

Name: Badal Prabhakar Wanjari  
Branch: Computer Technology  
Section: B  
Semester: 3<sup>rd</sup>  
Roll No. 140  
Reg. No. 20011045

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## Practical - 10

**Aim:** Study of Pandas dataframe and implement dataframe related operations.

### Programs:

#### Converting data into dataframe

Program:

```
import pandas as pd

data = {"Roll No": [101, 102, 103, 104, 105], "Name": ["Rahul", "Rajesh", "Raju", "Radha", "Raj"]}

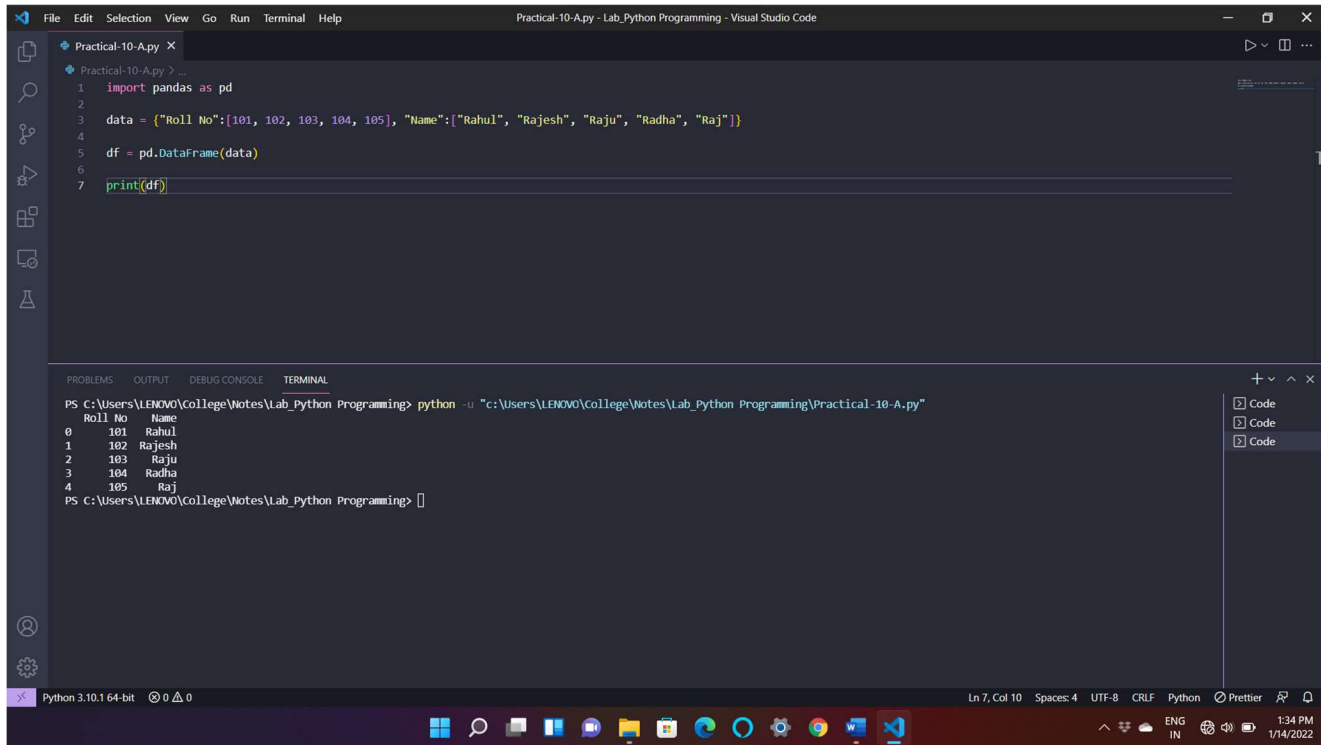
df = pd.DataFrame(data)

print(df)
```

Output:

	Roll No	Name
0	101	Rahul
1	102	Rajesh
2	103	Raju
3	104	Radha
4	105	Raj

Screenshot:



