In [8]:
```
import pandas as pd
```

Assign data

In [9]:
```
data = {'Name': ['Harsh', 'Snowber', 'Ishaan',
                 'Sam', 'Gurvinder', 'Iftisam', 'Navneet'],
        'Age': [17, 17, 18, 17, 18, 17, 17],
        'Gender': ['M', 'F', 'M', 'M', 'M', 'F', 'F'],
        'Marks': [90, 76, 'NaN', 74, 65, 'NaN', 71]}

df = pd.DataFrame(data)
df
```

Out[9]:

	Name	Age	Gender	Marks
0	Harsh	17	M	90
1	Snowber	17	F	76
2	Ishaan	18	M	NaN
3	Sam	17	M	74
4	Gurvinder	18	M	65
5	Iftisam	17	F	NaN
6	Navneet	17	F	71

Compute average

In [10]:
```
c = avg = 0
for ele in df['Marks']:
    if str(ele).isnumeric():
        c += 1
        avg += ele
avg /= c
df = df.replace(to_replace="NaN", value=avg)

df
```

Out[10]:

	Name	Age	Gender	Marks
0	Harsh	17	M	90.0
1	Snowber	17	F	76.0
2	Ishaan	18	M	75.2
3	Sam	17	M	74.0
4	Gurvinder	18	M	65.0
5	Iftisam	17	F	75.2
6	Navneet	17	F	71.0

Categorize gender

In [11]:
```
df['Gender'] = df['Gender'].map({'M': 0, 'F': 1, }).astype(float)

df
```

Out[11]:

	Name	Age	Gender	Marks
0	Harsh	17	0.0	90.0
1	Snowber	17	1.0	76.0
2	Ishaan	18	0.0	75.2
3	Sam	17	0.0	74.0
4	Gurvinder	18	0.0	65.0
5	Iftisam	17	1.0	75.2
6	Navneet	17	1.0	71.0

Filter top scoring students

In [12]:
```
df = df[df['Marks'] >= 75]

df = df.drop(['Age'], axis=1)

df
```

Out[12]:

	Name	Gender	Marks
0	Harsh	0.0	90.0
1	Snowber	1.0	76.0
2	Ishaan	0.0	75.2
5	Iftisam	1.0	75.2

Wrangling Data Using Merge Operation pd.merge(data_frame1,data_frame2, on="field ")

FIRST TYPE OF DATA:

In [13]:
```
import pandas as pd
```

creating DataFrame for Student Details

In [14]:
```
details = pd.DataFrame({
    'ID': [101, 102, 103, 104, 105, 106,
           107, 108, 109, 110],
    'NAME': ['Darpan', 'Shrutam', 'Yuraj',
             'Dhamini', 'Tanish', 'Diksha',
             'Saurabh', 'Ayush', 'Dolly', "Mohit"],
    'BRANCH': ['CSE', 'CSE', 'CSE', 'CSE', 'CSE',
               'CSE', 'CSE', 'CSE', 'CSE', 'CSE']})

print(details)
```

```
    ID     NAME BRANCH
0  101   Darpan    CSE
1  102  Shrutam    CSE
2  103    Yuraj    CSE
3  104  Dhamini    CSE
4  105   Tanish    CSE
5  106   Diksha    CSE
6  107  Saurabh    CSE
7  108    Ayush    CSE
8  109    Dolly    CSE
9  110    Mohit    CSE
```

SECOND TYPE OF DATA

In [15]:
```
import pandas as pd

fees_status = pd.DataFrame(
    {'ID': [101, 102, 103, 104, 105,
            106, 107, 108, 109, 110],
     'PENDING': ['5000', '250', 'NIL',
                 '9000', '15000', 'NIL',
                 '4500', '1800', '250', 'NIL']})

print(fees_status)
```

```
    ID PENDING
0  101    5000
1  102     250
2  103     NIL
3  104    9000
4  105   15000
5  106     NIL
6  107    4500
7  108    1800
8  109     250
9  110     NIL
```

WRANGLING DATA USING MERGE OPERATION:

In [17]:
```
import pandas as pd
details = pd.DataFrame({
    'ID': [101, 102, 103, 104, 105,
           106, 107, 108, 109, 110],
    'NAME': ['Darpan', 'Shrutam', 'Yuraj',
             'Dhamini', 'Tanish', 'Diksha',
             'Saurabh', 'Ayush', 'Dolly', "Mohit"],
    'BRANCH': ['CSE', 'CSE', 'CSE', 'CSE', 'CSE',
               'CSE', 'CSE', 'CSE', 'CSE', 'CSE']})
fees_status = pd.DataFrame(
    {'ID': [101, 102, 103, 104, 105,
            106, 107, 108, 109, 110],
     'PENDING': ['5000', '250', 'NIL',
                 '9000', '15000', 'NIL',
                 '4500', '1800', '250', 'NIL']})

print(pd.merge(details, fees_status, on='ID'))
```

```
    ID     NAME BRANCH PENDING
0  101   Darpan    CSE    5000
1  102  Shrutam    CSE     250
2  103    Yuraj    CSE     NIL
3  104  Dhamini    CSE    9000
4  105   Tanish    CSE   15000
5  106   Diksha    CSE     NIL
6  107  Saurabh    CSE    4500
7  108    Ayush    CSE    1800
8  109    Dolly    CSE     250
9  110    Mohit    CSE     NIL
```

In [ ]: