```
import numpy as np
import pandas as pd
from pandas import DataFrame
```

```
path = "/Users/zhangpuchang/Downloads/movies_dataset.csv"
df = pd.read_csv(path, header=0)
```

```
# 数据摘要
df["industry"].value_counts() # 标称属性 例：country频数
```

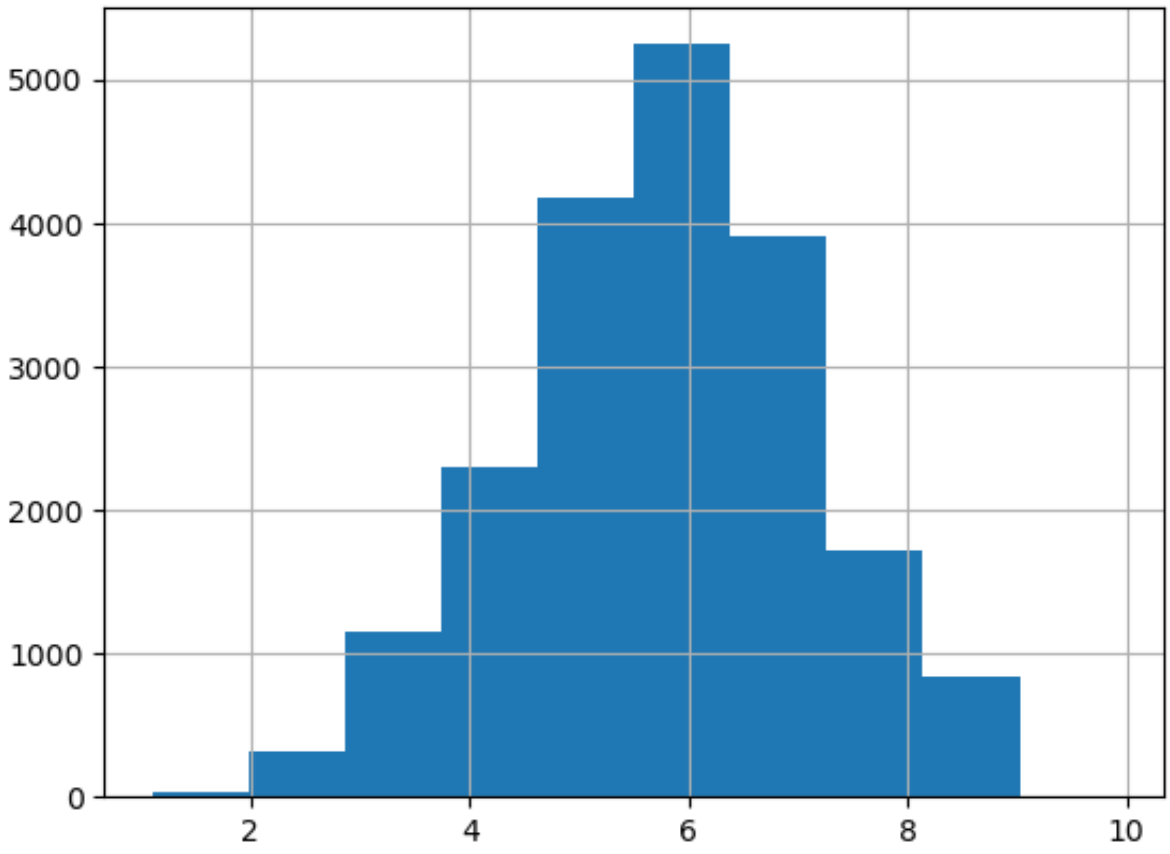
```
Hollywood / English    14649
Bollywood / Indian      2645
Tollywood               1172
Anime / Kids            1049
Wrestling                433
