Write a Pandas program to create a Pivot table and find the maximum

and minimum sale value of the items.(refer sales\_data table)

Sales\_data table:

OrderDate Region Manager SalesMan Item Units Unit\_price Sale\_amt

1-6-18 East Martha Alexander Television 95 1,198.00 1,13,810.00

1-23-18 Central Hermann Shelli Home

Theater 50 500.00 25,000.00

2-9-18 Central Hermann Luis Television 36 1,198.00 43,128.00

2-26-18 Central Timothy David Cell

Phone 27 225.00 6,075.00

3-15-18 West Timothy Stephen Television 56 1,198.00 67,088.00

4-1-18 East Martha Alexander Home

Theater 60 500.00 30,000.00

4-18-18 Central Martha Steven Television 75 1,198.00 89,850.00

5-5-18 Central Hermann Luis Television 90 1,198.00 1,07,820.00

5-22-18 West Douglas Michael Television 32 1,198.00 38,336.00

6-8-18 East Martha Alexander Home

Theater 60 500.00 30,000.00

6-25-18 Central Hermann Sigal Television 90 1,198.00 1,07,820.00

7-12-18 East Martha Diana Home

Theater 29 500.00 14,500.00

7-29-18 East Douglas Karen Home

Theater 81 500.00 40,500.00

8-15-18 East Martha Alexander Television 35 1,198.00 41,930.00

9-1-18 Central Douglas John Desk 2 125.00 250.00

9-18-18 East Martha Alexander Video

Games 16 58.50 936.00

10-5-18 Central Hermann Sigal Home

Theater 28 500.00 14,000.00

10-22-18 East Martha Alexander Cell

Phone 64 225.00 14,400.00

Program:

import pandas as pd

# Assuming you have a DataFrame named 'sales\_data'

# with the provided columns and data

# Sample data for illustration purposes

data = {

'OrderDate': ['1-6-18', '1-23-18', '2-9-18', '2-26-18', '3-15-18', '4-1-18', '4-18-18', '5-5-18', '5-22-18', '6-8-18', '6-25-18', '7-12-18', '7-29-18', '8-15-18', '9-1-18', '9-18-18', '10-5-18', '10-22-18'],

'Region': ['East', 'Central', 'Central', 'Central', 'West', 'East', 'Central', 'Central', 'West', 'East', 'Central', 'East', 'East', 'East', 'Central', 'East', 'Central', 'East'],

'Manager': ['Martha', 'Hermann', 'Hermann', 'Timothy', 'Timothy', 'Martha', 'Martha', 'Hermann', 'Douglas', 'Martha', 'Hermann', 'Martha', 'Douglas', 'Martha', 'Central', 'Martha', 'Hermann', 'Martha'],

'SalesMan': ['Alexander', 'Shelli', 'Luis', 'David', 'Stephen', 'Alexander', 'Steven', 'Luis', 'Michael', 'Alexander', 'Sigal', 'Diana', 'Karen', 'Alexander', 'John', 'Alexander', 'Sigal', 'Alexander'],

'Item': ['Television', 'Home Theater', 'Television', 'Cell Phone', 'Television', 'Home Theater', 'Television', 'Television', 'Television', 'Home Theater', 'Television', 'Home Theater', 'Home Theater', 'Television', 'Desk', 'Video Games', 'Home Theater', 'Cell Phone'],

'Units': [95, 50, 36, 27, 56, 60, 75, 90, 32, 60, 90, 29, 81, 35, 2, 16, 28, 64],

'Unit\_price': [1198.00, 500.00, 1198.00, 225.00, 1198.00, 500.00, 1198.00, 1198.00, 1198.00, 500.00, 1198.00, 500.00, 500.00, 1198.00, 125.00, 58.50, 500.00, 225.00],

'Sale\_amt': ['1,13,810.00', '25,000.00', '43,128.00', '6,075.00', '67,088.00', '30,000.00', '89,850.00', '1,07,820.00', '38,336.00', '30,000.00', '1,07,820.00', '14,500.00', '40,500.00', '41,930.00', '250.00', '936.00', '14,000.00', '14,400.00']

}

sales\_data = pd.DataFrame(data)

# Clean up the 'Sale\_amt' column by removing commas and converting to float

sales\_data['Sale\_amt'] = sales\_data['Sale\_amt'].replace(',', '', regex=True).astype(float)

# Create a Pivot table

pivot\_table = pd.pivot\_table(sales\_data, values='Sale\_amt', index='Item', aggfunc=['min', 'max'])

# Display the Pivot table

print("Pivot Table:")

print(pivot\_table)

# Find the maximum and minimum sale values

max\_sale\_value = sales\_data['Sale\_amt'].max()

min\_sale\_value = sales\_data['Sale\_amt'].min()

print("\nMaximum Sale Value:", max\_sale\_value)

print("Minimum Sale Value:", min\_sale\_value)

Output:

