

You are provided with the Titanic dataset containing information about passengers on the Titanic. Your task is to write Python code to answer the following questions based on the dataset.

- 1. Get the number of survivors by gender (Sex).
- 2. Get the number of non-survivors by gender (Sex).
- 3. Get the number of survivors by embarkation location (Embarked S).
- 4. Get the number of non-survivors by embarkation location (Embarked S).
- 5. Calculate the percentage of children (Age < 18) who survived.
- 6. Calculate the percentage of adults (Age >= 18) who survived.
- 7. Get the median age of survivors.
- 8. Get the median age of non-survivors.
- 9. Get the median fare of survivors.
- 10. Get the median fare of non-survivors.

The Titanic dataset contains columns as shown below.

Pas sen gerl d	Sur vive d	Pcl ass	Na me	Sex	Age	Sib Sp	Par ch	Tick et	Far e	Cab in	Em bar ked

Sample Test Cases

titanicDat... Submit Debugger Explorer 1 import pandas as pd 2 import numpy as np 3 4 # Load the Titanic dataset data = pd.read csv('Titanic-Dataset.csv') 5 6 data = pd.get dummies(data, columns=['Embarked'], drop first=True) 7 8 9 survivors by gender == data[data['Survived'] === 1]['Sex'].value counts() print(survivors by gender) 10 11 12 non\_survivors\_by\_gender == data[data['Survived'] === 0] ['Sex'].value counts() print(non survivors by gender) 13 14 #3. Get the number of survivors by embarked location (Embarked S) 15 16 survivors by embarked s= data[data['Survived'] == 1] 17 ['Embarked S'].value counts() 18 19 print(survivors by embarked s) 20 21 #4. Get the number of non-survivors by embarked location (Embarked S) 22 23 non\_survivors\_by\_embarked\_s="data[data['Survived']"===0] Activate Windows 

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You are provided with the Titanic dataset containing information about passengers on the Titanic. Your task is to write Python code to answer the following questions based on the dataset.

- 1. Calculate the survival rate by class.
- 2. Calculate the survival rate by embarkation location (Embarked S).
- 3. Calculate the survival rate by family size (FamilySize).
- 4. Calculate the survival rate by being alone (IsAlone).
- 5. Get the average fare by passenger class (Pclass).
- 6. Get the average age by passenger class (Pclass).
- 7. Get the average age by survival status (Survived).
- 8. Get the average fare by survival status (Survived).
- 9. Get the number of survivors by class (Pclass).
- 10. Get the number of non-survivors by class (Pclass).

The Titanic dataset contains columns as shown below,

Pas sen gerl d	Sur vive d	Pcl ass	Na me	Sex	Age	Sib Sp	Par ch	Tick et	Far e	Cab in	Em bar ked	

Sample Test Cases

titanicDat... Submit Explorer Debugger 1 import pandas as pd 2 import numpy as np 3 4 # Load the Titanic dataset 5 data = pd.read csv('Titanic-Dataset.csv') 6 data['FamilySize'] = data['SibSp'] + data['Parch'] data['IsAlone'] = np.where(data['FamilySize'] > 0, 0, 1) 7 data = pd.get dummies(data, columns=['Embarked'], drop first=True) 8 # 1. Calculate the survival rate by class 9 10 11 print(data.groupby('Pclass')['Survived'].mean()) # 2. Calculate the survival rate by embarked location 12 13 print(data.groupby('Embarked S')['Survived'].mean()) 14 #-3. Calculate the survival rate by family size 15 16 print(data.groupby('FamilySize')['Survived'].mean()) 17 18 # 4. Calculate the survival rate by being alone 19 20 print(data.groupby('IsAlone')['Survived'].mean()) # 5. Get the average fare by class 21 22 print(data.groupby('Pclass')['Fare'].mean()) 23 24 # 6. Get the average age by class 25 ------Activate Windows 

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You are provided with the Titanic dataset containing information about passengers on the Titanic. Your task is to write Python code to answer the following questions based on the dataset.

- 1. Create a new column 'IsAlone' which is 1 if the passenger is alone (FamilySize = 0), otherwise 0
- 2. Convert the 'Sex' column to numeric values (male: 0, female: 1).
- 3. One-hot encode the 'Embarked' column, dropping the first category.
- 4. Get the mean age of passengers.
- 5. Get the median fare of passengers.
- 6. Get the number of passengers by class.
- 7. Get the number of passengers by gender.
- 8. Get the number of passengers by survival status.
- 9. Calculate the survival rate of passengers.
- 10. Calculate the survival rate by gender.

The Titanic dataset contains columns as shown below.

