

Handling Missing Values



Pandas Replace | Handling Missing Values Using Pandas

Replace “Priyang” with “Anil”.

| | Name | Marks | Grades |
|---|---------|-------|---------------|
| 0 | Priyang | 98.0 | NaN |
| 1 | Aadhya | NaN | AB |
| 2 | Krishna | 99.0 | AA |
| 3 | Vedant | 87.0 | NaN |
| 4 | Parshv | 90.0 | AC |
| 5 | Mittal | NaN | BA |
| 6 | Archana | 82.0 | not available |
| 7 | Priyang | 78.0 | -99 |

```
import pandas as pd
data=pd.read_csv("C:\\Users\\Dell\\Downloads\\data_#na.csv")
print(data)
sr=data.replace(to_replace="Priyang",value="Anil")
print(sr)
```

| | Name | Marks | Grades |
|---|---------|-------|---------------|
| 0 | Anil | 98.0 | NaN |
| 1 | Aadhya | NaN | AB |
| 2 | Krishna | 99.0 | AA |
| 3 | Vedant | 87.0 | NaN |
| 4 | Parshv | 90.0 | AC |
| 5 | Mittal | NaN | BA |
| 6 | Archana | 82.0 | not available |
| 7 | Anil | 78.0 | -99 |

Replace “Priyang” & “Aadhya” with “Anil”

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Downloads\\data_na.csv")
print(data)
sr=data.replace( to_replace: ["Priyang", "Aadhya"], value: "Anil")
print(sr)
```

| | Name | Marks | Grades |
|---|---------|-------|---------------|
| 0 | Anil | 98.0 | NaN |
| 1 | Anil | NaN | AB |
| 2 | Krishna | 99.0 | AA |
| 3 | Vedant | 87.0 | NaN |
| 4 | Parshv | 90.0 | AC |
| 5 | Mittal | NaN | BA |
| 6 | Archana | 82.0 | not available |
| 7 | Anil | 78.0 | -99 |

Replace NaN with 40

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Downloads\\data_#na.csv")
print(data)
sr=data.replace(np.nan, value: 40)
print(sr)
```

| | Name | Marks | Grades |
|---|---------|-------|---------------|
| 0 | Priyang | 98.0 | 40 |
| 1 | Aadhya | 40.0 | AB |
| 2 | Krishna | 99.0 | AA |
| 3 | Vedant | 87.0 | 40 |
| 4 | Parshv | 90.0 | AC |
| 5 | Mittal | 40.0 | BA |
| 6 | Archana | 82.0 | not available |
| 7 | Priyang | 78.0 | -99 |

Replace Marks column NaN with 40 and column NaN with FF

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Downloads\\data_#na.csv")
print(data)
sr=data.replace({"Marks":{np.nan:40},"Grades":{np.nan:"FF"}})
print(sr)
```

| | Name | Marks | Grades |
|---|---------|-------|---------------|
| 0 | Priyang | 98.0 | FF |
| 1 | Aadhya | 40.0 | AB |
| 2 | Krishna | 99.0 | AA |
| 3 | Vedant | 87.0 | FF |
| 4 | Parshv | 90.0 | AC |
| 5 | Mittal | 40.0 | BA |
| 6 | Archana | 82.0 | not available |
| 7 | Priyang | 78.0 | -99 |

Replace “not available”, np.nan, “-99” of Grades column to FF

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Downloads\\data_na.csv")
print(data)
sr=data.replace(to_replace={"Grades":["not available",np.nan,"-99"]}, value: "FF")
print(sr)
```

| | Name | Marks | Grades |
|---|---------|-------|--------|
| 0 | Priyang | 98.0 | FF |
| 1 | Aadhya | NaN | AB |
| 2 | Krishna | 99.0 | AA |
| 3 | Vedant | 87.0 | FF |
| 4 | Parshv | 90.0 | AC |
| 5 | Mittal | NaN | BA |
| 6 | Archana | 82.0 | FF |
| 7 | Priyang | 78.0 | FF |