Punjabi                  332
Stage shows              129
Pakistani                 92
Dub / Dual Audio          45
3D Movies                  1
Name: industry, dtype: int64
```

```
ranks = df["IMDb-rating"]  # 数值属性 5数概括及缺失值的个数 例：IMDb-rating
null_cnt = ranks.isnull().sum()
ranks = ranks.dropna(axis = 0)
min_ranks = min(ranks)
max_ranks = max(ranks)
pct_25 = np.percentile(ranks, 25)
Median = np.median(ranks)
pct_75 = np.percentile(ranks, 75)
print("缺失值个数：{}".format(null_cnt))
print("最小值：{}".format(min_ranks))
print("Q1：{}".format(pct_25))
print("中位数：{}".format(Median))
print("Q3：{}".format(pct_75))
print("最大值：{}".format(max_ranks))
```

```
缺失值个数: 841
最小值: 1.1
Q1: 4.8
中位数: 5.7
Q3: 6.6
最大值: 9.9
```

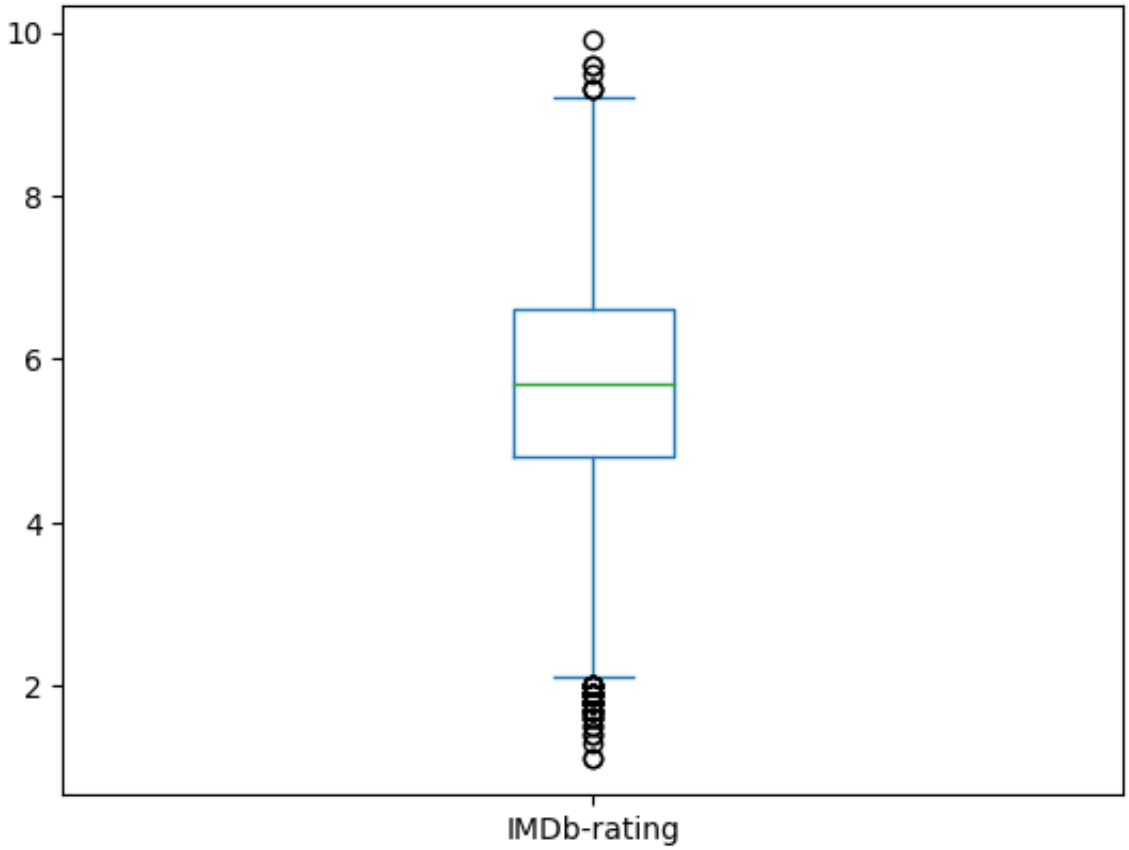
```python
# 数据可视化
import matplotlib.pyplot as plt
df["IMDb-rating"].hist() # 直方图
