In [45]:
```
import numpy as np
import pandas as pd
df = {'From_To': ['LoNDon_paris', 'MAdrid_miLAN',
'londON_StockhOlm',
'Budapest_PaRis', 'Brussels_londOn'],
'FlightNumber': [10045, np.nan, 10065, np.nan, 10085],
'RecentDelays': [[23, 47], [], [24, 43, 87], [13], [67, 32]],
'Airline': ['KLM(!)', '<Air France> (12)', '(British Airways. )',
'12. Air France', '"Swiss Air"']}
```

In [46]:
```
pd.DataFrame(df)
```

Out[46]:

	From_To	FlightNumber	RecentDelays	Airline
0	LoNDon_paris	10045.0	[23, 47]	KLM(!)
1	MAdrid_miLAN	NaN	[]	<Air France> (12)
2	londON_StockhOlm	10065.0	[24, 43, 87]	(British Airways.)
3	Budapest_PaRis	NaN	[13]	12. Air France
4	Brussels_londOn	10085.0	[67, 32]	"Swiss Air"

In [87]:
```
# df[df['From_To'] =='MAdrid_miLAN']['FlightNumber'] == 1
```

In [48]:
```
x = pd.DataFrame(df)


# x[x['From_To']=='MAdrid_miLAN'].index


x.iloc[1,1] = 10055.0
x.iloc[3,1] = 10075.0
```

In [52]:
```
(x['FlightNumber']).astype(int)
```

Out[52]:
```
0    10045
1    10055
2    10065
3    10075
```

```
4    10085
Name: FlightNumber, dtype: int32
```

In [54]:
```
x[['From', 'To']] = x['From_To'].str.split('_', 1, expand=True)
```

In [58]:
```
x = x.drop('From_To', 1)
x
```

Out[58]:

	FlightNumber	RecentDelays	Airline	From	To
0	10045.0	[23, 47]	KLM(!)	LoNDon	paris
1	10055.0	[]	<Air France> (12)	MAdrid	miLAN
2	10065.0	[24, 43, 87]	(British Airways.)	londON	StockhOlm
3	10075.0	[13]	12. Air France	Budapest	PaRis
4	10085.0	[67, 32]	"Swiss Air"	Brussels	londOn

In [59]:
```
x['From'].str.capitalize()
```

Out[59]:
```
0      London
1      Madrid
2      London
3    Budapest
4    Brussels
Name: From, dtype: object
```

In [60]:
```
x['To'].str.capitalize()
```

Out[60]:
```
0        Paris
1        Milan
2    Stockholm
3        Paris
4       London
Name: To, dtype: object
```

In [61]:
```
delays = x['RecentDelays']
```

In [62]:
```
delays
```

Out[62]:
```
0        [23, 47]
1              []
```

```
2    [24, 43, 87]
3            [13]
4        [67, 32]
Name: RecentDelays, dtype: object
```

In [74]:
```
x3 = pd.DataFrame(x['RecentDelays'].to_list(), columns=['Delay1','Delay2','Delay3'])
```

In [75]:
```
x3
```

Out[75]:

	Delay1	Delay2	Delay3
0	23.0	47.0	NaN
1	NaN	NaN	NaN
2	24.0	43.0	87.0
3	13.0	NaN	NaN
4	67.0	32.0	NaN

In [76]:
```
frames = [x, x3]
# pd.DataFrame(frames)
```

In [83]:
```
final_x = x.join(x3)
final_x
```

Out[83]:

	FlightNumber	RecentDelays	Airline	From	To	Delay1	Delay2	Delay3
0	10045.0	[23, 47]	KLM(!)	LoNDon	paris	23.0	47.0	NaN
1	10055.0	[]	<Air France> (12)	MAdrid	miLAN	NaN	NaN	NaN
2	10065.0	[24, 43, 87]	(British Airways.)	londON	StockhOlm	24.0	43.0	87.0
3	10075.0	[13]	12. Air France	Budapest	PaRis	13.0	NaN	NaN
4	10085.0	[67, 32]	"Swiss Air"	Brussels	londOn	67.0	32.0	NaN

In [86]:
```
final_x = final_x.drop('RecentDelays', 1)
final_x
```

Out[86]:

	FlightNumber	Airline	From	To	Delay1	Delay2	Delay3

	FlightNumber	Airline	From	To	Delay1	Delay2	Delay3
0	10045.0	KLM(!)	LoNDon	paris	23.0	47.0	NaN
1	10055.0	<Air France> (12)	MAdrid	miLAN	NaN	NaN	NaN
2	10065.0	(British Airways.)	londON	StockhOlm	24.0	43.0	87.0
3	10075.0	12. Air France	Budapest	PaRis	13.0	NaN	NaN
4	10085.0	"Swiss Air"	Brussels	londOn	67.0	32.0	NaN