

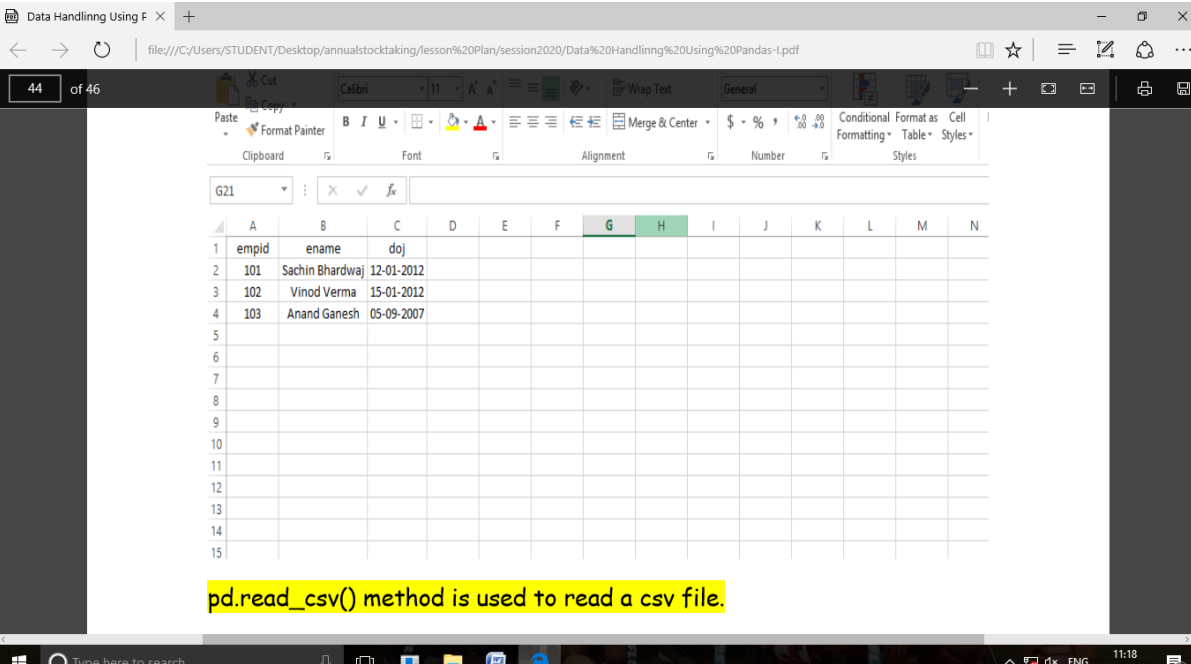
Chapter 4: Importing /Exporting Data between CSV Files/MySQL and Pandas

CSV File

A CSV is a comma separated values file, which allows data to be saved in a tabular format. CSV is a simple file such as a spreadsheet or database. Files in the csv format can be imported and exported from programs that store data in tables, such as Microsoft excel or Open Office.

CSV files data fields are most often separated, or delimited by a comma. Here the data in each row are delimited by comma and individual rows are separated by newline.

To create a csv file, first choose your favorite text editor such as- Notepad and open a new file. Then enter the text data you want the file to contain, separating each value with a comma and each row with a new line. Save the file with the extension.csv. You can open the file using MS Excel or another spread sheet program. It will create the table of similar data.



The screenshot shows a Microsoft Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	empid	ename	doj											
2	101	Sachin Bhardwaj	12-01-2012											
3	102	Vinod Verma	15-01-2012											
4	103	Anand Ganesh	05-09-2007											
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														

pd.read_csv() method is used to read a csv file.

The screenshot shows a PDF viewer window titled "Data Handling Using F". The address bar displays the file path: "file:///C:/Users/STUDENT/Desktop/annualstocktaking/lesson%20Plan/session2020/Data%20Handling%20Using%20Pandas-1.pdf". The page number is "44 of 46".

```
1 # importing pandas module
2 import pandas as pd
3 # making data frame
4 df = pd.read_csv("E:\emp.csv")
5 print(df)
6
```

	empid	ename	doj
0	101	Sachin Bhardwaj	12-01-2012
1	102	Vinod Verma	15-01-2012
2	103	Anand Ganesh	05-09-2007

The Windows taskbar at the bottom shows the search bar, taskbar icons, and system tray with the time "11:18" and date "28-07-2020".

