CORE MODULE 5

Business Data Analytics

PRACTICAL

Name	**: -**	**Prateek Kumar**
Registration No	**: -**	**ADIT22AP00152**
NSTI Name	**: -**	**NSTI Noida**
Course	**: -**	**ADIT (IBM)**
Date	**: -**	**23-10-2024**
Module	**: -**	**Core Module 5**
Practical	**: -**	**Business data analytics**
Requirements/tools	**: -**	

i) Hardware: -

i. **Working PC with Hard disk installed**
ii. **Internet connection**

ii) Software: -

i. **Browser for google collab**

Question 1: - Write a NumPy program to generate a random number between 0 and 1.

Solution: -

STEP1:- Open google collab using google search than import the library (NumPy)

```
import numpy as np
```

STEP2: - Generate a random number using np.random.rand() it is a function from the NumPy library that generates random numbers.

```
random_number = np.random.rand()
```

STEP3: - Print the random number

```
print(random_number)
```

the complete code is

```
import numpy as np
random_number = np.random.rand()
print(random_number)
```

output

```
[1]  import numpy as np

     # Generate a random number between 0 and 1
     random_number = np.random.rand()

     # Print the random number
     random_number
```

```
0.30352851026848293
```

Question 2: - Write a pandas program to create a dataframe from a dictionary and display it

Sample data: {'X':[78,85,96,80,86],'Y':[84,94,89,83,86], 'Z':[86,97,96,72,83]}

Solution: -

STEP1: - Open google collab using google search than import the library (pandas)

```
import pandas as pd
```

STEP2: - Create a variable named data and create a dictionary using our sample data.

```
data = {'X':[78,85,96,80,86], 'Y':[84,94,89,83,86], 'Z':[86,97,96,72,83]}
```

STEP3 :- create a dataframe named df using pandas dataframe to convert this dictionary in pandas data structure dataframe

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

STEP4: - Print the dataframe

```
Print(df)
```

the complete code is

```
import pandas as pd


data = {'X':[78,85,96,80,86], 'Y':[84,94,89,83,86], 'Z':[86,97,96,72,83]}
df = pd.DataFrame(data)
print(df)
```

output:-

```
import pandas as pd

data = {'X':[78,85,96,80,86], 'Y':[84,94,89,83,86], 'Z':[86,97,96,72,83]}
df = pd.DataFrame(data)
df
```

	X	Y	Z
0	78	84	86
1	85	94	97
2	96	89	96
3	80	83	72
4	86	86	83