```
import pandas as pd
import numpy as np
```

Part 1 group by

```
df1=pd.read_csv('/content/weather_by_cities.csv')
```

```
df1
```

	day	city	temperature	windspeed	event
0	1/1/2021	new york	32	6	Rain
1	1/2/2021	new york	36	7	Sunny
2	1/3/2021	new york	28	12	Snow
3	1/4/2021	new york	33	7	Sunny
4	1/1/2021	mumbai	90	5	Sunny
5	1/2/2021	mumbai	85	12	Fog
6	1/3/2021	mumbai	87	15	Fog
7	1/4/2021	mumbai	92	5	Rain
8	1/1/2021	paris	45	20	Sunny
9	1/2/2021	paris	50	13	Cloudy
10	1/3/2021	paris	54	8	Cloudy
11	1/4/2021	paris	42	10	Cloudy

```
df1.describe()
```

	temperature	windspeed

```
g_city=df1.groupby('city')
```

mean	56.166667	10.000000

```
g_city.get_group('mumbai')
```

	day	city	temperature	windspeed	event
4	1/1/2021	mumbai	90	5	Sunny
5	1/2/2021	mumbai	85	12	Fog
6	1/3/2021	mumbai	87	15	Fog
7	1/4/2021	mumbai	92	5	Rain

```
g_city.get_group('mumbai').describe()
```

	temperature	windspeed
count	4.000000	4.000000
mean	88.500000	9.250000
std	3.109126	5.057997
min	85.000000	5.000000
25%	86.500000	5.000000
50%	88.500000	8.500000
75%	90.500000	12.750000
max	92.000000	15.000000

```
g_city.get_group('paris')
```

	day	city	temperature	windspeed	event
8	1/1/2021	paris	45	20	Sunny
9	1/2/2021	paris	50	13	Cloudy
10	1/3/2021	paris	54	8	Cloudy
11	1/4/2021	paris	42	10	Cloudy

```
g_city.get_group('paris').describe()
```

	temperature	windspeed
count	4.000000	4.000000
mean	47.750000	12.750000
std	5.315073	5.251984
min	42.000000	8.000000
25%	44.250000	9.500000
50%	47.500000	11.500000
75%	51.000000	14.750000
max	54.000000	20.000000

```
g_city.get_group('new york')
```

	day	city	temperature	windspeed	event
0	1/1/2021	new york	32	6	Rain
1	1/2/2021	new york	36	7	Sunny
2	1/3/2021	new york	28	12	Snow
3	1/4/2021	new york	33	7	Sunny

```
g_city.get_group('new york').describe()
```

	temperature	windspeed
count	4.000000	4.000000
mean	32.250000	8.000000
std	3.304038	2.708013
min	28.000000	6.000000
25%	31.000000	6.750000
50%	32.500000	7.000000
75%	33.750000	8.250000
max	36.000000	12.000000

Part 2 (Only the iris dataset part)

```
df=pd.read_csv('/content/Iris.csv')
```

```
df['Species'].unique()
```

```
df['Species'].unique()
```

```
array(['Iris-setosa', 'Iris-versicolor', 'Iris-virginica'], dtype=object)
```

```
g_species=df.groupby('Species')
```

```
g_species.describe()
```

	Id								SepalLengthCm		...
	count	mean	std	min	25%	50%	75%	max	count	mean	...
Species											
Iris-setosa	50.0	25.5	14.57738	1.0	13.25	25.5	37.75	50.0	50.0	5.006	...
Iris-versicolor	50.0	75.5	14.57738	51.0	63.25	75.5	87.75	100.0	50.0	5.936	...
Iris-											

```
g_species.get_group('Iris-setosa').describe()
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	50.00000	50.00000	50.000000	50.000000	50.00000
mean	25.50000	5.00600	3.418000	1.464000	0.24400
std	14.57738	0.35249	0.381024	0.173511	0.10721
min	1.00000	4.30000	2.300000	1.000000	0.10000
25%	13.25000	4.80000	3.125000	1.400000	0.20000
50%	25.50000	5.00000	3.400000	1.500000	0.20000
75%	37.75000	5.20000	3.675000	1.575000	0.30000
max	50.00000	5.80000	4.400000	1.900000	0.60000

```
g_species.get_group('Iris-versicolor').describe()
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	50.00000	50.000000	50.000000	50.000000	50.000000
mean	75.50000	5.936000	2.770000	4.260000	1.326000
std	14.57738	0.516171	0.313798	0.469911	0.197753

```
g_species.get_group('Iris-virginica').describe()
```

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm
count	50.00000	50.00000	50.000000	50.000000	50.00000
mean	125.50000	6.58800	2.974000	5.552000	2.02600
std	14.57738	0.63588	0.322497	0.551895	0.27465
min	101.00000	4.90000	2.200000	4.500000	1.40000
25%	113.25000	6.22500	2.800000	5.100000	1.80000
50%	125.50000	6.50000	3.000000	5.550000	2.00000
75%	137.75000	6.90000	3.175000	5.875000	2.30000
max	150.00000	7.90000	3.800000	6.900000	2.50000

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