Mortality Rate Dashboard

Introduction:

- In this project, I am developing an interactive dashboard to visualize the mortality rate by country, Year, Age, Sex, and Cause of death (Only ICD-9 codes).
- Initially, I asked these questions in order to complete one part of my analysis.
    1. Which country has the highest mortality rate?
    2. What is the most popular cause of death in the ICD-9 group?
    3. In which region or country this cause of death is popular?
    4. Which age group has the cause of death found in question 2 and in which country they are located?

- Here, I have taken a total of 4 different datasets and one documentation from the Who website.

- Firstly, I am going to take the raw dataset and will perform cleaning using SSMS and python. Then, I will merge the dataset to get effective insights using Tableau Desktop and Python. Next, I will use Tableau Desktop again to develop the interactive dashboard that will allow the end-users to get the specific insights that they are looking for.

- This course in Healthcare Analytics has helped me to get a high-level view of how healthcare organizations function. I determined that the healthcare organizations have divided different causes of deaths by using a coding system which is termed **ICD (International Classification of Diseases)** first adopted by The International Statistical Institute in 1893. My project will only look at ICD-9 codes and their subsequent data. One of my objectives is to gain more knowledge about coding and what the different codes stand for as well as how they are used.

- This project is centered on the mortality rate that shows the causes of deaths for the different ICD-9 codes

Motivation:

- Every country in this world has experienced the brunt of COVID-19 in some of the other manner. It has had massive repercussions on the global economy. One of the main repercussions is the high toll of deaths which haven't stopped completely even after 3 years since the first case report. But before this pandemic, there were many causes of death that were subdivided and classified

in a cluster. This classification was termed as **ICD**(**International Classification of Diseases**) as mentioned above followed by codes for different clusters of diseases.

- I gained some knowledge about this coding system in this course in the form of my labs and I peeked to find more about the criterion/criteria of the division of ICD codes and so on.

- Initially, when I was finding the project domain for my project, I started finding datasets of COVID-19 and Mortality rates and I found this page of mortality rate by age, year, gender, sex, and most important cause of death under the ICD-9 group on the WHO website.

Evaluation:

Q1. What would the successful outcome of your project look like? In other words, under which circumstances would you consider your project to be "successful?"

- I have defined a successful outcome will be one in which I develop an effective and easy-to-use interactive dashboard along with relevant comparative graphs and charts and finally the timely and correct delivery of my project report.

Q2. How are you going to measure success for this project?

- The measure of success for this project will be the effective reshuffling and rearranging of data points while visualization, analyzing these changes to find more insights, and finally determining the answers to the questions outlined in the introduction section. This will be the minimum ask in order to define this project as a success.

Resources:

Q1. What resources are you going to use (datasets, computational tools, etc.)?

- I am going to use Python (for cleaning and data analysis), Tableau Desktop (for creating Dashboard and graphs), SQL in SQL Server Management Studio (for loading the dataset, structuring, and cleaning).

- I cannot use MS Excel or Spreadsheets because data that I am going to use has more than 20 million of the record.

References:

- Who mortality database :- For now, I have used only this link to get the data files and the relevant documentations. I have taken a subset of their information and I am going to perform all the analysis on my own.

- The remaining links and references (if any) will be added to the final project report.