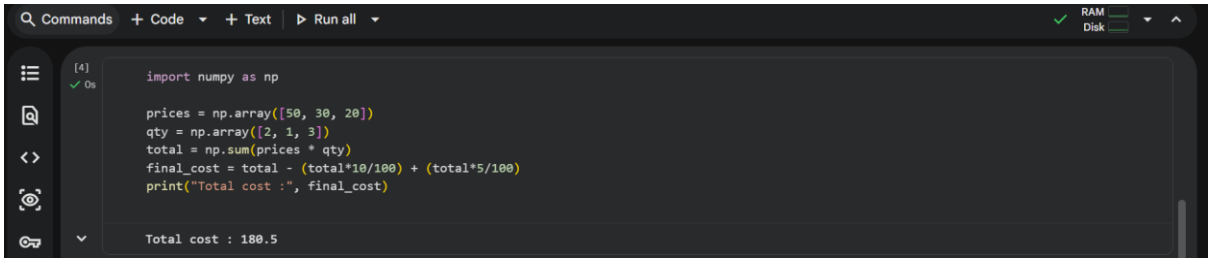
DSA0414 – FDS

LAB : DAY – 3 [05.02.2026]

EXP – 6



```
import numpy as np

prices = np.array([50, 30, 20])
qty = np.array([2, 1, 3])
total = np.sum(prices * qty)
final_cost = total - (total*10/100) + (total*5/100)
print("Total cost :", final_cost)
```

```
Total cost : 180.5
```

EXP – 7

```
import pandas as pd

order_data = pd.DataFrame({'cust':[1,1,2,2],'prod':['A','B','A','C'],'qty':[2,1,3,4],'date':pd.to_datetime(['2025-01-01','2025-01-02','2025
print(order_data.groupby('cust').size())
print(order_data.groupby('prod')['qty'].mean())
print(order_data['date'].min(), order_data['date'].max())
```

```
cust
1    2
2    2
dtype: int64
prod
A    2.5
B    1.0
C    4.0
Name: qty, dtype: float64
2025-01-01 00:00:00 2025-01-04 00:00:00
```

EXP – 8

```
import pandas as pd

sales = pd.DataFrame({'product':['A','B','A','C','B','A'],'qty':[5,3,4,2,6,7]})
top_products = sales.groupby('product')['qty'].sum().nlargest(5)
print(top_products)
```

```
product
A    16
B     9
C     2
Name: qty, dtype: int64
```

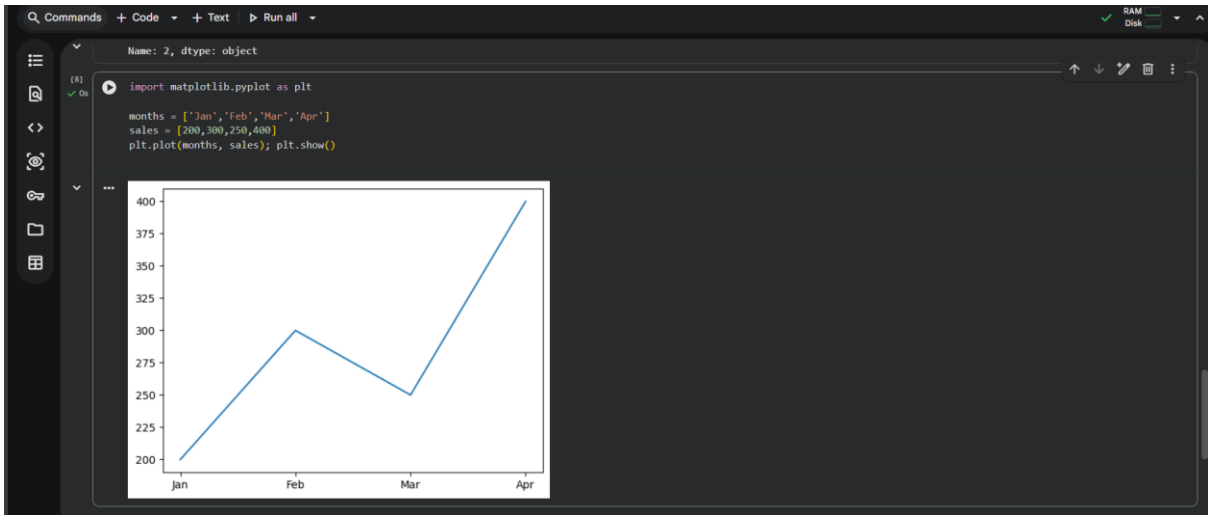
EXP – 9

```
import pandas as pd

property_data = pd.DataFrame({'loc':['X','Y','X'],'bed':[3,5,6],'area':[1500,2500,3000],'price':[500000,800000,1000000]})
print(property_data.groupby('loc')['price'].mean())
print(len(property_data[property_data['bed'] > 4]))
print(property_data.loc[property_data['area'].idxmax()])
```

```
loc
X    750000.0
Y    800000.0
Name: price, dtype: float64
2
loc           X
bed           6
area       3000
price    1000000
Name: 2, dtype: object
```

EXP – 10


Commands
+ Code
+ Text
Run all
RAM
Disk
Name: 2, dtype: object
[8]
0s
import matplotlib.pyplot as plt
months = ['Jan','Feb','Mar','Apr']
sales = [200,300,250,400]
plt.plot(months, sales); plt.show()
400
375
350
325
300
275
250
225
200
Jan
Feb
Mar
Apr