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SOURCE CODE:

```
import pandas as pd

import numpy as np

# Task 1: Creating data for the Data Frame

data = {'names': ['Person 1', 'Person 2', 'Person 3', 'Person 4', 'Person 5', 'Person 6', 'Person 7', 'Person 8', 'Person 9', 'Person 10'],

    'campus': np.random.choice(['vellore', 'chennai', 'bhopal', 'amaravati'], size=10),

    'branch': np.random.choice(['cse', 'it', 'EEE', 'ECE'], size=10),

    'prof': np.random.choice(['Saumya Mohandas', 'sri tulasi', 'Shivam Shivhare'], size=10),

    'attendance': np.random.choice(['present', 'absent'], size=10)}

# Creating the DataFrame 'df'

df = pd.DataFrame(data)

# Displaying the DataFrame

print(df)

print("\n")
```

OUTPUT:

```
smartbridge py > ass1.py > ...
1   import pandas as pd
2   import numpy as np
3
4   # Creating data for the DataFrame
5   data = {
6       'names': ['Person 1', 'Person 2', 'Person 3', 'Person 4', 'Person 5', 'Person 6', 'Person 7', 'Person 8', 'Person 9', 'Person 10'],
7       'campus': np.random.choice(['vellore', 'chennai', 'bhopal', 'amaravati'], size=10),
8       'branch': np.random.choice(['cse', 'it', 'EEE', 'ECE'], size=10),
9       'prof': np.random.choice(['Saumya Mohandas', 'sri tulasi', 'Shivam Shivhare'], size=10),
10      'attendance': np.random.choice(['present', 'absent'], size=10)
11  }
12
13  # Creating the DataFrame 'df'
14  df = pd.DataFrame(data)
15
16  # Displaying the DataFrame
17  print(df)
18

PROBLEMS 5   OUTPUT   DEBUG CONSOLE   TERMINAL

PS C:\Users\Pranaya\Desktop\Code> python -u "c:\Users\Pranaya\Desktop\Code\smartbridge py\ass1.py"
       names     campus branch            prof attendance
0   Person 1     bhopal    EEE  Shivam Shivhare    present
1   Person 2    vellore     it       sri tulasi    present
2   Person 3  amaravati     it  Saumya Mohandas     absent
3   Person 4     bhopal     it  Shivam Shivhare     absent
4   Person 5    vellore    EEE  Saumya Mohandas     absent
5   Person 6     bhopal     it  Shivam Shivhare     absent
6   Person 7    chennai     it  Shivam Shivhare    present
7   Person 8  amaravati    ECE  Saumya Mohandas     absent
8   Person 9    vellore    cse       sri tulasi     absent
9  Person 10     bhopal    cse       sri tulasi     absent
PS C:\Users\Pranaya\Desktop\Code>
```

 # Task 2: Check the info of 'df'

```
print("Task 2:")

print(df.info())

print("\n")
```

OUTPUT:

```
20  # Task 2: Check the info of 'df'
21  print("Task 2:")
22  print(df.info())
23  print("\n")
24
```

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL

```
Task 2:
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 5 columns):
 #   Column      Non-Null Count  Dtype
---  ------      --------------  -----
 0   names       10 non-null     object
 1   campus      10 non-null     object
 2   branch      10 non-null     object
 3   prof        10 non-null     object
 4   attendance  10 non-null     object
dtypes: object(5)
memory usage: 528.0+ bytes
None
```

 # Task 3: Check the descriptive statistics of 'df'

```
print("Task 3:")

print(df.describe())

print("\n")
```

OUTPUT:

```
25  # Task 3: Check the descriptive statistics of 'df'
26  print("Task 3:")
27  print(df.describe())
28  print("\n")
29
```

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL

```
Task 3:
          names   campus branch            prof attendance
count        10       10     10              10         10
unique       10        3      3               3          2
top     Person 1  vellore    ECE  Saumya Mohandas    present
freq          1        4      4               7          7
```

 # Task 4: Check the 4th index observation with 'loc' slicing operator

print("Task 4:")

print(df.loc[4])

print("\n")

OUTPUT:

```
30  # Task 4: Check the 4th index observation with 'loc' slicing operator
31  print("Task 4:")
32  print(df.loc[4])
33  print("\n")
34
```

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL

```
Task 4:
names               Person 5
campus                bhopal
branch                    it
prof          Saumya Mohandas
attendance             absent
Name: 4, dtype: object
```

 # Task 5: Check the null values in your 'df'

print("Task 5:")

print(df.isnull().sum())

OUTPUT:

```
35  # Task 5: Check the null values in your 'df'
36  print("Task 5:")
37  print(df.isnull().sum())
```

PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL

```
Task 5:
names         0
campus        0
branch        0
prof          0
attendance    0
dtype: int64
PS C:\Users\Pranaya\Desktop\Code>
```