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--test fields in the database
Select *
From COVID_19.dbo.CovidDeaths$
Where continent is not null
order by location, date

-- Select Data that we are going to be starting with and order the content
Select Location, date, total_cases, new_cases, total_deaths, population
From COVID_19..CovidDeaths$
Where continent is not null
order by 1,2

-- Total Cases vs Total Deaths
-- Shows likelihood of dying if you contract covid in your country

Select Location, date, total_cases, total_deaths, (total_deaths/total_cases)*100 as
DeathPercentage
From COVID_19..CovidDeaths$
Where location like '%Egypt%' and continent is not null
order by 1,2

-- The percentage of death in EGYPT
-- Shows what percentage of population infected with Covid
SELECT Location, date, Population, total_cases, (total_cases/population)*100 as
PercentPopulationInfected
From COVID_19..CovidDeaths$
Where location like '%Egypt%'
order by 1,2

--Infection Rate compared to Population in Egypt
Select Location, Population, MAX(total_cases) as HighestInfection,
Max((total_cases/population))*100 as PercentPopulationInfected
From COVID_19..CovidDeaths$
Where location like '%Egypt%'
Group by Location, Population
order by PercentPopulationInfected desc

-- death count in Egypt
Select Location, MAX(cast(Total_deaths as int)) as TotalDeathCount
From COVID_19..CovidDeaths$
Where location like '%Egypt%' and continent is not null
Group by Location
order by TotalDeathCount desc

-- Countries with Highest Death Count per Population
Select Location, MAX(cast(Total_deaths as int)) as TotalDeathCount
From COVID_19..CovidDeaths$
Where continent is not null
Group by Location
order by TotalDeathCount desc

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-- BREAKING THINGS DOWN BY CONTINENT
-- Showing continents with the highest death count per population
Select continent, MAX(cast(Total_deaths as int)) as TotalDeathCount
From COVID_19..CovidDeaths$
Where continent is not null
Group by continent
order by TotalDeathCount desc

-- GLOBAL NUMBERS
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
From COVID_19..CovidDeaths$
where continent is not null
Group By date
order by 1,2

-- Total Population vs Vaccinations
-- Shows Percentage of Population that has recieved at least one Covid Vaccine

Select death.continent, death.location, death.date, death.population,
vaccin.new_vaccinations
, SUM(CONVERT(int,vaccin.new_vaccinations)) OVER (Partition by death.Location
Order by death.location, death.Date) as RollingPeopleVaccinated
From COVID_19..CovidDeaths$ death
Join COVID_19..CovidVaccination$ vaccin
    On death.location = vaccin.location
    and death.date = vaccin.date
where death.continent is not null
order by 2,3

--Using CTE to perform Calculation on Partition By in previous query
With PopvsVac (Continent, Location, Date, Population, New_Vaccinations,
RollingPeopleVaccinated)
as
(
Select death.continent, death.location, death.date, death.population,
vaccin.new_vaccinations
, SUM(CONVERT(int,vaccin.new_vaccinations)) OVER (Partition by death.Location
Order by death.location, death.Date) as RollingPeopleVaccinated
From COVID_19..CovidDeaths$ as death
Join COVID_19..CovidVaccination$ as vaccin
    On death.location = vaccin.location
    and death.date = vaccin.date
where death.continent is not null
)
Select *, (RollingPeopleVaccinated/Population)*100
From PopvsVac

```

-- Using Temp Table to perform Calculation on Partition By in previous query

```
DROP Table if exists #PercentPopulationVaccinated
Create Table #PercentPopulationVaccinated
(
Continent nvarchar(255),
Location nvarchar(255),
Date datetime,
Population numeric,
New_vaccinations numeric,
RollingPeopleVaccinated numeric
)
```

```
Insert into #PercentPopulationVaccinated
Select death.continent, death.location, death.date, death.population,
vaccin.new_vaccinations
, SUM(CONVERT(int,vaccin.new_vaccinations)) OVER (Partition by death.Location
Order by death.location, death.Date) as RollingPeopleVaccinated
From COVID_19..CovidDeaths$ as death
Join COVID_19..CovidVaccination$ as vaccin
    On death.location = vaccin.location
    and death.date = vaccin.date
```

```
Select *, (RollingPeopleVaccinated/Population)*100
From #PercentPopulationVaccinated
```

-- Creating View to store data for later visualizations

```
Create View PercentPopulationVaccinated as
Select death.continent, death.location, death.date, death.population,
vaccin.new_vaccinations
, SUM(CONVERT(int,vaccin.new_vaccinations)) OVER (Partition by death.Location
Order by death.location, death.Date) as RollingPeopleVaccinated
From COVID_19..CovidDeaths$ as death
Join COVID_19..CovidVaccination$ as vaccin
    On death.location = vaccin.location
    and death.date = vaccin.date
where death.continent is not null
```