In [1]:
```
import numpy as pd
import pandas as pd
```

In [10]:
```
emp1= pd.DataFrame({'empid':['E90','E87'],
 'Name':['Asif','Basit']})
emp1
```

Out[10]:

	empid	Name
0	E90	Asif
1	E87	Basit

In [11]:
```
emp2= pd.DataFrame({'empid':['E22','E74','E90'],
 'Name':['Minil','Akash','Asif']})
emp2
```

Out[11]:

	empid	Name
0	E22	Minil
1	E74	Akash
2	E90	Asif

In [12]:
```
address= pd.DataFrame({'empid':['E87','E22','E49'],
 'City':['Mumbai','Banglore','Pune'] ,
 'State':['Maharashtra','Karnataka','Maharashtra']})
address
```

Out[12]:

	empid	City	State
0	E87	Mumbai	Maharashtra
1	E22	Banglore	Karnataka
2	E49	Pune	Maharashtra

In [14]:
```
#concat
ad=pd.concat([emp1,emp2])
ad
```

Out[14]:

	empid	Name
0	E90	Asif
1	E87	Basit
0	E22	Minil
1	E74	Akash
2	E90	Asif

In [15]:
```
ad.reset_index(drop=True)
```

Out[15]:

	empid	Name
0	E90	Asif
1	E87	Basit

	empid	Name
2	E22	Minil
3	E74	Akash
4	E90	Asif

In [23]:
```
#Check duplicates
ad1=ad[ad.duplicated()]
ad1
```

Out[23]:

	empid	Name
2	E90	Asif

In [33]:
```
ad.drop_duplicates(keep='last',inplace=True)
ad
```

Out[33]:

	empid	Name
1	E87	Basit
0	E22	Minil
1	E74	Akash
2	E90	Asif

In [35]:
```
#Remove duplicates
ad.reset_index(drop=True,inplace=True)
ad
```

Out[35]:

	empid	Name
0	E87	Basit
1	E22	Minil
2	E74	Akash
3	E90	Asif

In [43]:
```
ad
```

Out[43]:

	empid	Name
0	E87	Basit
1	E22	Minil
2	E74	Akash
3	E90	Asif

In [44]:
```
address
```

Out[44]:

	empid	City	State
0	E87	Mumbai	Maharashtra
1	E22	Banglore	Karnataka

	empid	City	State
2	E49	Pune	Maharashtra

In [45]:
```
#Inner Join
empl=pd.merge(ad,address,on='empid',how='inner')
empl
```

Out[45]:

	empid	Name	City	State
0	E87	Basit	Mumbai	Maharashtra
1	E22	Minil	Banglore	Karnataka

In [46]:
```
#Left outer Joins
emp2=pd.merge(ad,address,on='empid',how='left')
emp2
```

Out[46]:

	empid	Name	City	State
0	E87	Basit	Mumbai	Maharashtra
1	E22	Minil	Banglore	Karnataka
2	E74	Akash	NaN	NaN
3	E90	Asif	NaN	NaN

In [47]:
```
#Right Outer Joins
emp3=pd.merge(ad,address,on='empid',how='right')
emp3
```

Out[47]:

	empid	Name	City	State
0	E87	Basit	Mumbai	Maharashtra
1	E22	Minil	Banglore	Karnataka
2	E49	NaN	Pune	Maharashtra

In [49]:
```
#Full outer Joins
emp4=pd.merge(ad,address,on='empid',how='outer')
emp4
```

Out[49]:

	empid	Name	City	State
0	E87	Basit	Mumbai	Maharashtra
1	E22	Minil	Banglore	Karnataka
2	E74	Akash	NaN	NaN
3	E90	Asif	NaN	NaN
4	E49	NaN	Pune	Maharashtra

In [53]:
```
sal = pd.DataFrame({'empid':['E87','E22','E74','E90','E49'],
 'salary':['$10,000','$30,000','$20,000','$60,000','$90,000']})
sal
```

Out[53]:

	empid	salary

	empid	salary
0	E87	$10,000
1	E22	$30,000
2	E74	$20,000
3	E90	$60,000
4	E49	$90,000

In [59]:
```
emplooyes_details=pd.merge(sal,emp4,on='empid',how='inner')
emplooyes_details
```

Out[59]:

	empid	salary	Name	City	State
0	E87	$10,000	Basit	Mumbai	Maharashtra
1	E22	$30,000	Minil	Banglore	Karnataka
2	E74	$20,000	Akash	NaN	NaN
3	E90	$60,000	Asif	NaN	NaN
4	E49	$90,000	NaN	Pune	Maharashtra

In [62]:
```
exp = pd.DataFrame({'employee_id':['E87','E22','E74','E90','E49'],
 'experience':['5 years','3 years','7 years','2 years','10 years']})
exp
```

Out[62]:

	employee_id	experience
0	E87	5 years
1	E22	3 years
2	E74	7 years
3	E90	2 years
4	E49	10 years

In [63]:
```
pd.merge(emplooyes_details,exp,left_on='empid',right_on='employee_id',how='inner')
```

Out[63]:

	empid	salary	Name	City	State	employee_id	experience
0	E87	$10,000	Basit	Mumbai	Maharashtra	E87	5 years
1	E22	$30,000	Minil	Banglore	Karnataka	E22	3 years
2	E74	$20,000	Akash	NaN	NaN	E74	7 years
3	E90	$60,000	Asif	NaN	NaN	E90	2 years
4	E49	$90,000	NaN	Pune	Maharashtra	E49	10 years

In [66]:
```
pd.merge(emplooyes_details,exp,left_on='empid',right_on='employee_id',how='inner').d
```

Out[66]:

	empid	salary	Name	City	State	experience
0	E87	$10,000	Basit	Mumbai	Maharashtra	5 years
1	E22	$30,000	Minil	Banglore	Karnataka	3 years

	empid	salary	Name	City	State	experience
2	E74	$20,000	Akash	NaN	NaN	7 years
3	E90	$60,000	Asif	NaN	NaN	2 years
4	E49	$90,000	NaN	Pune	Maharashtra	10 years

In [69]:
```
#Save the dataframe
employee_details=pd.merge(emplooyes_details,exp,left_on=['empid'],right_on=['employe
employee_details
```

Out[69]:

	empid	salary	Name	City	State	experience
0	E87	$10,000	Basit	Mumbai	Maharashtra	5 years
1	E22	$30,000	Minil	Banglore	Karnataka	3 years
2	E74	$20,000	Akash	NaN	NaN	7 years
3	E90	$60,000	Asif	NaN	NaN	2 years
4	E49	$90,000	NaN	Pune	Maharashtra	10 years

In [70]:
```
employee_details
```

Out[70]:

	empid	salary	Name	City	State	experience
0	E87	$10,000	Basit	Mumbai	Maharashtra	5 years
1	E22	$30,000	Minil	Banglore	Karnataka	3 years
2	E74	$20,000	Akash	NaN	NaN	7 years
3	E90	$60,000	Asif	NaN	NaN	2 years
4	E49	$90,000	NaN	Pune	Maharashtra	10 years