To create a sample dataset of marks for various subjects using pandas in Python, you can follow these steps:

1. Import the pandas library:

* import pandas as pd

2. Create a dictionary containing the marks data for each subject:

marks\_data = {

'Maths': [80, 75, 90, 85, 95],

'English': [70, 65, 80, 75, 85],

'Science': [85, 80, 95, 90, 92],

'History': [75, 70, 85, 80, 88]

}

3. Create a pandas DataFrame using the dictionary:

df = pd.DataFrame(marks\_data)

Here's the complete code:

import pandas as pd

marks\_data = {

'Maths': [80, 75, 90, 85, 95],

'English': [70, 65, 80, 75, 85],

'Science': [85, 80, 95, 90, 92],

'History': [75, 70, 85, 80, 88]

}

df = pd.DataFrame(marks\_data)

The resulting DataFrame `df` will have the subject names as columns and the marks data as rows. Each row represents a student, and each column represents a subject.

You can further manipulate and analyze the data using pandas functions and methods on the created DataFrame.

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Selecting a single column and multiple columns from a DataFrame using the indexing operator in pandas:

import pandas as pd

data = {

'Name': ['John', 'Emma', 'Tom', 'Emily'],

'Age': [25, 28, 24, 26],

'Subject': ['Maths', 'English', 'Science', 'History'],

'Marks': [80, 90, 85, 70]

}

df = pd.DataFrame(data)

single\_column = df['Subject']

print(single\_column)

multiple\_columns = df[['Name', 'Marks']]

print(multiple\_columns)

In the above code, we create a sample DataFrame `df` with columns 'Name', 'Age', 'Subject', and 'Marks'.

To select a single column, we use the indexing operator `[]` and pass the column name as a string. For example, `df['Subject']` will return the 'Subject' column.

To select multiple columns, we use the indexing operator `[]` and pass a list of column names. For example, `df[['Name', 'Marks']]` will return a DataFrame with only the 'Name' and 'Marks' columns.

You can run this code and observe the output to see the selected columns from the DataFrame.