Python Assignment

Guidelines:

i. ***This assignment is mandatory for everyone.***
ii. ***Use the below datasets or Tables to solve the below queries.***
iii. ***It is mandatory to submit the answer with the screenshot of the output you have received.***
iv. *There will only be a single attempt for each exam and **no deadline extension in case of assignments**.*
v. *Any case of unfair means or **plagiarism would lead to debarring** in final placements without any further consideration.*

Problem 1:

Dataset: https://drive.google.com/file/d/1fXTWJTunqaMjtqUo9c5sM1o_ABHybhin/view?usp=sharing

International Sports Academy wants to understand the performance of different countries across the globe and also popular sports in which multiple countries have taken part. They want to visualize ever year's performance in multiple factors with respect to data collected.

1. Handle null values in dataset and remove unwanted symbols if any.
2. What is the unique count of sports, events, and different city, and the team participated in the Olympics.
3. What is the total count of players from the United States, China, Netherland, Spain, France, Italy?
4. What is the average age of female and male players from the United States, China, Netherland, Spain, France, Italy
5. What are the different kinds of sports in which players have participated in different cities of the United States.
6. What are the names of players who have brought gold, silver and bronze medal?
7. Which team has brought the most number of female and male players?
8. Draw a suitable graph which depicts different events took place from 1900 to 2016.
9. What are the different sports played in a different season?
10. What are the average height and weight of players who participated in football, Judo, basketball?
11. How many sports and events were player in 1992 winter, 1994 winter 2000 summer 2002 winter
12. List the names of players who brought gold, silver and bronze medal.
13. What is the highest number of sports played in the year 1990, 1992, 1994, 2016?
14. What are the different sports played by female players? In which sport, most numbers of female players have participated. Visualize the same
15. Perform the above problem for male players as well.

16. Which city has the maximum number of players?
17. Show line chart which tells variation in a number of players from 1990 to 2000 of India and Pakistan. (Draw separate chart for India and Pakistan)
18. Draw a pie chart to show the percentage of male and female players across the world
19. Which team has won the maximum number of gold, silver and bronze? Visualize the same.
20. Who is the tallest and shortest player?
21. Draw a suitable chart which shows the performance of different cities belonging to Beijing, London, Sydney, Los Angeles.

Problem 2:

Dataset: https://drive.google.com/drive/folders/1O7lsRG3j_hvXfP7EFP5bhC3sWP5wF4Lp?usp=sharing

1. Read Table1.xlsx and Table2.xlsx

2. Sort customer numbers in both Table1 and Table2 files in ascending order

3. Create a new Table3 combining both Table1 and Table2 by selecting the first 3 customers from

Table1 and first 4 customers from Table2. Repeat this process till we iterate on all customers

Your output should have 1 column and 100 rows with customer numbers.

Output – 1,2,3,51,52,53,54,4,5,6,55,56,57,58,7,8,9,59,60,61,62….

Problem 3:

Congratulations!! You have been selected as a Data Analyst in a Skincare Company. Your role is to analyse their previous year sales record and analyse the data through various plots and charts using Pandas, Matplotlib and Python

Goals

Download the dataset:
https://drive.google.com/file/d/100mkWK_sHZnN4ASfRLkFsXTD1flJLOoD/view?usp=sharing

Identify which features are useful: Explore the features present in the dataset and infer which features would be useful to create a plot from them

Milestones

1. Read the dataset and store it in a pandas data frame

2. Extract the product names into a list from the data frame
3. Create a two-dimensional list of product names and sales
4. Create a dictionary of sold items
5. What is the average profit of the company in a month
6. Get the most sold item of the company
7. Read Total profit of all months and show it using a line plot
8. Read all product sales data and show it using a Multiline Plot
9. Read toothpaste sales data of each month and show it using a scatter plot
10. Read face cream and face wash product sales data and show it using the bar chart
11. Read Bathing soap and face wash data of all months and display it using a Subplot
12. Calculate total sale data for last year for each product and show it using a Pie chart