Certificate Course in Machine Learning using Python [6 Weeks]

Exercises and Practice Problems in Python

Exercises and Practice Problems (Pandas DataFrame)

Q. Create a data frame:

'Name': ['Ankit', 'Amit', 'Aishwarya', 'Priyanka', 'Priya', 'Shaurya'],

'Age': [21, 19, 20, 16, 17, 21],

'Stream': ['Math', 'Commerce', 'Science', 'Math', Commerce, 'Science'],

'Percentage': [88, 92, 95, 70, 65, 78]}

import pandas as pd

```
d={'Name': ['Ankit', 'Amit', 'Aishwarya', 'Priyanka', 'Priya', 'Shaurya' ],
  'Age': [21, 19, 20, 16, 17, 21],
  'Stream': ['Math', 'Commerce', 'Science', 'Math', 'Commerce', 'Science'],
  'Percentage': [88, 92, 95, 70, 65, 78]}

df=pd.DataFrame(d)
df
```

Q. Insert a new row – Name: Sahil, Age-23, Stream- Commerce, Percentage-88.

```
new_df=pd.DataFrame([['Sahil',23,'Commerce',88]],columns=['Name','Age','Stream','Percentage'])
df=df.append(new_df,ignore_index=True)
df
```

Q. Select rows where percentage is >80

```
print(df.loc[df['Percentage']>80])
```

Q. Selecting all the rows from the given dataframe in which 'Stream' is Commerce

```
print(df.loc[df['Stream'].isin(['Commerce','Science'])])
```

Q. Selecting all the rows from the given dataframe in which 'Age' is greater than 18

```
print(df.loc[df['Age']>18])
```

Q. Print sum of age and percentage only

```
print("Sum of age",sum(df['Age']))
print("Sum of Percentage",sum(df['Percentage']))
```

Q. Get the first 3 rows of above DataFrame

```
df.head(3)
```

Q. Write a Pandas program to count the number of rows and columns of a DataFrame

```
print("Total rows in df dataframe:",  df.shape[0])
print("Total columns in df dataframe:",  df.shape[1])
```

Q. Print mean value of Age and Percentage.

```
import numpy as np
mean_age=np.mean(df['Age'])
print("Mean value of Age:{:.2f}".format(mean_age))
print("Mean value of Percentage:{:.2f}".format(np.mean(df['Percentage'])))
```

Q. Find Minimum age

```
print("Minimum age:",min(df['Age']))
```

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Python Demonstration Code: Day 9 ►

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