Replace Grade Values

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Downloads\\data_#na.csv")
print(data)
sr=data.replace(to_replace=["FF","AA","AB","BA"],value=["FAIL","VERY GOOD","EXCELLENT","GOOD"])
print(sr)
```

⚠️ 1 ⚠️ 9

| | Name | Marks | Grades |
|---|---------|-------|---------------|
| 0 | Priyang | 98.0 | NaN |
| 1 | Aadhya | NaN | EXCELLENT |
| 2 | Krishna | 99.0 | VERY GOOD |
| 3 | Vedant | 87.0 | NaN |
| 4 | Parshv | 90.0 | AC |
| 5 | Mittal | NaN | GOOD |
| 6 | Archana | 82.0 | not available |
| 7 | Priyang | 78.0 | -99 |

Replace NaN values with ffill

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Downloads\\data_#na.csv")
print(data)
sr=data.replace(np.nan,method="ffill",limit=1)
print(sr)
```

| | Name | Marks | Grades |
|---|---------|-------|---------------|
| 0 | Priyang | 98.0 | NaN |
| 1 | Aadhya | 98.0 | AB |
| 2 | Krishna | 99.0 | AA |
| 3 | Vedant | 87.0 | AA |
| 4 | Parshv | 90.0 | AC |
| 5 | Mittal | 90.0 | BA |
| 6 | Archana | 82.0 | not available |
| 7 | Priyang | 78.0 | -99 |

Clear data of Marks column using Regex

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Desktop\\minipro.csv")
print(data)
sr=data.replace(to_replace={"Marks":"[A-Za-z]"}, value=" ", regex=True)
print(sr)
```

| | Name | Marks | Grades |
|---|---------|-------|--------|
| 0 | Priyang | 98 | NaN |
| 1 | Aadhya | NaN | AB |
| 2 | Krishna | 99 | AA |
| 3 | Vedant | NaN | NaN |
| 4 | Parshv | 90 | AC |
| 5 | Mittal | NaN | BA |
| 6 | Archana | 82 | NaN |
| 7 | Priyang | 78 | -99 |

Replace NaN values of Marks column with 0

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Desktop\\minipro.csv")
print(data)
sr=data.replace(to_replace={"Marks":np.nan}, value=0)
print(sr)
```

| | Name | Marks | Grades |
|---|---------|-------|--------|
| 0 | Priyang | 98M | NaN |
| 1 | Aadhya | 0 | AB |
| 2 | Krishna | 99M | AA |
| 3 | Vedant | 0 | NaN |
| 4 | Parshv | 90M | AC |
| 5 | Mittal | 0 | BA |
| 6 | Archana | 82M | NaN |
| 7 | Priyang | 78M | -99 |

Replace NaN value(first only) of Grades column with “FF” using ‘at’ method

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Desktop\\minipro.csv")
print(data)
data.at[0,"Grades"]="FF"
print(data)
```

| | Name | Marks | Grades |
|---|---------|-------|--------|
| 0 | Priyang | 98M | FF |
| 1 | Aadhya | NaN | AB |
| 2 | Krishna | 99M | AA |
| 3 | Vedant | NaN | NaN |
| 4 | Parshv | 90M | AC |
| 5 | Mittal | NaN | BA |
| 6 | Archana | 82M | NaN |
| 7 | Priyang | 78M | -99 |

Replace NaN value of Marks column with 0 using iat method

```
import pandas as pd
import numpy as np
data=pd.read_csv("C:\\Users\\Dell\\Desktop\\minipro.csv")
print(data)
data.iat[1,1]=0
print(data)
```

| | Name | Marks | Grades |
|---|---------|-------|--------|
| 0 | Priyang | 98M | NaN |
| 1 | Aadhya | 0 | AB |
| 2 | Krishna | 99M | AA |
| 3 | Vedant | NaN | NaN |
| 4 | Parshv | 90M | AC |
| 5 | Mittal | NaN | BA |
| 6 | Archana | 82M | NaN |
| 7 | Privand | 78M | -99 |