EMP

empid	fn	ln	sal	did
101	Naman	Singh	5000	20
102	Raman	Tripathi	7000	20
103	Chaman	Nagor	8000	20
104	Nisha	Patil	9000	30
105	Madhu	Reddy	10000	30
106	Rahul	Barkade	12200	113

DEPT

Dept_Id	Dname
10	HR
20	Sales
30	Logistics
40	Accounting
50	Admin

- Inner Join(Common data)
- Left Outer Join
- Right Outer Join
- Full Outer Join

Group level aggregates-2

104	Nisha	Patil	9000	30	Logistics

Inner Join

empid	fn	ln	sal	did	Dept_Id	Dname
101	Naman	Singh	5000	20	20	Sales
102	Raman	Tripathi	7000	20	20	Sales
103	Chaman	Nagor	8000	20	20	Sales
104	Nisha	Patil	9000	30	30	Logistics
105	Madhu	Reddy	10000	30	30	Logistics

```
import pandas as pd
pd.merge(emp,dept,left_on="did",right_on="Dept_Id",how="inner")
```

EMP

empid	fn	ln	sal	did
101	Naman	Singh	5000	20
102	Raman	Tripathi	7000	20
103	Chaman	Nagor	8000	20
104	Nisha	Patil	9000	30
105	Madhu	Reddy	10000	30
106	Rahul	Barkade	12200	113

DEPT

Dept_Id	Dname
10	HR
20	Sales
30	Logistics
40	Accounting
50	Admin

- Everything from left table and matching records from right table

Left Outer Join

empid	fn	ln	sal	did	Dept_Id	Dname
101	Naman	Singh	5000	20	20	Sales
102	Raman	Tripathi	7000	20	20	Sales
103	Chaman	Nagor	8000	20	20	Sales
104	Nisha	Patil	9000	30	30	Logistics
105	Madhu	Reddy	10000	30	30	Logistics
106	Rahul	Barkade	12200	113	*Nan*	*Nan*

```
import pandas as pd
pd.merge(emp,dept,left_on="did",right_on="Dept_Id",how="left")
```

EMP

empid	fn	ln	sal	did
101	Naman	Singh	5000	20
102	Raman	Tripathi	7000	20
103	Chaman	Nagor	8000	20
104	Nisha	Patil	9000	30
105	Madhu	Reddy	10000	30
106	Rahul	Barkade	12200	113

DEPT

Dept_Id	Dname
10	HR
20	Sales
30	Logistics
40	Accounting
50	Admin

- Everything from right table and matching records from left table

Right Outer Join

empid	fn	ln	sal	did	Dept_Id	Dname
Nan	Nan	Nan	Nan	Nan	10	HR
101	Naman	Singh	5000	20	20	Sales
102	Raman	Tripathi	7000	20	20	Sales
103	Chaman	Nagor	8000	20	20	Sales
104	Nisha	Patil	9000	30	30	Logistics
105	Madhu	Reddy	10000	30	30	Logistics
Nan	Nan	Nan	Nan	Nan	40	Accounti
Nan	Nan	Nan	Nan	Nan	50	Admin

```
import pandas as pd
pd.merge(emp,dept,left_on="did",right_on="Dept_Id",how="right")
```

EMP

empid	fn	ln	sal	did
101	Naman	Singh	5000	20
102	Raman	Tripathi	7000	20
103	Chaman	Nagor	8000	20
104	Nisha	Patil	9000	30
105	Madhu	Reddy	10000	30
106	Rahul	Barkade	12200	113

DEPT

Dept_Id	Dname
10	HR
20	Sales
30	Logistics
40	Accounting
50	Admin

- Everything from both

Full Outer Join

empid	fn	ln	sal	did	Dept_Id	Dname
101	Naman	Singh	5000	20	20	Sales
102	Raman	Tripathi	7000	20	20	Sales
103	Chaman	Nagor	8000	20	20	Sales
104	Nisha	Patil	9000	30	30	Logistics
105	Madhu	Reddy	10000	30	30	Logistics
106	Rahul	Barkade	12200	113	Nan	Nan
Nan	Nan	Nan	Nan	Nan	10	HR
Nan	Nan	Nan	Nan	Nan	40	Accounting
Nan	Nan	Nan	Nan	Nan	50	Admin

```
import pandas as pd
pd.merge(emp,dept,left_on="did",right_on="Dept_Id",how="outer")
```

17-08-2023(A)

Orderno	Item	Qty	Cat	Price	Subtotal
101	French Fries	2	Fries	70	140
102	McVeggie	4	Burger	130	520
103	Maharaja Mac	2	Burger	210	420
104	French Fries	5	Fries	70	350

18-08-2023(B)

Orderno	Item	Qty	Cat	Price	Subtotal
101	French Fries	2	Fries	70	140
102	McVeggie	4	Burger	130	520

pd.concat([A,B])