

### Experiment-13

Aim: To execute pandas program to detect missing values of a given dataframe.

Pseudo code:

- 1) Import libraries pandas.
- 2) Create a dataframe.
- 3) Use `isnull()` to identify missing values.
- 4) Display the result.

Sample Input:

```
df = pd.DataFrame(np.random.randn(10,4), columns=['A',  
                                                    'B', 'C', 'D'])
```

Sample Output:

	A	B	C	D
0	False	True	False	False
1	False	False	True	False
2	True	False	False	False
...	...	...	...	...
9	False	False	False	True

Result:

Then code has been executed successfully  
on got the output.

```

import pandas as pd
import numpy as np

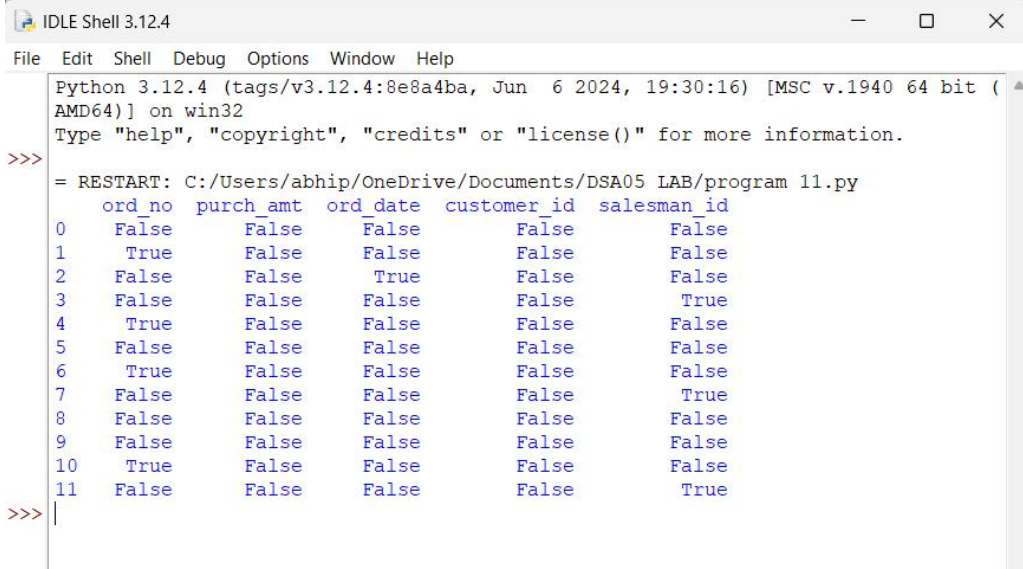
# Sample DataFrame based on your screenshot
data = {
    'ord_no': [70001, np.nan, 70002, 70004, np.nan, 70005, np.nan, 70010, 70003, 70012, np.nan, 70013],
    'purch_amt': [150.5, 270.65, 65.26, 110.5, 948.5, 2400.6, 5760.0, 1983.43, 2480.4, 250.45, 75.29, 3045.6],
    'ord_date': ['2012-10-05', '2012-09-10', np.nan, '2012-08-17', '2012-09-10', '2012-07-27', '2012-09-10', '2012-10-10', '2012-10-10', '2012-06-27', '2012-08-17', '2012-04-25'],
    'customer_id': [3002, 3001, 3001, 3003, 3002, 3001, 3001, 3003, 3003, 3002, 3001, 3001],
    'salesman_id': [5002, 5003, 5001, np.nan, 5002, 5001, 5001, np.nan, 5003, 5003, 5003, np.nan]
}

df = pd.DataFrame(data)

# Detect missing values
missing_values = df.isna()

# Display the DataFrame of True/False values indicating missing data
print(missing_values)

```



```

IDLE Shell 3.12.4
File Edit Shell Debug Options Window Help
Python 3.12.4 (tags/v3.12.4:8e8a4ba, Jun 6 2024, 19:30:16) [MSC v.1940 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/abhip/OneDrive/Documents/DSA05 LAB/program 11.py
   ord_no  purch_amt  ord_date  customer_id  salesman_id
0    False    False    False    False    False
1     True    False    False    False    False
2    False    False    True    False    False
3    False    False    False    False    True
4     True    False    False    False    False
5    False    False    False    False    False
6     True    False    False    False    False
7    False    False    False    False    True
8    False    False    False    False    False
9    False    False    False    False    False
10    True    False    False    False    False
11   False    False    False    False    True
>>>

```