The screenshot shows a Visual Studio Code window with a file named 'Practical-10-A.py'. The code in the editor is as follows:

```
1 import pandas as pd
2
3 data = {"Roll No": [101, 102, 103, 104, 105], "Name": ["Rahul", "Rajesh", "Raju", "Radha", "Raj"]}
4
5 df = pd.DataFrame(data)
6
7 print(df)
```

The terminal at the bottom shows the output of the script:

```
PS C:\Users\LENOVO\College\Notes\Lab_Python Programming> python -u "c:\Users\LENOVO\College\Notes\Lab_Python Programming\Practical-10-A.py"
Roll No  Name
0      101  Rahul
1      102  Rajesh
2      103   Raju
3      104  Radha
4      105   Raj
PS C:\Users\LENOVO\College\Notes\Lab_Python Programming>
```

Inserting Row in dataframe:

Program:

```
import pandas as pd

data = {"Roll No": [101, 102, 103, 104, 105], "Name": ["Rahul", "Rajesh", "Raju",
"Radha", "Raj"]}

Marks = [100, 99, 97, 67, 87]

df = pd.DataFrame(data)

df.insert(2, "Marks", Marks)

print(df)
```

Output:

	Roll No	Name	Marks
0	101	Rahul	100
1	102	Rajesh	99
2	103	Raju	97
3	104	Radha	67
4	105	Raj	87

Screenshot:

The screenshot shows a Visual Studio Code window with a file named 'Practical-10-A.py'. The code in the editor is as follows:

```

1 import pandas as pd
2
3 data = {"Roll No": [101, 102, 103, 104, 105], "Name": ["Rahul", "Rajesh", "Raju", "Radha", "Raj"]}
4
5 Marks = [100, 99, 97, 67, 87]
6
7 df = pd.DataFrame(data)
8
9 df.insert(2, "Marks", Marks)
10
11 print(df)

```

The terminal at the bottom shows the command to run the script and its output:

```

PS C:\Users\LENOVO\College\Notes\Lab_Python Programming> python -u "c:\Users\LENOVO\College\Notes\Lab_Python Programming\Practical-10-A.py"
Roll No    Name    Marks
0      101  Rahul    100
1      102 Rajesh    99
2      103  Raju     97
3      104 Radha     67
4      105   Raj     87
PS C:\Users\LENOVO\College\Notes\Lab_Python Programming>

```

## Deleting Column from DataFrame:

Program:

```

import pandas as pd

data = {"Roll No": [101, 102, 103, 104, 105], "Name": ["Rahul", "Rajesh", "Raju", "Radha", "Raj"], "Marks" : [100, 99, 97, 67, 87]}

df = pd.DataFrame(data)

df = df.drop(['Name'], axis = 1)

print(df)

```

Output:

	Roll No	Marks
0	101	100
1	102	99
2	103	97
3	104	67
4	105	87

Screenshot:

The screenshot shows a Visual Studio Code window with a file named 'Practical-10-A.py'. The code in the editor is as follows:

```
1 import pandas as pd
2
3 data = {"Roll No": [101, 102, 103, 104, 105], "Name": ["Rahul", "Rajesh", "Raju", "Radha", "Raj"], "Marks": [100, 99, 97, 67, 87]}
4
5 df = pd.DataFrame(data)
6
7 df = df.drop(['Name'], axis = 1)
8
9 print(df)
```

The terminal at the bottom shows the execution of the script. It runs the command `python -u "c:\Users\LENOVO\College\Notes\Lab_Python Programming\Practical-10-A.py"` and displays the following output:

```
Roll No  Name  Marks
0      101   Rahul   100
1      102  Rajesh    99
2      103   Raju    97
3      104  Radha    67
4      105    Raj     87
```

The terminal shows the command being run twice, resulting in the same output each time. The status bar at the bottom indicates the Python version is 3.10.1 64-bit and the file encoding is UTF-8.

Result: By studying pandas library in Python, I have successfully completed Practical-10.