9.Write a Pandas program to create a Pivot table and find the total sale amount region wise, manager wise, sales man wise. .(refer sales_data table)

Sales_data:

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

CODE :

9.Pivot table sales.py - C:/Query processing/9.Pivot table sales.py (3.11.1)

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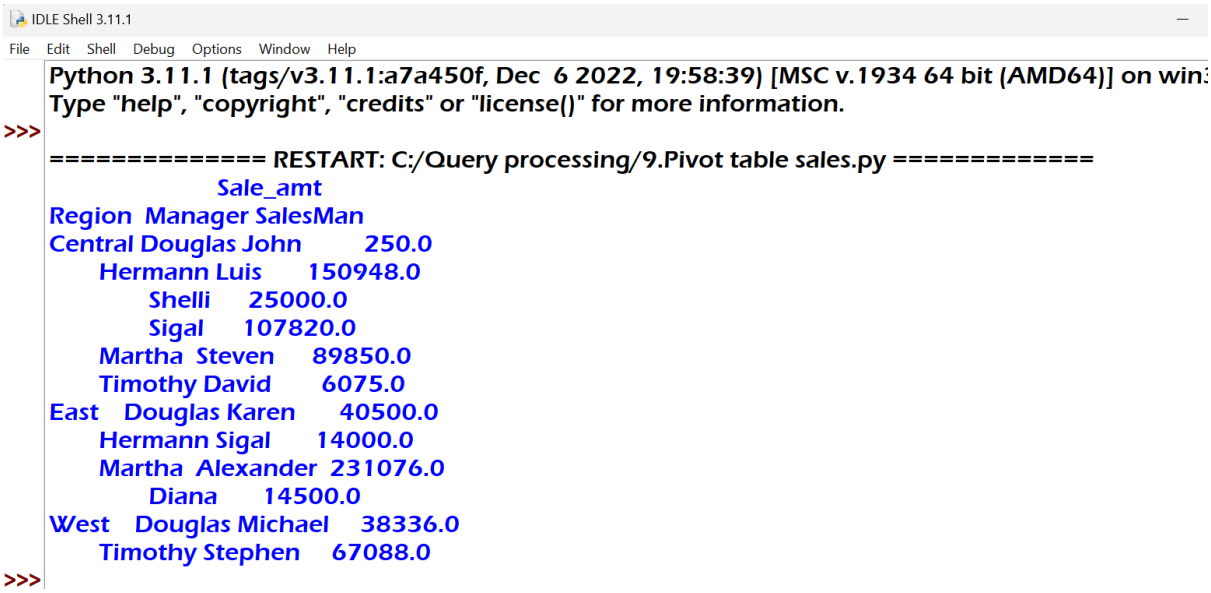
```
import pandas as pd
data = {
    "OrderDate": [
        "1-6-18", "1-23-18", "2-9-18", "2-26-18", "3-15-18",
        "4-1-18", "4-18-18", "5-5-18", "5-22-18", "6-8-18",
        "6-25-18", "7-12-18", "7-29-18", "8-15-18", "9-1-18",
        "9-18-18", "10-5-18", "10-22-18"
    ],
    "Region": [
        "East", "Central", "Central", "Central", "West",
        "East", "Central", "Central", "West", "East",
        "Central", "East", "East", "East", "Central",
        "East", "East", "East"
    ],
    "Manager": [
        "Martha", "Hermann", "Hermann", "Timothy", "Timothy",
        "Martha", "Martha", "Hermann", "Douglas", "Martha",
        "Hermann", "Martha", "Douglas", "Martha", "Douglas",
        "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": [
        113810.00, 25000.00, 43128.00, 6075.00, 67088.00,
        30000.00, 89850.00, 107820.00, 38336.00, 30000.00,
        107820.00, 14500.00, 40500.00, 41930.00, 250.00,
        936.00, 14000.00, 14400.00
    ]
}
df = pd.DataFrame(data)
pivot_table = pd.pivot_table(df, values='Sale_amt', index=['Region', 'Manager', 'SalesMan'], aggfunc='sum')
print(pivot_table.to_string())
```

OUTPUT:


IDLE Shell 3.11.1
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Python 3.11.1 (tags/v3.11.1:a7a450f, Dec 6 2022, 19:58:39) [MSC v.1934 64 bit (AMD64)] on win
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Query processing/9.Pivot table sales.py ==========
Sale_amt
Region Manager SalesMan
Central Douglas John 250.0
Hermann Luis 150948.0
Shelli 25000.0
Sigal 107820.0
Martha Steven 89850.0
Timothy David 6075.0
East Douglas Karen 40500.0
Hermann Sigal 14000.0
Martha Alexander 231076.0
Diana 14500.0
West Douglas Michael 38336.0
Timothy Stephen 67088.0
>>>