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# Python | Pandas DataFrame.fillna() to replace Null values in dataframe

Difficulty Level : Easy   •   Last Updated : 17 Sep, 2018

Python is a great language for doing data analysis, primarily because of the fantastic ecosystem of data-centric Python packages. **Pandas** is one of those packages, and makes importing and analyzing data much easier.

Sometimes csv file has null values, which are later displayed as *NaN* in Data Frame. Just like pandas `dropna()` method manage and remove Null values from a data frame, `fillna()` manages and let the user replace NaN values with some value of their own.

**Syntax:**

> *DataFrame.fillna(value=None, method=None, axis=None, inplace=False, limit=None, downcast=None, \*\*kwargs)*

**Parameters:**

> **value :** *Static, dictionary, array, series or dataframe to fill instead of NaN.*
> **method :** *Method is used if user doesn't pass any value. Pandas has different methods like* `bfill`*,* `backfill` *or* `ffill` *which fills the place with value in the Forward index or Previous/Back respectively.*
> **axis:** *axis takes int or string value for rows/columns. Input can be 0 or 1 for Integer and 'index' or 'columns' for String*
> **inplace:** *It is a boolean which makes the changes in data frame itself if True.*
> **limit :** *This is an integer value which specifies maximum number of consequetive forward/backward NaN value fills.*

***kwargs : Any other Keyword arguments*

For link to CSV file Used in Code, click here.

**Example #1:** Replacing NaN values with a Static value.

**Before replacing:**

```python
# importing pandas module
import pandas as pd

# making data frame from csv file
nba = pd.read_csv("nba.csv")

nba
```

**Output:**

**After replacing:**

In the following example, all the null values in College column has been replaced
with "No college" string. Firstly, the data frame is imported from CSV and then
College column is selected and `fillna()` method is used on it.

```python
# importing pandas module
import pandas as pd

# making data frame from csv file
nba = pd.read_csv("nba.csv")

# replacing na values in college with No college
nba["College"].fillna("No College", inplace = True)

nba
```

**Output:**

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college column of row 4 and 5.

Similarly, bfill, backfill and pad methods can also be used.

```python
# importing pandas module
import pandas as pd

# making data frame from csv file
nba = pd.read_csv("nba.csv")

# replacing na values in college with No college
nba["College"].fillna( method ='ffill', inplace = True)

nba
```

**Output:**

**Example #3:** Using Limit

In this example, a limit of 1 is set in the *fillna()* method to check if the function stops replacing after one successful replacement of NaN value or not.

```python
# importing pandas module
import pandas as pd

# making data frame from csv file
nba = pd.read_csv("nba.csv")

# replacing na values in college with No college
nba["College"].fillna( method ='ffill', limit = 1, inplace = True)

nba
```
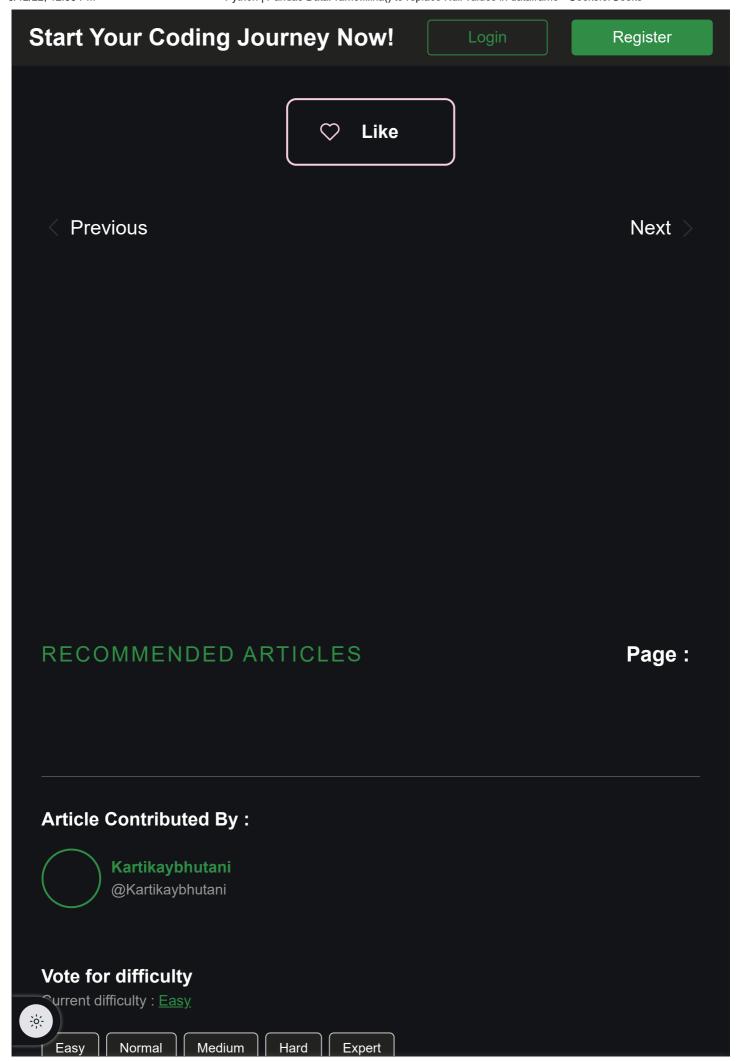
**Output:**

As shown in the output, The college column of 4th row was replaced but 5th one wasn't since the limit was set 1.

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