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|  | Covid 19 Data Exploration |
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|  | Skills used: Joins, CTE's, Temp Tables, Windows Functions, Aggregate Functions, Creating Views, Converting Data Types |
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|  |  |
|  | Select \* |
|  | From PortfolioProject..CovidDeaths |
|  | Where continent is not null |
|  | order by 3,4 |
|  |  |
|  |  |
|  | -- Select Data that we are going to be starting with |
|  |  |
|  | Select Location, date, total\_cases, new\_cases, total\_deaths, population |
|  | From PortfolioProject..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 PortfolioProject..CovidDeaths |
|  | Where location like '%states%' |
|  | and continent is not null |
|  | order by 1,2 |
|  |  |
|  |  |
|  | -- Total Cases vs Population |
|  | -- Shows what percentage of population infected with Covid |
|  |  |
|  | Select Location, date, Population, total\_cases, (total\_cases/population)\*100 as PercentPopulationInfected |
|  | From PortfolioProject..CovidDeaths |
|  | --Where location like '%states%' |
|  | 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 PortfolioProject..CovidDeaths |
|  | --Where location like '%states%' |
|  | Group by Location, Population |
|  | order by PercentPopulationInfected desc |
|  |  |
|  |  |
|  | -- Countries with Highest Death Count per Population |
|  |  |
|  | Select Location, MAX(cast(Total\_deaths as int)) as TotalDeathCount |
|  | From PortfolioProject..CovidDeaths |
|  | --Where location like '%states%' |
|  | Where continent is not null |
|  | Group by Location |
|  | order by TotalDeathCount desc |
|  |  |
|  |  |
|  |  |
|  | -- BREAKING THINGS DOWN BY CONTINENT |
|  |  |
|  | -- Showing contintents with the highest death count per population |
|  |  |
|  | Select continent, MAX(cast(Total\_deaths as int)) as TotalDeathCount |
|  | From PortfolioProject..CovidDeaths |
|  | --Where location like '%states%' |
|  | 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 PortfolioProject..CovidDeaths |
|  | --Where location like '%states%' |
|  | 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 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 |
|  | --, (RollingPeopleVaccinated/population)\*100 |
|  | From PortfolioProject..CovidDeaths dea |
|  | Join PortfolioProject..CovidVaccinations vac |
|  | On dea.location = vac.location |
|  | and dea.date = vac.date |
|  | where dea.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 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 |
|  | --, (RollingPeopleVaccinated/population)\*100 |
|  | From PortfolioProject..CovidDeaths dea |
|  | Join PortfolioProject..CovidVaccinations vac |
|  | On dea.location = vac.location |
|  | and dea.date = vac.date |
|  | where dea.continent is not null |
|  | --order by 2,3 |
|  | ) |
|  | 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 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 |
|  | --, (RollingPeopleVaccinated/population)\*100 |
|  | From PortfolioProject..CovidDeaths dea |
|  | Join PortfolioProject..CovidVaccinations vac |
|  | On dea.location = vac.location |
|  | and dea.date = vac.date |
|  | --where dea.continent is not null |
|  | --order by 2,3 |
|  |  |
|  | Select \*, (RollingPeopleVaccinated/Population)\*100 |
|  | From #PercentPopulationVaccinated |
|  |  |
|  |  |
|  |  |
|  |  |
|  | -- Creating View to store data for later visualizations |
|  |  |
|  | 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 |
|  | --, (RollingPeopleVaccinated/population)\*100 |
|  | From PortfolioProject..CovidDeaths dea |
|  | Join PortfolioProject..CovidVaccinations vac |
|  | On dea.location = vac.location |
|  | and dea.date = vac.date |
|  | where dea.continent is not null |
|  |  |