Pas sen gerl d	Sur vive d	Pcl ass	Na me	Sex	Age	Sib Sp	Par ch	Tick et	Far e	Cab in	Em bar ked

Sample Test Cases

Explorer titanicDat... 1 import pandas as pd 2 import numpy as np 3 4 # Load the Titanic dataset 5 data = pd.read csv('Titanic-Dataset.csv') data['FamilySize'] = data['SibSp'] + data['Parch'] 6 7 8 # 1. Create a new column 'IsAlone' (1 if alone, 0 otherwise) 9 data['IsAlone'] == np.where(data['FamilySize'] === 0, 1, 0) 10 11 # 2. Convert 'Sex' to numeric (male: 0, female: 1) data['Sex'] = data['Sex'].map({'male': 0, 'female': 1}) 12 13 14 #.3. One-hot encode the 'Embarked' column 15 data = pd.get dummies(data, columns=['Embarked']) 16 #-4. Get the mean age of passengers 17 mean age = data['Age'].mean() 18 19 print( mean age) 20 #-5. Get the median fare of passengers 21 22 median fare = data['Fare'].median() 23 print( median fare)

# 6. Get the number of passengers by class

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You are provided with the Titanic dataset containing information about passengers on the Titanic. Your task is to write Python code to answer the following questions based on the dataset. For each question, perform necessary data cleaning, transformations, and calculations as required.

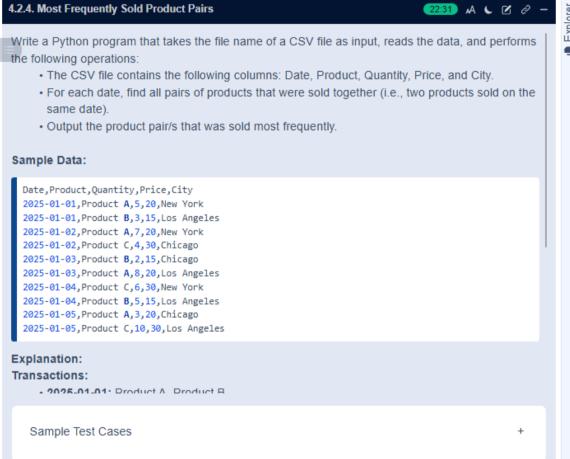
- 1. Display the first 5 rows of the dataset.
- 2. Display the last 5 rows of the dataset.
- 3. Get the shape of the dataset (number of rows and columns).
- 4. Get a summary of the dataset (using .info()).
- Get basic statistics (mean, standard deviation, etc.) of the dataset using .describe().
- 6. Check for missing values and display the count of missing values for each column.
- 7. Fill missing values in the 'Age' column with the median age.
- 8. Fill missing values in the 'Embarked' column with the most frequent value (mode).
- 9. Drop the 'Cabin' column due to many missing values.
- 10. Create a new column, 'FamilySize' by adding the 'SibSp' and 'Parch' columns.

The Titanic dataset contains columns as shown below.

Pas sen gerl d	Sur vive Pcl d ass	Na me	Sex	Age	Sib Sp	Par ch	Tick et	Far e	Cab in	Em bar ked	
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Sample Test Cases

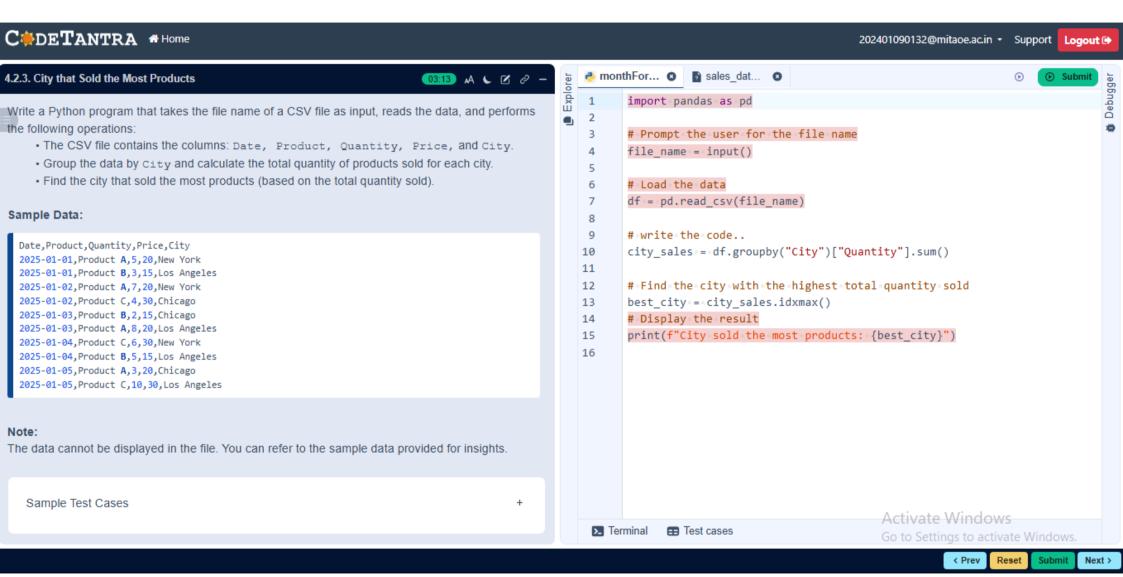
titanicDat... Explorer Debugger 1 import pandas as pd 2 import numpy as np 3 4 # Load the Titanic dataset 5 data = pd.read\_csv('Titanic-Dataset.csv') 6 7 # 1. Display the first 5 rows of the dataset 8 print(data.head()) 9 10 # 2. Display the last 5 rows of the dataset 11 print(data.tail()) 12 #-3. Get the shape of the dataset 13 14 15 print(data.shape) 16 # 4. Get a summary of the dataset (info) 17 18 print(data.info()) # 5. Get basic statistics of the dataset 19 20 print(data.describe()) 21 22 # 6. Check for missing values 23 print(data.isnull().sum()) 24 25 #-7. Fill missing values in the 'Age' column with the median age 