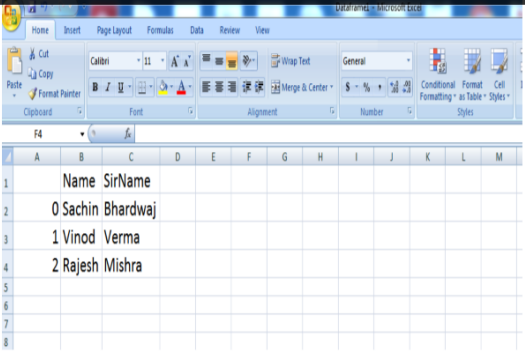
Exporting data from dataframe to CSV File

To export a data frame into a csv file first of all, we create a data frame say df1 and use `dataframe.to_csv(' E:\Dataframe1.csv ')` method to export data frame df1 into csv file Dataframe1.csv.

```
1 import pandas as pd
2 l = [{'Name': 'Sachin', 'SirName': 'Bhardwaj'},
3      {'Name': 'Vinod', 'SirName': 'Verma'},
4      {'Name': 'Rajesh', 'SirName': 'Mishra'}]
5 df1=pd.DataFrame(l)
6 # saving the dataframe
7 df1.to_csv('E:\Dataframe1.csv')
```

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	A	B	C	D	E	F	G	H	I	J	K	L	M
1		Name	SirName										
2		0	Sachin Bhardwaj										
3		1	Vinod Verma										
4		2	Rajesh Mishra										
5													
6													
7													
8													

And now the content of df1 is exported to csv file Dataframe1.

Installing and importing mysql connector, mysql client-

With Anaconda : if we have installed python using Anaconda, then mysql connector and mysql client need to be installed on your computer. We can check this in Anaconda Navigator, by Clicking on not installed in Environment

and then scroll down to find mysql connector and mysql client and by clicking on both these, install them in Anaconda.

Steps to import and export data using pandas

1. Start Python
2. import mysql.connector package
3. Create or open a database
4. Open and establish a connection to the database
5. Create a cursor object or its instance (required for Pandas to Mysql)
6. Read a sql query for (Mysql to Pandas) and execute a query for(Pandas to Mysql)
7. Commit the transaction for(Pandas to Mysql)
8. Close the connection for(Pandas to Mysql)

Exporting Data between Python Pandas & Mysql

Program 1- To insert and Delete record in MySQL from Pandas data frame.

Before execution of the program employee table contains no record.

```
mysql>select * from employee;
```

```
empty set(0.00 sec)
```

Data Handling using Pa x +

file:///C:/Users/STUDENT/Desktop/annualstocktaking/lesson%20Plan/session2020/Data%20Handling%20using%20Pandas-II.pdf

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```
In [8]: import mysql.connector
import pandas as pd
con=mysql.connector.connect(host="localhost",user="root",passwd="root",database="sachin")
print(con)
c=con.cursor()
print(df)
c.execute("delete from employee")
con.commit()
for(row,rs) in df.iterrows():
    empid=str(int(rs[0]))
    ename=rs[1]
    Doj=(rs[2])
    c.execute("insert into employee values('+ empid +','+ ename +','+ Doj +')")
con.commit()
c.close()
empdata={'empid':[101,102,103,104,105,106],
          'ename':['Sachin','Vinod','Lakhbir','Anil','Devinder','UmaSelvi'],
          'Doj':['2012-01-12','2012-01-15','2007-09-05','2012-01-17','2007-09-05','2012-01-16']}
df=pd.DataFrame(empdata)
print("Dta transfer Successfully")
```

For extracting data from data frame into different columns

For casting integer to string

Activate Windows
Go to Settings to activate Windows.

Type here to search

12:25
29-07-2020

Data Handling using Pa x +

file:///C:/Users/STUDENT/Desktop/annualstocktaking/lesson%20Plan/session2020/Data%20Handling%20using%20Pandas-II.pdf

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```
<mysql.connector.connection.MySQLConnection object at 0x000001F78BC5A828>
  empid  ename    Doj
0    101  Sachin  2012-01-12
1    102  Vinod   2012-01-15
2    103  Lakhbir 2007-09-05
3    104   Anil   2012-01-17
4    105  Devinder 2007-09-05
5    106  UmaSelvi 2012-01-16
Dta transfer Successfully
```

Activate Windows
Go to Settings to activate Windows.

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12:24
29-07-2020

After the execution of the program the records in employee table are-

```
mysql> select * from employee;
+-----+-----+-----+
| empid | ename   | Doj       |
+-----+-----+-----+
| 101   | Sachin | 2012-01-12 |
| 102   | Vinod  | 2012-01-15 |
| 103   | Lakhbir| 2007-09-05 |
| 104   | Anil   | 2012-01-17 |
| 105   | Devinder| 2007-09-05 |
| 106   | UmaSelvi| 2012-01-16 |
+-----+-----+-----+
6 rows in set (0.05 sec)
```

Activate Windows
Go to Settings to activate Windows.