Q1

1. Create two CSV file with three columns viz. Tom, Brick, Harry with index 'True' and 'False'. Each column must contain at least ten values each as a combination of datatypes.
2. Create a data frame with at least 5 columns and 10 rows. There must be some missing values in it. If the integer column contains missing values replace it with some statistical approach. Also, if there is any missing values in String column, drop the rows using some looping function.
3. Create a data frame with at least 5 columns and 10 rows. Each column must contain only integer elements only. Column names must be Abilash, Ankit, Ashok, Asif, Anjaan. Now apply a function where we want to club together the data based on any row or column. Group the series using a mapper or by a series of columns.
4. Read the CountryDataIND.csv file and perform statistical operation on the same about the dataset. Look for any missing data if any.
5. Plot a histogram by keeping the bin size to 10 for the column name = 'Observation Value'. Also Plot a scatter plot between 'observation Value' and 'Time Period'

Q2

Suppose you have landed to a job and the first task you've assigned to prepare a report which includes the following:

1. Player Count
    - Total Number of Players
2. Purchasing Analysis (Total)
    - Number of Unique Items
    - Average Purchase Price
    - Total Number of Purchases
    - Total Revenue
3. Gender Demographics
    - Percentage and Count of Male Players
    - Percentage and Count of Female Players
    - Percentage and Count of Other / Non-Disclosed
4. Purchasing Analysis (Gender)
    - The below each broken by gender
        - Purchase Count
        - Average Purchase Price
        - Total Purchase Value
        - Average Purchase Total per Person by Gender
5. Age Demographics
    - The below each broken into bins of 4 years (i.e. <10, 10-14, 15-19, etc.)
        - Purchase Count
        - Average Purchase Price
        - Total Purchase Value
        - Average Purchase Total per Person by Age Group
6. Top Spenders
    - Identify the the top 5 spenders in the game by total purchase value, then list (in a table):

        - SN
        - Purchase Count
        - Average Purchase Price
        - Total Purchase Value
7. Most Popular Items
    - Identify the 5 most popular items by purchase count, then list (in a table):
        - Item ID
        - Item Name
        - Purchase Count
        - Item Price
        - Total Purchase Value
8. Most Profitable Items
    - the 5 most profitable items by total purchase value, then list (in a table):
        - Item ID
        - Item Name
        - Purchase Count
        - Item Price
        - Total Purchase Value

Q3

Fuel economy data are the result of vehicle testing done at the Environmental Protection Agency's National Vehicle and Fuel Emissions Laboratory in Ann Arbor, Michigan, and by vehicle manufacturers with oversight by EPA.

Datset Description:

- Model Vehicle make and model
- Displ Engine displacement - the size of an engine in liters
- Cyl The number of cylinders in a particular engine
- Trans Transmission Type and Number of Gears
- Drive Drive axle type (2WD = 2-wheel drive, 4WD = 4-wheel/all-wheel drive)
- Fuel Fuel Type
- Cert Region* Certification Region Code
- Sales Area** Certification Region Code
- Stnd Vehicle emissions standard
- Stnd Description* Vehicle emissions standard description
- Underhood ID This is a 12-digit ID number that can be found on the underhood emission label of every vehicle. It's required by the EPA to designate its "test group" or "engine family."
- Veh Class EPA Vehicle Class
- Air Pollution Score Air pollution score (smog rating)
- City MPG Estimated city mpg (miles/gallon)
- Hwy MPG Estimated highway mpg (miles/gallon)

- Cmb MPG Estimated combined mpg (miles/gallon)
- Greenhouse Gas Score Greenhouse gas rating
- SmartWay Yes, No, or Elite
- Comb CO2* Combined city/highway CO2 tailpipe emissions in grams per mile

Note: For more details information about the dataset refer to the text file

Q4

Perform the pre-requisite viz. :

Assessing the Data

i. Data cleaning
ii. Inspection
iii. Manipulation if required
iv. Extracting meaningful visualization based on your understanding
v. Data consolidation if required

Q1. Find out the alternative sources of fuel available in 2008 & 2018 respectively and by how much?

Q2. Is there any improvement in 'fuel economy' with respect to vehicle class from 2008 to 2018, perform the necessary steps to examine?

Q3. Is there any change in characteristics of SmartWay Vehicles ?

Q4. Which all features are associated with better fuel economy?

Q5. How much improvement is there in miles/gallon or mpg? Also, which vehicle has improved the most?

Indians and elections are the things which keeps on happening almost every month and every year. Well, Loksabha elections is one such which happens after every 5 years, well we have data of candidates and electors from 2009 and 2014. Compare the dataset and compute the results visually

1. Create grand alliances
   a. 'INC','NCP', 'RJD', 'DMK', 'IUML', 'JMM','JD(s)','KC(M)','RLD','RSP','CMP(J)','KC(J)','PPI','MD' **as UPA**
   b. 'BJP','SS', 'LJP', 'SAD', 'RLSP', 'AD','PMK','NPP','AINRC','NPF','RPI(A)','BPF','JD(U)','SDF','NDPP','MNF','RIDALOS','KMDK','IJK','PNK','JSP','GJM','MGP','GFP','GVP','AJSU','IPFT','MPP','KPP','JKPC','KC(T)','BDJS','AGP','JSS','PPA','UDP','HSPDP','PSP','JRS','KVC','PNP','SBSP','KC(N)','PDF','MDPF' **as NDA**
   c. 'YSRCP','AAAP', 'IND', 'AIUDF', 'BLSP', 'JKPDP', 'JD(S)', 'INLD', 'CPI', 'AIMIM', 'KEC(M)','SWP', 'NPEP', 'JKN', 'AIFB', 'MUL', 'AUDF', 'BOPF', 'BVA', 'HJCBL', 'JVM','MDMK' **as Others**
2. Create Winning seats distribution by Major Political Parties & Alliances for 2009 & 2014
3. How many seats won by Alliances and Major Political Parties ?

4. Plot comparatively seats won based on candidate category as General, ST and SC for 2009 & 2014
5. Plot the age distribution of winners of both 2014 and 2009 elections
6. Separately plot age distribution of NDA & UPA candidates
7. Plot Gender distributions of 2009 & 2014 elections
8. Plot gender distribution of NDA and UPA separately for 2009 elections
9. Plot gender distribution of NDA and UPA separately for 2014 elections
10. Plot the poll percentage of states for 2009 & 2014 elections