JAWAHAR VIDYA MANDIR, SHYAMALI

INFORMATICS PRACTICES PROJECT FILE

(2024-25)

NAME :

CLASS and SECTION :

ROLL NO.:

REGISTRATION NO.:

CERTIFICATE

This is to certify that the content of this project entitled "**Importing/Exporting Data between CSV Files and Pandas** " is a bonafide work of,

of Class XII 'A', submitted to "**Mr. J. K. JAISWAL**" for consideration in partial fulfilment of the CBSE's AISSCE Examination 2022-23.

The original research work was carried out by him under my supervision in the academic year 2022-23. On the basis of the declaration made by him. I recommend this project for evaluation.

Teacher In-Charge

(Mr. J. K. JAISWAL)

External Examiner

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude of my teacher **Mr. Jayant Kumar Jaiswal** who gave me the golden opportunity to do this wonderful project of Informatics Practices on **Importing/Exporting Data between CSV Files and Pandas** who has helped me in completing my project. I came to know so many new things and I am really thankful to them.

Secondly, I would also like to thanks my parents and friends who helped me a lot in finalizing my project.

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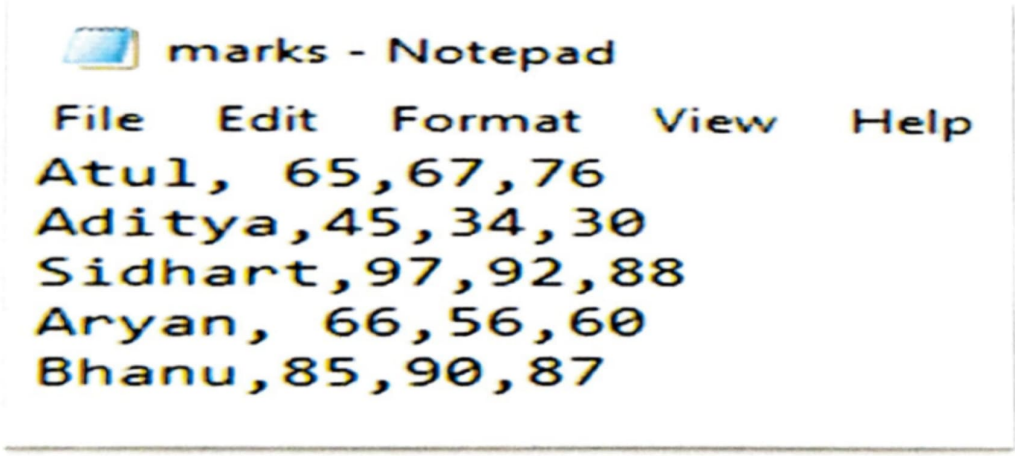
1. Write a program that reads from a csv file (marks.csv stored in data folder of C: drive having data as shown below: Name and marks in 3 subjects) in a dataframe. Then, the program should add a column "Total" storing total of marks in three subjects and another column storing average marks. Print the dataframe after adding these columns.

