaccinated

CREATE VIEW PercentPopulationVaccinated AS

Select dea.continent, dea.location, dea.date, dea.population, vac.new\_vaccinations

, SUM(CONVERT(int,vac.new\_vaccinations)) OVER (Partition by dea.Location Order by dea.location, dea.Date) as RollingPeopleVaccinated

From PortfolioProject..CovidDeaths dea

Join PortfolioProject..CovidVaccinations vac

On dea.location = vac.location

and dea.date = vac.date

where dea.continent is not null