In [2]:
```
import pandas as pd
```

In [11]:
```
data={"Roll-num": [10,20,30,40,50,60,701], "Age":[12,14,13,12,14,13,15],"NAME"
```

In [12]:
```
block = pd.DataFrame(data)
```

In [13]:
```
print("Original Data frame:\n")
```

```
Original Data frame:
```

In [14]:
```
print(block)
```

```
   Roll-num  Age    NAME
0        10   12    John
1        20   14  Camill
2        30   13  Rheana
3        40   12  Joseph
4        50   14  Amanti
5        60   13   Alexa
6       701   15    Siri
```

In [15]:
```
print(block.loc[[0,1,3]])
```

```
   Roll-num  Age    NAME
0        10   12    John
1        20   14  Camill
3        40   12  Joseph
```

In [16]:
```
print(block.loc[0:3])
```

```
   Roll-num  Age    NAME
0        10   12    John
1        20   14  Camill
2        30   13  Rheana
3        40   12  Joseph
```

In [17]:
```
print(block.loc[0:2,['Age','NAME']])
```

```
   Age    NAME
0   12    John
1   14  Camill
2   13  Rheana
```

In [18]:
```
print(block.iloc[[0,1,3,6],[0,2]])
```

```
   Roll-num    NAME
0        10    John
1        20  Camill
3        40  Joseph
6       701    Siri
```

In [ ]:
```
##Merging
```

In [19]:
```
import pandas as pd
```

In [20]:
```
d1 = {'Name': ['Pankaj', 'Meghna', 'Lisa'], 'Country': ['India', 'India', 'USA
```

In [21]:
```
df1 =pd.DataFrame(d1)
```

In [22]:
```
print('Datafreame 1:\n',df1)
```

```
Datafreame 1:
      Name Country Role
0  Pankaj   India  CEO
1  Meghna   India  CTO
2    Lisa     USA  CTO
```

In [24]:
```
df2 =pd.DataFrame({'ID':[1,2,3],'Name':['Pankaj','Anupam','Amit']})
```

In [25]:
```
print('Datafreame 2:\n',df2)
```

```
Datafreame 2:
    ID    Name
0   1  Pankaj
1   2  Anupam
2   3    Amit
```

In [26]:
```
df_merged = df1.merge(df2)
```

In [28]:
```
print('Result Inner join:\n',df_merged)
```

```
Result Inner join:
      Name Country Role  ID
0  Pankaj   India  CEO   1
```

In [30]:
```
print('Result left join:\n',df1.merge(df2,how='left'))
```

```
Result left join:
      Name Country Role   ID
0  Pankaj   India  CEO  1.0
1  Meghna   India  CTO  NaN
2    Lisa     USA  CTO  NaN
```

In [31]:
```
print('Result right join:\n',df1.merge(df2,how='right'))
```

```
Result right join:
      Name Country Role  ID
0  Pankaj   India  CEO   1
1  Anupam     NaN  NaN   2
2    Amit     NaN  NaN   3
```

In [34]:
```
print('Result outer join:\n',df1.merge(df2,how='outer'))
```

```
Result outer join:
      Name Country Role   ID
0  Pankaj   India  CEO  1.0
1  Meghna   India  CTO  NaN
2    Lisa     USA  CTO  NaN
3  Anupam     NaN  NaN  2.0
4    Amit     NaN  NaN  3.0
```

In [35]:
```
import pandas as pd
```

In [37]:
```
csvData = pd.read_csv("C:\\Users\\Pranali\\Downloads\\records.csv")
```

In [38]:
```
print("\nBefore sorting:")
```

```
Before sorting:
```

In [39]:
```
print(csvData)
```

```
   ID    Name    Role  Salary
0   1  Pankaj  Editor   10000
1   2    Lisa  Editor    8000
2   3   David  Author    6000
3   4     Ram  Author    4000
4   5  Anupam  Author    5000
```

In [40]:
```
csvData.sort_values(["Salary"], axis=0, ascending=[False], inplace=True)
```

In [42]:
```
print("\nAfter Sorting:")
print(csvData)
```

```
After Sorting:
   ID    Name    Role  Salary
0   1  Pankaj  Editor   10000
1   2    Lisa  Editor    8000
2   3   David  Author    6000
4   5  Anupam  Author    5000
3   4     Ram  Author    4000
```

In [43]:
```
csvData.sort_values(["Salary"],axis=0, ascending=[True], inplace=True)
```

In [44]:
```
print("\nAfter Sorting:")
print(csvData)
```

```
After Sorting:
   ID    Name    Role  Salary
3   4     Ram  Author    4000
4   5  Anupam  Author    5000
2   3   David  Author    6000
1   2    Lisa  Editor    8000
0   1  Pankaj  Editor   10000
```

In [45]:
```
import pandas as pd
```

In [46]:
```
df=pd.read_csv("C:\\Users\\Pranali\\Downloads\\records.csv")
```

In [47]:
```
print(df)
```

```
   ID    Name    Role  Salary
0   1  Pankaj  Editor   10000
1   2    Lisa  Editor    8000
2   3   David  Author    6000
3   4     Ram  Author    4000
4   5  Anupam  Author    5000
```

In [48]:
```
print(df.T)
```

```
             0       1       2       3       4
ID           1       2       3       4       5
Name    Pankaj    Lisa   David     Ram  Anupam
Role    Editor  Editor  Author  Author  Author
Salary   10000    8000    6000    4000    5000
```

In [49]:
```
print(df.shape)
```

```
(5, 4)
```

In [50]:
```
print(df.size)
```

```
20
```

In [ ]:
```

```