CSC343H1 Project Phase 1

Domain:
   All countries' GDP Data, Urban Population, Forest Area, CO_2 Emission, Global
Temperature Change and Fuel Price in recent ten years.

Dataset:
  Name: GDP
  Link: https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?view=chart
  Information: All countries' GPD data in 10 years.
  Other: Will remove the data out of range and remove some new countries which do not have
enough data.

  Name: Urban Population
  Link: https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?view=chart
  Information: All countries' Urban Population data in 10 years.
  Other: Will remove the data out of range and remove some new countries which do not have
enough data.

  Name: Forest Area
  Link:
https://data.worldbank.org/indicator/AG.LND.FRST.K2?end=2016&locations=BT&start=19
90&view=chart
  Information: All countries' Forest Area data in 10 years.
  Other: Will remove the data out of range and remove some new countries which do not have
enough data.

  Name: CO_2 Emission
  Link: https://data.worldbank.org/indicator/EN.ATM.CO2E.KT?view=chart
  Information: All countries' CO_2 Emission data in 10 years.
  Other: Will remove the data out of range and remove some new countries which do not have
enough data.

  Name: Global Temperature Change
  Link: https://www.ncdc.noaa.gov/cag/global/time-series
  Information: Global Temperature Change data in 10 years.
  Other: May need to sum up all difference to get the current temperature.

  Name: Fuel Price
  Link: https://data.worldbank.org/indicator/EP.PMP.SGAS.CD?view=chart
        https://data.worldbank.org/indicator/EP.PMP.DESL.CD?view=chart
  Information: All countries' Fuel Price data in 10 years.
  Other: Need to combine two major different fuels' price and relevant this to CO_2 emission
and temperature change. Will remove the data out of range and remove some new countries
which do not have enough data.

Question:
  1. Is there a correlation between GDP and the urban population?
  2. Which has a more powerful influence on the forest area, urban population or CO_2
     emission?
  3. Is there a correlation between fuel price and global temperature change?

Schema:

GDP Data(<u>countryName</u>, <u>countryCode</u>, year1, year2, year3, year4, year5, year6, year7, year8, year9, year10)

A tuple in this relation represents a country's GDP data. countryName is the name of country, countryCode is the code of this country. Year1 to year 10 is this country's ten years' GDP data.

Urban Population(<u>countryName</u>, <u>countryCode</u>, year1, year2, year3, year4, year5, year6, year7, year8, year9, year10)

A tuple in this relation represents a country's Urban Population data. countryName is the name of country, countryCode is the code of this country. Year1 to year 10 is this country's ten years' Urban population percentage data.

Forest Area(<u>countryName</u>, <u>countryCode</u>, year1, year2, year3, year4, year5, year6, year7, year8, year9, year10)

A tuple in this relation represents a country's Forest Area data. countryName is the name of country, countryCode is the code of this country. Year1 to year 10 is this country's ten years' Forest Area data.

CO_2 Emission(<u>countryName</u>, <u>countryCode</u>, year1, year2, year3, year4, year5, year6, year7, year8, year9, year10)

A tuple in this relation represents a country's CO_2 Emission data. countryName is the name of country, countryCode is the code of this country. Year1 to year 10 is this country's ten years' CO_2 Emission data.

Global Temperature Change(<u>year</u>, temperature)

A tuple in this relation represent global temperature change data. Year is the year number, temperature is the temperature change compare to last year.

Fuel Price(<u>countryName</u>, <u>countryCode</u>, year1, year2, year3, year4, year5, year6, year7, year8, year9, year10)

A tuple in this relation represents a country's Fuel Price data. countryName is the name of country, countryCode is the code of this country. Year1 to year 10 is this country's ten years' Fuel Price data which is the average of gasoline and diesel price.