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   1
         import pandas as pd
   2
         from itertools import combinations
         from collections import Counter
   3
   4
   5
         # Prompt user to input the file name
   6
         file_name = input()
   8
         # Read data from the specified CSV file
   9
         df = pd.read csv(file name)
  10
  11
         # write the code
  12
  13
         grouped=df.groupby('Date')['Product'].apply(list)
  14
         product combination=[]
  15
        , for products in grouped:
  16
             product combination.extend(combinations(sorted(set(products)),2))
  17
         combinations count=Counter(product combination)
         max count=combinations count.most common(1)[0][1]
  18
        v for combo , count in combinations_count.items():
  19
  20
        , → if count==max count:
         >> print(f"{combo[0]} and {combo[1]}: {count} times")
  21
  22
  23
         # Output the most frequent product pairsd
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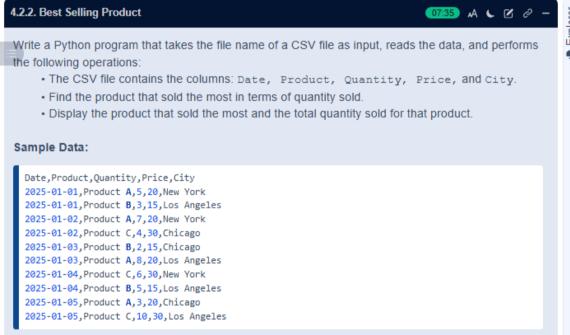
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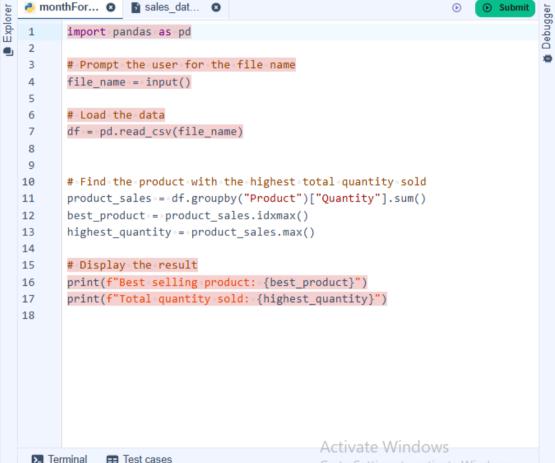


Note:

Sample Test Cases

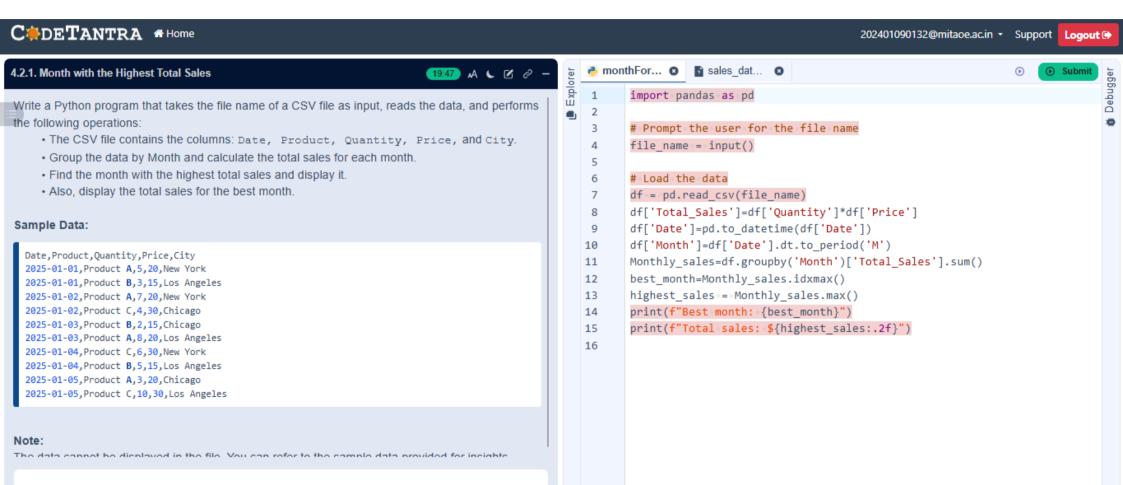


The data cannot be displayed in the file. You can refer to the sample data provided for insights.



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Sample Test Cases

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