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,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]})

Code:

import pandas as pd

import numpy as np

# Given DataFrame

df = pd.DataFrame({

'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]})

# Detecting missing values and counting them

missing\_count = df.isnull().sum()

# Displaying the count of missing values in each column

print("Count of Missing Values in each column:")

print(missing\_count)

Output:

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.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]})

Code:

import pandas as pd

import numpy as np

# Given DataFrame

df = pd.DataFrame({

'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]})

# Dropping rows with missing values

df\_cleaned = df.dropna()

# Displaying the cleaned DataFrame

print(df\_cleaned)

Output:

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

0 70001.0 150.50 2012-10-05 3002 5002.0

5 70005.0 2400.60 2012-07-27 3001 5001.0

8 70003.0 2480.40 2012-10-10 3003 5003.0

9 70012.0 250.45 2012-06-27 3002 5002.0