

- In Pandas we can join two dataframes
 - merge
 - join
 - concat

merge

- it is under pandas the function: pd.merge
- it similar to SQL joins
- you can join with specific columns

```
In [4]: import pandas as pd
```

```
In [6]: d1={'ID':[1,2,3],
          'Name':['Chandu', 'Pawan', 'Bansal']}
d2={'ID':[1,2,4],
    'Age':[20,25,30]}

df1=pd.DataFrame(d1)
df2=pd.DataFrame(d2)
```

```
In [8]: df1
```

```
Out[8]:
```

	ID	Name
0	1	Chandu
1	2	Pawan
2	3	Bansal

```
In [10]: df2
```

```
Out[10]:
```

	ID	Age
0	1	20
1	2	25
2	4	30

```
In [5]: pd.merge(df1,df2,on='ID',how='inner')
```

Out[5]:

	ID	Name	Age
0	1	Chandu	20
1	2	Pawan	25

```
In [6]: pd.merge(df1,df2,on='ID',how='outer')
```

Out[6]:

	ID	Name	Age
0	1	Chandu	20.0
1	2	Pawan	25.0
2	3	Bansal	NaN
3	4	NaN	30.0

```
In [7]: pd.merge(df1,df2,on='ID',how='left')
```

Out[7]:

	ID	Name	Age
0	1	Chandu	20.0
1	2	Pawan	25.0
2	3	Bansal	NaN

```
In [12]: pd.merge(df1,df2,on='ID',how='right')
```

Out[12]:

	ID	Name	Age
0	1	Chandu	20
1	2	Pawan	25
2	4	NaN	30

```
In [ ]: ## homework
df1.join(df2)

pd.concat([df1,df2])
```