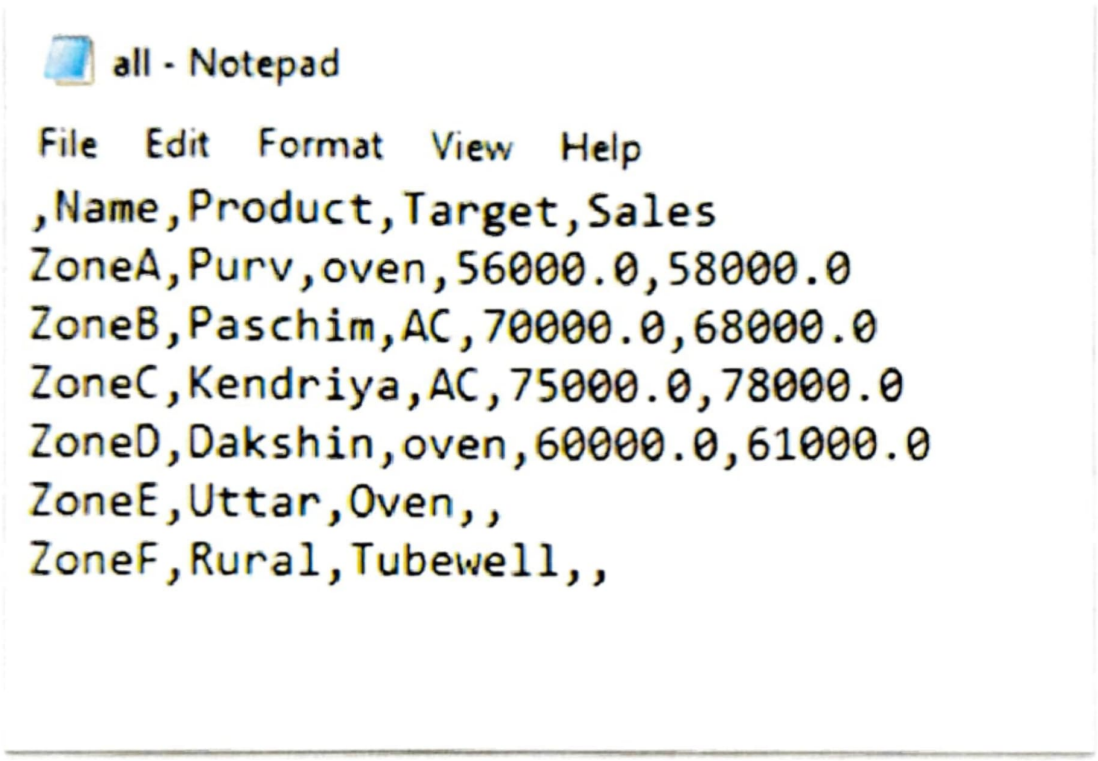


2. Consider the dataframe allDf as shown below:

	Name	Product	Target	Sales
ZoneA	Purv	oven	56000.0	58000.0
ZoneB	Paschim	AC	70000.0	68000.0
ZoneC	Kendriya	AC	75000.0	78000.0
ZoneD	Dakshin	oven	60000.0	61000.0
ZoneE	Uttar	Oven	NaN	NaN
ZoneF	Rural	Tubewell	NaN	NaN

Write a program to export the contents of this dataframe to a CSV file

Output:


all - Notepad
File Edit Format View Help
,Name,Product,Target,Sales
ZoneA,Purv,oven,56000.0,58000.0
ZoneB,Paschim,AC,70000.0,68000.0
ZoneC,Kendriya,AC,75000.0,78000.0
ZoneD,Dakshin,oven,60000.0,61000.0
ZoneE,Uttar,Oven,,
ZoneF,Rural,Tubewell,,

3. Write a program to read from a CSV file Employee.csv and create a dataframe from it.

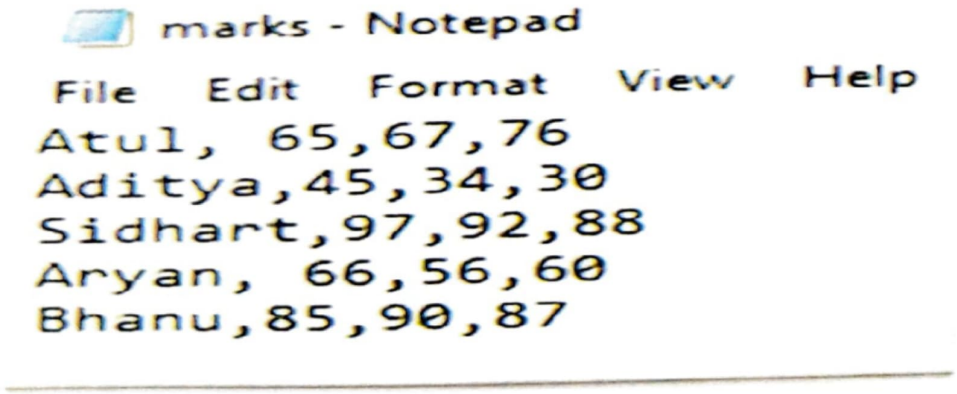
4. Write a program to read from a CSV file Employee.csv and create a dataframe from it but dataframe should not use file's column header rather should use own column no. 0,1,2 and so on.

5. Write a program to read from a CSV file Employee.csv and create a dataframe from it dataframe should not use file's column header rather should use own column headings as EmpID, EmpName, Designation and Salary. Also print the maximum salary given to an employee

ACTIVITY-01

Aim:

Write a program that reads from a csv file (**marks.csv** stored in data folder of C: drive having data as shown below: Name and marks in 3 subjects) in a DataFrame. Then, the program should add a column 'Total' storing total of marks in three subjects and another column storing average marks. Print the DataFrame after adding these columns.



