Creating a dataframe from Pandas series

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Series is a type of list in pandas which can take any data type (string, number, obj... in Pandas Series we return an object in the form of list... length of values in series.

Later in this article, we will discuss dataframes in pandas. The difference between Series and Dataframe. Series can only contain single list with index, whereas dataframe can be made of more than one series or we can say that a dataframe is a collection of series that can be used to analyse the data.

Code #1: Creating a simple Series

```
import pandas as pd
import matplotlib.pyplot as plt

author = ['Jitender', 'Purnima', 'Arpit', 'Jyoti']

auth_series = pd.Series(author)
print(auth_series)
```

Output:

```
0    Jitender
1     Purnima
2       Arpit
3       Jyoti
dtype: object
```

Let's check type of Series:

```
import pandas as pd
import matplotlib.pyplot as plt

author = ['Jitender', 'Purnima', 'Arpit', 'Jy

auth_series = pd.Series(author)
print(type(auth_series))
```

Output:

```
<class 'pandas.core.series.Series'>
```

Code #2: Creating Dataframe from Series

```
import pandas as pd
import matplotlib.pyplot as plt

author = ['Jitender', 'Purnima', 'Arpit', 'Jyoti']
article = [210, 211, 114, 178]

auth_series = pd.Series(author)
article_series = pd.Series(article)

frame = { 'Author': auth_series, 'Article': article_series }

result = pd.DataFrame(frame)

print(result)
```

Output:

```
     Author  Article
0  Jitender      210
1   Purnima      211
2     Arpit      114
3     Jyoti      178
```

Explanation:

We are combining two series *Author* and *Article published*. Create a dictionary so that we can combine the metadata for series. Metadata is the data of data that can define the series of values. Pass this dictionary to pandas DataFrame and finally you can see the result as combination of two series i.e f author and number of articles.

```
import pandas as pd
import matplotlib.pyplot as plt

author = ['Jitender', 'Purnima', 'Arpit', 'Jy
article = [210, 211, 114, 178]

auth_series = pd.Series(author)
article_series = pd.Series(article)

frame = { 'Author': auth_series, 'Article': a

result = pd.DataFrame(frame)
age = [21, 21, 24, 23]

result['Age'] = pd.Series(age)

print(result)
```


Output:

```
     Author  Article  Age
0  Jitender      210   21
1   Purnima      211   21
2     Arpit      114   24
3     Jyoti      178   23
```

Explanation:

We have added one more series externally named as *age* of the authors, then directly added this series in the pandas dataframe. Remember one thing if any value is missing then by default it will be converted into NaN value i.e *null* by default.

Code #4: Missing value in dataframe

```
import pandas as pd
import matplotlib.pyplot as plt

author = ['Jitender', 'Purnima', 'Arpit', 'Jyoti']
article = [210, 211, 114, 178]

auth_series = pd.Series(author)
article_series = pd.Series(article)

frame = { 'Author': auth_series, 'Article': article_series }

result = pd.DataFrame(frame)
age = [21, 21, 23]

result['Age'] = pd.Series(age)
```

Output:

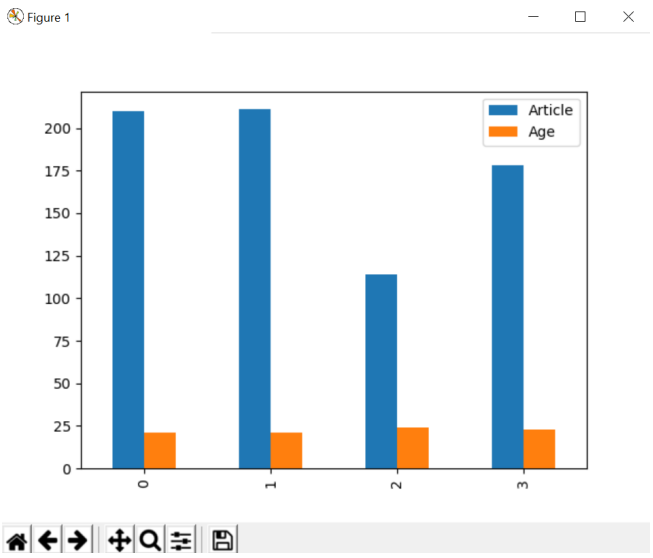
```
     Author  Article   Age
0  Jitender      210  21.0
1   Purnima      211  21.0
2     Arpit      114  23.0
3     Jyoti      178   NaN
```


Code #5: Data Plot on graph

Using `plot.bar()` we have created a bar graph.

```
import pandas as pd
import matplotlib.pyplot as plt

author = ['Jitender', 'Purnima', 'Arpit', 'Jyoti']
article = [210, 211, 114, 178]

auth_series = pd.Series(author)
article_series = pd.Series(article)

frame = { 'Author': auth_series, 'Article': article_series }

result = pd.DataFrame(frame)
age = [21, 21, 24, 23]

result['Age'] = pd.Series(age)

result.plot.bar()
plt.show()
```

Output:



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