

19. Pandas – DataFrame - Adding, dropping columns & rows

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19. Pandas – DataFrame - Adding, dropping columns & rows

1. Adding column to DataFrame

- ✓ Based on requirement we can add column to existing DataFrame

Program Creating DataFrame
Name demo1.py
Input file sales8.csv

```
import pandas as pd

df = pd.read_csv("sales8.csv")

print(df.head(5))
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	1
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1
3	192840	Shahid	20	iPhone 11	60000	2
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3

Program Name Adding Status column to DataFrame
demo6.py
Input file sales8.csv

```
import pandas as pd

df = pd.read_csv("sales8.csv")

df['Status'] = "Delivered"
print(df.head())
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity	Status
0	192837	Veeru	3	LG Mobile	65999	1	Delivered
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2	Delivered
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1	Delivered
3	192840	Shahid	20	iPhone 11	60000	2	Delivered
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3	Delivered

Program Name Adding Total cost column to DataFrame
demo2.py
Input file sales8.csv

```
import pandas as pd

df = pd.read_csv("sales8.csv")

df["Total Cost"] = df['Product cost']*df['Quantity']

print(df.head(5))
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity	Total Cost
0	192837	Veeru	3	LG Mobile	65999	1	65999
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2	126000
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1	75999
3	192840	Shahid	20	iPhone 11	60000	2	120000
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3	209997

Program Name Adding Total cost column to DataFrame by using apply method
Input file demo3.py
sales8.csv

```
import pandas as pd

df = pd.read_csv('sales8.csv')

def total(df):
    t = df['Product cost'] * df['Quantity']
    return t

df['Total cost'] = df.apply(total, axis = 1)

print(df.head())
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity	Total cost
0	192837	Veeru	3	LG Mobile	65999	1	65999
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2	126000
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1	75999
3	192840	Shahid	20	iPhone 11	60000	2	120000
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3	209997

Program Name Adding total cost column to DataFrame in a specific position
Input file demo5.py
sales8.csv

```
import pandas as pd

df = pd.read_csv("sales8.csv")

print(df.head())

new = df['Product cost'] * df['Quantity']
df.insert(5,"Total Cost", new)

print()
print(df.head(5))
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	1
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1
3	192840	Shahid	20	iPhone 11	60000	2
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3

	Order Id	Customer name	Customer Id	Product name	Product cost	Total Cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	65999	1
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	126000	2
2	192839	Balaji	12	34in Ultrawide Monitor	75999	75999	1
3	192840	Shahid	20	iPhone 11	60000	120000	2
4	192841	Vinay	10	Bose SoundSport Headphones	69999	209997	3

2. Dropping columns from DataFrame

- ✓ Based on requirement we can drop column from existing DataFrame

Program Dropping single columns
Name demo7.py
Input file sales8.csv

```
import pandas as pd

df1 = pd.read_csv("sales8.csv")

df2 = df1.drop(columns = 'Customer name')

print(df1.head())
print()
print(df2.head())
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	1
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1
3	192840	Shahid	20	iPhone 11	60000	2
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3

	Order Id	Customer Id	Product name	Product cost	Quantity
0	192837	3	LG Mobile	65999	1
1	192838	19	Apple iPad 10.2-inch	63000	2
2	192839	12	34in Ultrawide Monitor	75999	1
3	192840	20	iPhone 11	60000	2
4	192841	10	Bose SoundSport Headphones	69999	3

Program Name Dropping multiple columns
demo8.py
Input file sales8.csv

```
import pandas as pd

df1 = pd.read_csv("sales8.csv")

df2 = df1.drop(['Customer name', 'Product name'], axis = 1)

print(df1.head())
print()
print(df2.head())
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	1
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1
3	192840	Shahid	20	iPhone 11	60000	2
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3

	Order Id	Customer Id	Product cost	Quantity
0	192837	3	65999	1
1	192838	19	63000	2
2	192839	12	75999	1
3	192840	20	60000	2
4	192841	10	69999	3

3. Dropping rows from DataFrame

- ✓ We can drop the rows from DataFrame by using drop method

Program Dropping single row
Name demo9.py
Input file sales8.csv

```
import pandas as pd

df1 = pd.read_csv("sales8.csv")

df2 = df1.drop(3, axis = 0)

print(df1.head())
print()
print(df2.head())
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	1
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1
3	192840	Shahid	20	iPhone 11	60000	2
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	1
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3
5	192842	Vinay	10	20in Monitor	65999	2

Program Name Dropping multiple rows
demo10.py
Input file sales8.csv

```
import pandas as pd

df1 = pd.read_csv("sales8.csv")
df2 = df1.drop([1, 2], axis = 0)

print(df1.head())
print()
print(df2.head())
```

Output

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	1
1	192838	Neelima	19	Apple iPad 10.2-inch	63000	2
2	192839	Balaji	12	34in Ultrawide Monitor	75999	1
3	192840	Shahid	20	iPhone 11	60000	2
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3

	Order Id	Customer name	Customer Id	Product name	Product cost	Quantity
0	192837	Veeru	3	LG Mobile	65999	1
3	192840	Shahid	20	iPhone 11	60000	2
4	192841	Vinay	10	Bose SoundSport Headphones	69999	3
5	192842	Vinay	10	20in Monitor	65999	2
6	192843	Balaji	12	iPhone 8	55999	3