INPUT:

```
import pandas as pd
df1 = pd.read_csv("C:\\data\\marks.csv", names = ["Name", "Marks1", "Marks2", "Marks3"])
print("Dataframe after fetching data from CSV file")
print(df1)
df1['Total'] = df1["Marks1"]+ df1[ "Marks2"]+ df1['Marks3'] #"Total" column
df1['Average Marks'] = df1['Total']/3
print("Dataframe after all calculations")
print(df1)
```

OUTPUT:

```
Dataframe after fetching data from CSV file
      Name    Marks1  Marks2  Marks3
0      Atul   65      67      76
1    Aditya   45      34      30
2   Sidhart   97      92      88
3     Aryan   66      56      60
4     Bhanu   85      90      87
Dataframe after all calculations
      Name    Marks1  Marks2  Marks3  Total   Average Marks
0      Atul   65      67      76      208         69.333333
1    Aditya   45      34      30      109         36.333333
2   Sidhart   97      92      88      277         92.333333
3     Aryan   66      56      60      182         60.666667
4     Bhanu   85      90      87      262         87.333333
```

ACTIVITY-02

Aim:

Consider the dataframeallDf as shown below:

	Name	Product	Target	Sales
ZoneA	Purv	oven	56000.0	58000.0
ZoneB	Paschim	AC	70000.0	68000.0
ZoneC	Kendriya	AC	75000.0	78000.0
ZoneD	Dakshin	oven	60000.0	61000.0
ZoneE	Uttar	Oven	NaN	NaN
ZoneF	Rural	Tubewell	NaN	NaN

Write a program to export the contents of this dataframe to a CSV file

Input:

```
import pandas as pd

#dataframe allDf created
#writing to csv file
allDf.to_csv("C:\\pywork\\all.csv")
```

INPUT:

```
import pandas as pd
df5= pd.read_csv("C:\\pywork\\Employee.csv",\
                 names=["EmpID", "EmpName", "Designation", "Salary"],\
                 skiprows=1)
print(df5)
print("Maximum salary is",df5.Salary.max())
```

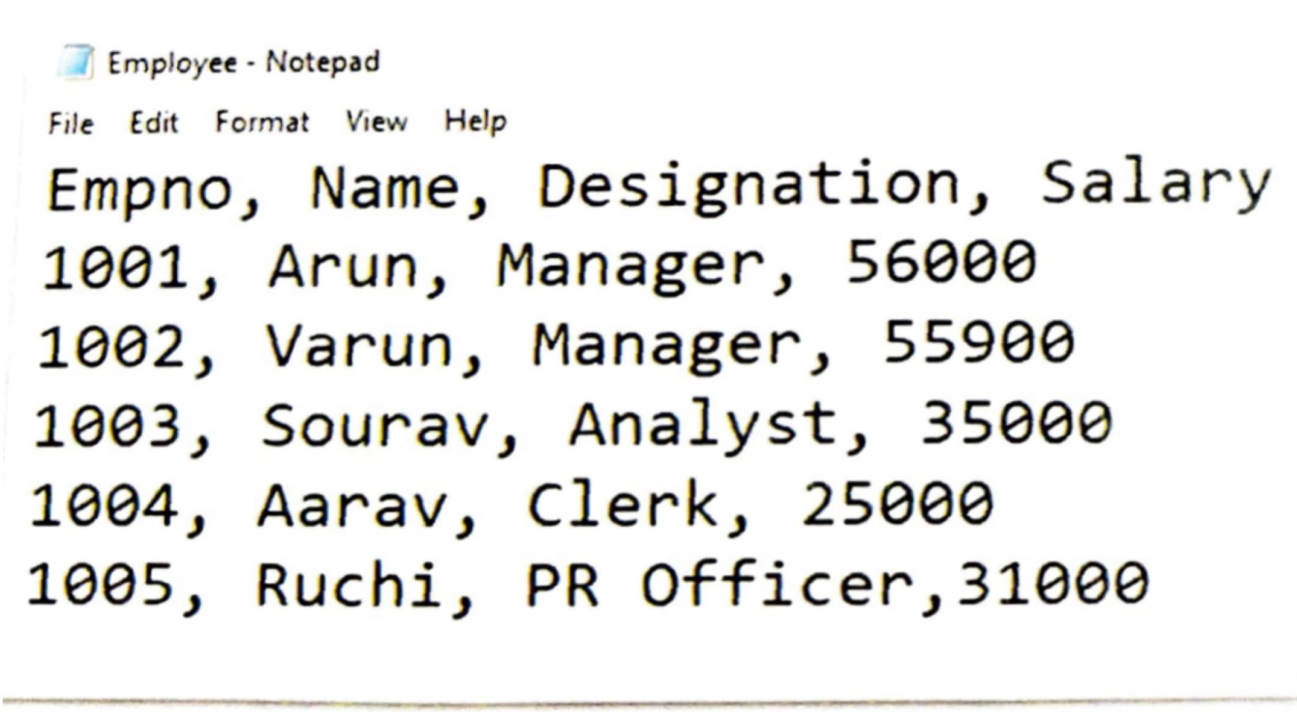
OUTPUT:

```
   Empno EmpName Designation  Salary
0   1001    Arun     Manager   56000
1   1002   Varun     Manager   55900
2   1003  Sourav     Analyst   35000
3   1004   Aarav       Clerk   33400
4   1005   Ruchi  PR Office    43000
Maximum salary is 56000
```

ACTIVITY - 05

Aim:

Write a program to read from a CSV file Employee.csv and create a dataframe from it dataframe should not use file's column header rather should use own column headings as EmpID, EmpName, Designation and Salary. Also print the maximum salary given to an employee.



