

```
In [1]: import pandas as pd
import numpy as np
df=pd.DataFrame(np.random.randn(5,3),index=['a','c','e','f','n'],columns=['one','two','three'])
df=df.reindex(['a','b','c','d','e','f','g','h'])
print("original dataframe with NaN\n",df)
print("\n")
print("dropped data frame\n",df.dropna())
print("\n")
```

original dataframe with NaN

	one	two	three
a	1.199347	0.244152	-0.029139
b	NaN	NaN	NaN
c	-0.310287	0.504928	-0.106016
d	NaN	NaN	NaN
e	0.950785	-0.012230	0.576272
f	-0.492551	-1.150973	1.075059
g	NaN	NaN	NaN
h	NaN	NaN	NaN

dropped data frame

	one	two	three
a	1.199347	0.244152	-0.029139
c	-0.310287	0.504928	-0.106016
e	0.950785	-0.012230	0.576272
f	-0.492551	-1.150973	1.075059

```
In [2]: df=pd.DataFrame(np.random.randn(3,3),index=['a','c','e'],columns=['one','two','three'])
df=df.reindex(['a','b','c'])
print("original dataframe:\n",df)
print("\n")
print("NaN replaced with'0':\n")
print(df.fillna(0))
df=pd.DataFrame({'one':[10,20,30,40,50,2000],'two':[1000,0,30,40,50,60]})
print("\noriginal dataframe:\n",df)
print("\ndataframe with replaced values:\n")
print(df.replace({1000:10,2000:60,40:400,0:100}))
df=pd.DataFrame(np.random.randn(5,3),index=['a','c','e','f','h'],columns=['one','two','three'])
df=df.reindex(['a','b','c','d','e','f','g','h'])
print(df)
print("\nNaN_with true fill:\n")
```

original dataframe:

	one	two	three
a	-0.803423	-1.625098	-0.234506
b	NaN	NaN	NaN
c	-1.764579	-0.254162	0.059899

NaN replaced with '0':

	one	two	three
a	-0.803423	-1.625098	-0.234506
b	0.000000	0.000000	0.000000
c	-1.764579	-0.254162	0.059899

original dataframe:

	one	two
0	10	1000
1	20	0
2	30	30
3	40	40
4	50	50
5	2000	60

dataframe with replaced values:

	one	two
0	10	10
1	20	100
2	30	30
3	400	400
4	50	50
5	60	60

  

	one	two	three
a	1.670000	0.366020	-0.327112
b	NaN	NaN	NaN
c	-0.905314	-0.140880	-0.452640
d	NaN	NaN	NaN
e	0.621233	2.191621	1.679725
f	0.247795	-1.299422	-0.102992
g	NaN	NaN	NaN
h	0.496986	0.408569	-1.263354

NaN\_with true fill:

```
In [3]: print(df['one'].isnull())
df=pd.DataFrame(np.random.randn(5,3),index=['a','c','e','f','h'],columns=['one','two','three'])
df=df.reindex(['n','b','c','d','e','f','g','h'])
print("\noriginal dataframe:\n",df)
print("\nNaN-filled with forward values:\n")
print(df.fillna(method='pad'))
print("\nNaN-filled with background values:\n")
print(df.fillna(method='bfill'))
```

```
a    False
b     True
c    False
d     True
e    False
f    False
g     True
h    False
Name: one, dtype: bool
```

original dataframe:

	one	two	three
n	NaN	NaN	NaN
b	NaN	NaN	NaN
c	-0.031547	1.740538	-0.127349
d	NaN	NaN	NaN
e	0.860371	-0.394044	0.408017
f	1.186273	-0.364133	0.471168
g	NaN	NaN	NaN
h	-0.377939	-0.231495	-0.461639

NaN-filled with forward values3:

	one	two	three
n	NaN	NaN	NaN
b	NaN	NaN	NaN
c	-0.031547	1.740538	-0.127349
d	-0.031547	1.740538	-0.127349
e	0.860371	-0.394044	0.408017
f	1.186273	-0.364133	0.471168
g	1.186273	-0.364133	0.471168
h	-0.377939	-0.231495	-0.461639

NaN-filled with background values:

	one	two	three
n	-0.031547	1.740538	-0.127349
b	-0.031547	1.740538	-0.127349
c	-0.031547	1.740538	-0.127349
d	0.860371	-0.394044	0.408017
e	0.860371	-0.394044	0.408017
f	1.186273	-0.364133	0.471168
g	-0.377939	-0.231495	-0.461639
h	-0.377939	-0.231495	-0.461639

In [ ]: