--------------------------------------------------------------------------------------------------------------------------------------

1. Write a Pandas program to detect missing values of a given DataFrame.

Input:

df= pd.DataFrame({

ord\_no [70001.np.nan. 70002.70004.np.nan, 70005.пр.nan, 70010.70003.70012.np.na n.70013].

'purch amt 1150.5.270.65.65.26,110.5,948.5.2400.6.5760,1983.43.2480.4.250.45.75.29.3045.6],

'ord date: [2012-10-05, 2012-09-10 пр.nan '2012-08-17','2012-09-10, 2012-07-27 2012-09-102012-10-10 2012-10-10 2012-06-27','2012-08-17 2012-04-25'],

customer\_id': [3002.3001,3001,3003 3002.3001,3001.3004 3003 3002,3001,3001].

salesman\_id":5002,5003,5001, np.nan, 5002.5001,5001, пр.nan, 5003.5002.5003.пр.пan]))

//code

import pandas as pd

import numpy as np

# Create the DataFrame

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, 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, 3004, 3003, 3002, 3001, 3001],

'salesman\_id': [5002, 5003, 5001, np.nan, 5002, 5001, 5001, np.nan, 5003, 5002, 5003, np.nan]

}

df = pd.DataFrame(data)

# Detect missing values

missing\_values = df.isna()

# Count missing values in each column

missing\_values\_count = df.isna().sum()

# Print the missing values DataFrame

print("Missing values in the DataFrame:")

print(missing\_values)

# Print the count of missing values in each column

print("\nCount of missing values in each column:")

print(missing\_values\_count)

output:

Missing values in the DataFrame:

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

Count of missing values in each column:

ord\_no 4

purch\_amt 0

ord\_date 1

customer\_id 0

salesman\_id 3

dtype: int64

2. Write a Pandas program to drop the rows where at least one element is missing in a given DataFrame.

Input:

df= pd.DataFrame({

'ord\_no':[70001.np.nan, 70002,70004.np.nan, 70005.np.nan, 70010,70003,70012.np.na n.70013],

'purch\_amt':[150.5,270.65.65.26.110.5,948.5.2400.6,5760, 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': [3002,3001,3001.3003,3002,3001,3001,3004,3003,3002,3001,3001), 'salesman\_id":15002,5003,5001.np.nan, 5002,5001,5001,np.nan,5003,5002.5003, пр.п an]})

//code

import pandas as pd

import numpy as np

# Create the DataFrame

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, 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, 3004, 3003, 3002, 3001, 3001],

'salesman\_id': [5002, 5003, 5001, np.nan, 5002, 5001, 5001, np.nan, 5003, 5002, 5003, np.nan]

}

df = pd.DataFrame(data)

# Drop rows with any missing values

df\_cleaned = df.dropna()

# Print the cleaned DataFrame

print("DataFrame after dropping rows with missing values:")

print(df\_cleaned)

output:

DataFrame after dropping rows with missing values:

ord\_no purch\_amt ord\_date customer\_id salesman\_id

0 70001.0 150.50 2012-10-05 3002 5002.0

1 70003.0 2480.40 2012-10-10 3003 5003.0

………………………………………………………………………………………………………………………………………………………….