INPUT:

```
import pandas as pd
df4= pd.read_csv("C:\\pywork\\Employee.csv", header=None, skiprows=1)
print(df4)
```

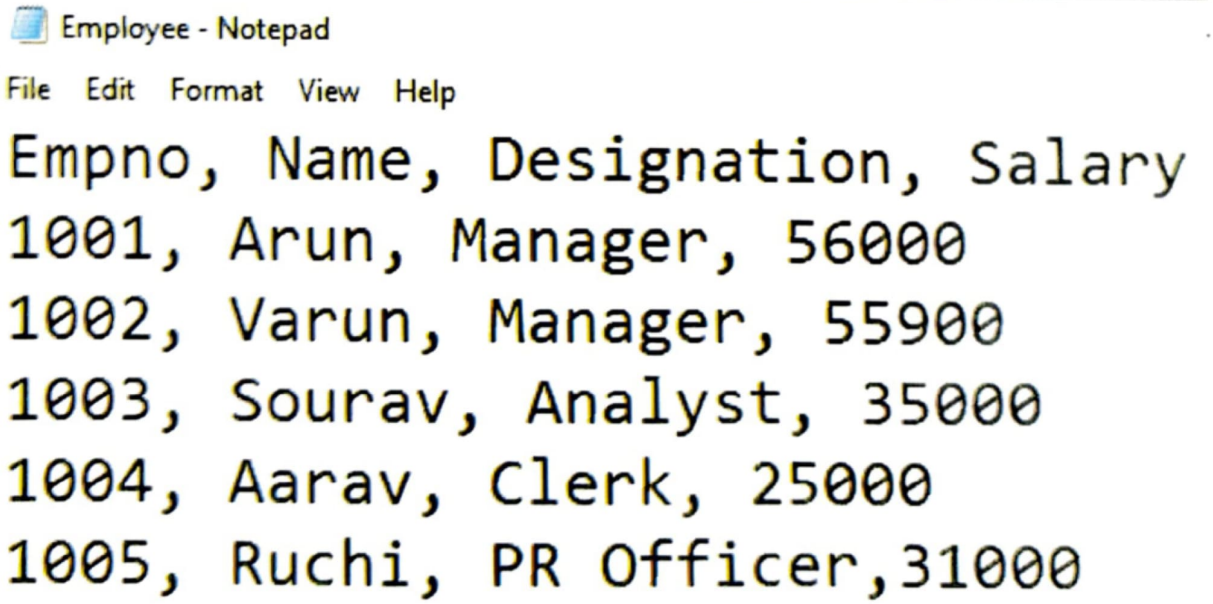
OUTPUT:

```
      0        1           2      3
0  1001     Arun     Manager  56000
1  1002    Varun     Manager  55900
2  1003   Sourav     Analyst  35000
3  1004    Aarav       Clerk  33400
4  1005    Ruchi  PR Office   43000
```

ACTIVITY-04

Aim:

Write a program to read from a CSV file Employee.csv and create a dataframe from it but dataframe should not use file's column header rather should use own column no. 0,1,2 and so on.



OUTPUT:

	Empno	Name	Designation	Salary
0	1001	Arun	Manager	56000
1	1002	Varun	Manager	55900
2	1003	Sourav	Analyst	35000
3	1004	Aarav	Clerk	33400
4	1005	Ruchi	PR Office	43000

ACTIVITY-03

Aim:

Write a program to read from a CSV file

Employee.csv and create a dataframe from it.

Employee - Notepad

File Edit Format View Help

```
Empno, Name, Designation, Salary
1001, Arun, Manager, 56000
1002, Varun, Manager, 55900
1003, Sourav, Analyst, 35000
1004, Aarav, Clerk, 25000
1005, Ruchi, PR Officer, 31000
```

Input:

```
import pandas as pd
df3= pd.read_csv("C:\\pywork\\Employee.csv")
print (df3)
```

Bibliography

- Informatics practices, Class XII, by NCERT
- Informatics practices, by Sumita Arora
- https://www.w3schools.com
- http://www.tutorialspoint.com
- https://onecompiler.com/mysql