G. H. Raisoni College Of Engineering And Management, Wagholi Pune 2021- 2022 Group B :-Assignment no :-4			
Department	CE [SUMMER 2022 (Online)]		
Term / Section	III/B	Date Of **submission**	23-11-2021
Subject Name /Code	Python for Data Science / UCSP204		
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Group B :→ Experiment No 4 (11)

Aim :→ Write a python program to read excel sample file of 100 records into Dataframe by using Pandas library
Also write these 100 records into particular sheet of excel file

Theory :→

Pandas is a python library for data analysis. Started by Wes McKinney in 2008.

Pandas is build on top of two core Python libraries.
(1) matplotlib For data visualization
(2) NumPy for mathematical operations.

Pandas acts as a wrapper over these libraries allowing you to access many of matplotlib's and NumPy's methods with less code.
For instance, 'pandas'.plot() combines multiple matplotlib method, enabling you to plot a chart in a few lines.

Pandas introduced two new types of objects for storing data that make analytical tasks easier and eliminate the need to switch tools: Series, which have a List-like structure, and DataFrames which have a tabular structure.

- Pandas DataFrame: Pandas Dataframe is two-D size-mutable, potentially heterogeneous tabular data structure with labeled axes (rows and columns)

A Data frame is a two-dimensional data structure, ie, data is aligned in a tabular fashion in rows and columns. Pandas Data frame consists of three principal component, the data, rows, and columns.

Features of Data Frame

- Potentially columns are of different types
- Size-mutable
- Labeled axes (rows and columns)
- can perform Arithmetic operations on rows an columns

CSV File:

CSV (Comma-Separated value) Files are common files Format for transferring and storing data.

The basic process of loading data from CSV File into a Pandas DataFrame is achieved using the "read_CSV" Function in Pandas:

```
import pandas as pd
# Read data from file 'Filename.csv'
data = pd.read_CSV("Filename.csv")
data.head()
```

In [1]:
```
import pandas as pd

# create dataframe :- file read operation to read csv file
data= pd.read_csv('C:\\Users\\prath\Videos\\#2.second year\\sem3\PDS\\vgsales.csv')
data.head()
print (data)
print("*****************************************")
writer = pd.ExcelWriter('C:\\Users\\prath\Videos\\#2.second year\\sem3\PDS\\vgsales.xlsx')
data.to_excel(writer)
writer.save()
print('DataFrame is written successfully to Excel File.')
```

```
    Rank                                     Name Platform  Year         Genre  \
0      1                               Wii Sports      Wii  2006        Sports
1      2                     Super Mario Bros.       NES  1985      Platform
2      3                        Mario Kart Wii       Wii  2008        Racing
3      4                     Wii Sports Resort       Wii  2009        Sports
4      5               Pokemon Red/Pokemon Blue        GB  1996  Role-Playing
..   ...                                    ...      ...   ...           ...
94    95    The Legend of Zelda: Ocarina of Time      N64  1998        Action
95    96  Crash Bandicoot 2: Cortex Strikes Back       PS  1997      Platform
96    97                    Super Mario Bros. 2       NES  1988      Platform
97    98     Super Smash Bros. for Wii U and 3DS      3DS  2014      Fighting
98    99             Call of Duty: World at War     X360  2008       Shooter

                    Publisher  NA_Sales  EU_Sales  JP_Sales  Other_Sales  \
0                    Nintendo     41.49     29.02      3.77         8.46
1                    Nintendo     29.08      3.58      6.81         0.77
2                    Nintendo     15.85     12.88      3.79         3.31
3                    Nintendo     15.75     11.01      3.28         2.96
4                    Nintendo     11.27      8.89     10.22         1.00
..                        ...       ...       ...       ...          ...
94                   Nintendo      4.10      1.89      1.45         0.16
95  Sony Computer Entertainment      3.78      2.17      1.31         0.31
96                   Nintendo      5.39      1.18      0.70         0.19
97                   Nintendo      3.24      1.35      2.42         0.43
98                 Activision      4.79      1.90      0.00         0.69

    Global_Sales
0          82.74
1          40.24
2          35.82
3          33.00
4          31.37
..           ...
94          7.60
95          7.58
96          7.46
97          7.45
98          7.37

[99 rows x 11 columns]
*****************************************
DataFrame is written successfully to Excel File.
```

In [ ]: