

Operations on Multi-Index

Work with multi-index DataFrames and perform operations on different levels.

```
In [4]: import pandas as pd
data = {
    'City': ['Delhi', 'Delhi', 'Vadodara', 'Vadodara'],
    'Year': [2020, 2021, 2020, 2021],
    'Sales': [100, 120, 80, 90]
}

df = pd.DataFrame(data).set_index(['City', 'Year'])
print(df)
```

		Sales
City	Year	
Delhi	2020	100
	2021	120
Vadodara	2020	80
	2021	90

Selecting Data Form a Specific Level

```
In [5]: Delhi_data = df.xs('Delhi', level='City')
print(Delhi_data)
```

	Sales
Year	
2020	100
2021	120

Performing on a Specific Level

```
In [12]: city_sales = df.groupby('City')['Sales'].sum()
print(city_sales)
```

City	
Delhi	220
Vadodara	170

Name: Sales, dtype: int64

Shorting and Indexing

```
In [14]: df_shorted = df.sort_index()  
print(df_shorted)
```

		Sales
City	Year	
	2020	100
Delhi	2021	120
	2020	80
Vadodara	2021	90

Using reset Method

```
In [18]: df_reset = df.reset_index(level='Year')  
print(df_reset)
```

	Year	Sales
City	2020	100
	2021	120
Delhi	2020	80
	2021	90

```
In [ ]:
```