```
import pandas as pd
import numpy as np
# Create a pandas dataframe with numpy random values
data = np.random.randn(4, 4)#4 rows and 4 columns
df = pd.DataFrame(data)
# Rename columns
df.columns = ['Random value 1', 'Random value 2', 'Random value 3',
'Random value 4'1
df.head()
{"summary":"{\n \"name\": \"df\",\n \"rows\": 4,\n \"fields\": [\n
{\n \"column\": \"Random value 1\",\n \"properties\": {\n
\"dtype\": \"number\",\n \"std\": 0.5381489175736578,\n
\"min\": -2.1098032507812334,\n\ \"max\": -0.8109849300605916,\n\ \"num_unique_values\": 4,\n\ \"samples\": [\n\ -0.8109849300605916,\n\ -0.8109849300
1.2669061665726347\n
                                                    ],\n
                                                                     \"semantic_type\": \"\",\n
                                                    \"description\": \"\"\n
\"Random value 2\",\n
\"number\",\n \"std\": 0.6894381157695613,\n
                                                                                                                 \"min\": -
                                            \"max\": -0.8052027227780121,\n
2.265577729790332,\n
\"num unique values\": 4,\n \"samples\": [\n
0.8052027227780121,\n
                                                           -2.265577729790332,\n
1.7775172143704303\n
                                                     ],\n
                                                                    \"semantic type\": \"\",\n
                                                                    },\n {\n \"column\":
\"description\": \"\"\n
                                                     }\n
\"Random value 3\",\n
                                                    \"properties\": {\n
                                                                                                      \"dtype\":
\"number\",\n \"std\": 0.489793438832578,\n \"min\": -
                                           \"max\": 0.5756508843938366,\n
0.5283684139219307,\n
                                                      \"samples\": [\n
\"num unique values\": 4,\n
0.41863685744523016,\n
                                                            0.24658748558160729,\n
                                                                     \"semantic_type\": \"\",\n
0.5283684139219307\n
                                                     ],\n
\"description\": \"\"\n
                                                                     },\n {\n \"column\":
                                                      }\n
\"Random value 4\",\n \"properties\": {\n
                                                                                                       \"dtype\":
\"number\",\n \"std\": 1.3555276462630594,\n
                                                                                                               \"min\": -
2.5861607341875565,\n\\"max\": 0.3972936117444579,\n
\"num_unique_values\": 4,\n
                                                                 \"samples\": [\n
2.5861607341875565,\n
                                                        -0.26909627592134866,\n
                                                                            \"semantic type\": \"\",\n
0.3972936117444579\n
                                                     ],\n
\"description\": \"\n }\n
                                                                    }\n ]\
n}","type":"dataframe","variable_name":"df"}
print("Descriptive Statistics:")
print(df.describe())
Descriptive Statistics:
             Random value 1 Random value 2 Random value 3 Random value 4
                        4.000000
                                                      4.000000
                                                                                      4.000000
                                                                                                                    4.000000
count
                       -1.401598
                                                     -1.452661
                                                                                      0.178127
                                                                                                                   -0.594276
mean
```

```
0.489793
std
             0.538149
                             0.689438
                                                              1.355528
min
            -2.109803
                            -2.265578
                                             -0.528368
                                                             -2.586161
25%
            -1.591474
                            -1.899532
                                              0.052849
                                                             -0.848362
50%
            -1.342802
                             -1.369932
                                              0.332612
                                                             -0.094118
75%
            -1.152926
                            -0.923061
                                              0.457890
                                                              0.159968
            -0.810985
                            -0.805203
                                              0.575651
                                                              0.397294
max
print("\nNull Values:")
print(df.isnull().sum())
Null Values:
Random value 1
Random value 2
                  0
                  0
Random value 3
Random value 4
                  0
dtype: int64
print("\nData Types:")
print(df.dtypes)
Data Types:
Random value 1
                  float64
Random value 2
                  float64
Random value 3
                  float64
Random value 4
                  float64
dtype: object
print("\nRandom value 2 column with location method:")
print(df.loc[:, 'Random value 2'])
print("\nRandom value 3 column with location method:")
print(df.loc[:, 'Random value 3'])
print("\nRandom value 2 column with index location method:")
print(df.iloc[:, 1])
print("\nRandom value 3 column with index location method:")
print(df.iloc[:, 2])
Random value 2 column with location method:
    -1.777517
1
    -0.805203
2
    -0.962347
    -2.265578
Name: Random value 2, dtype: float64
Random value 3 column with location method:
    -0.528368
```

```
1
     0.418637
2
     0.575651
3
     0.246587
Name: Random value 3, dtype: float64
Random value 2 column with index location method:
    -1.777517
1
    -0.805203
2
    -0.962347
3
    -2.265578
Name: Random value 2, dtype: float64
Random value 3 column with index location method:
    -0.528368
1
     0.418637
2
     0.575651
3
     0.246587
Name: Random value 3, dtype: float64
```