```

```
<Axes: >
```




```python
df["IMDb-rating"].plot.box() # 盒图及离群点
```

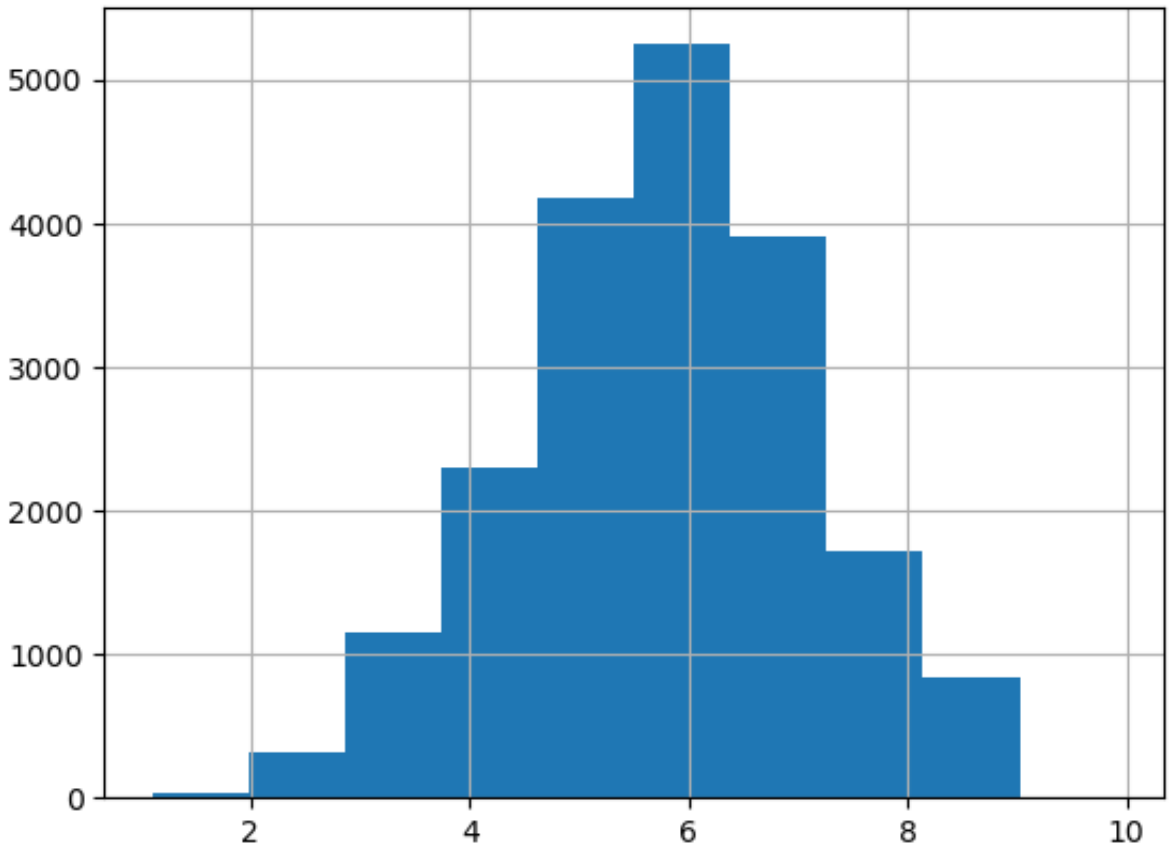
```
<Axes: >
```




```
# 缺失值处理
# 剔除缺失值
data_dropna = df["IMDb-rating"].dropna(axis = 0)
```

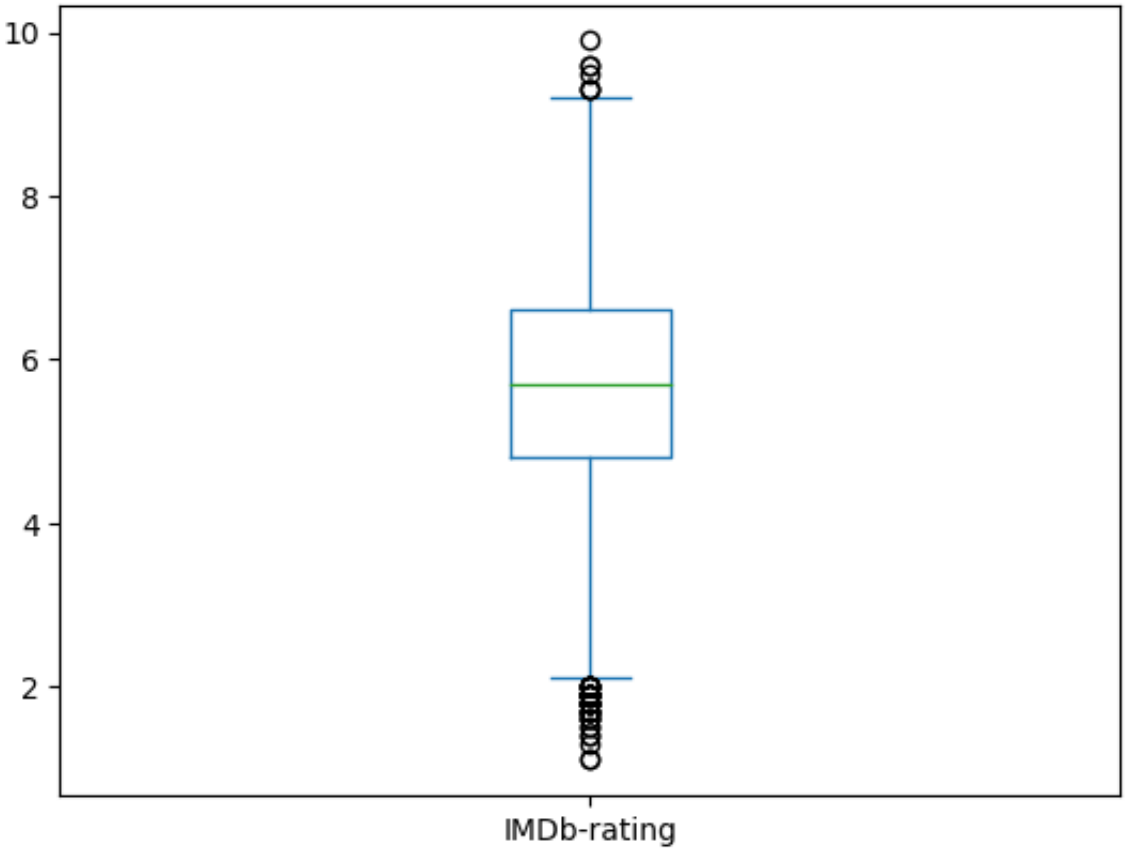
```
df["IMDb-rating"].hist() #直方图
```

```
<Axes: >
```



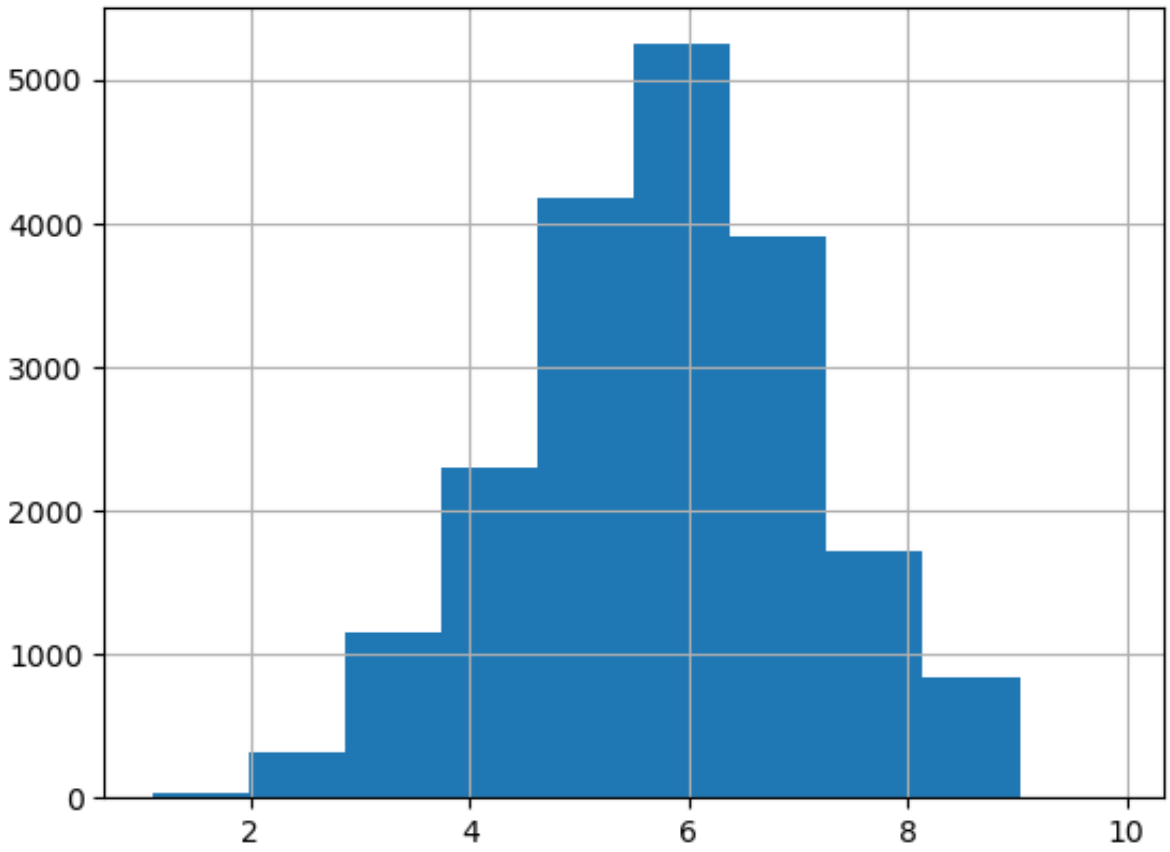

```
df["IMDb-rating"].plot.box() # 盒图及离群点
```

```
<Axes: >
```



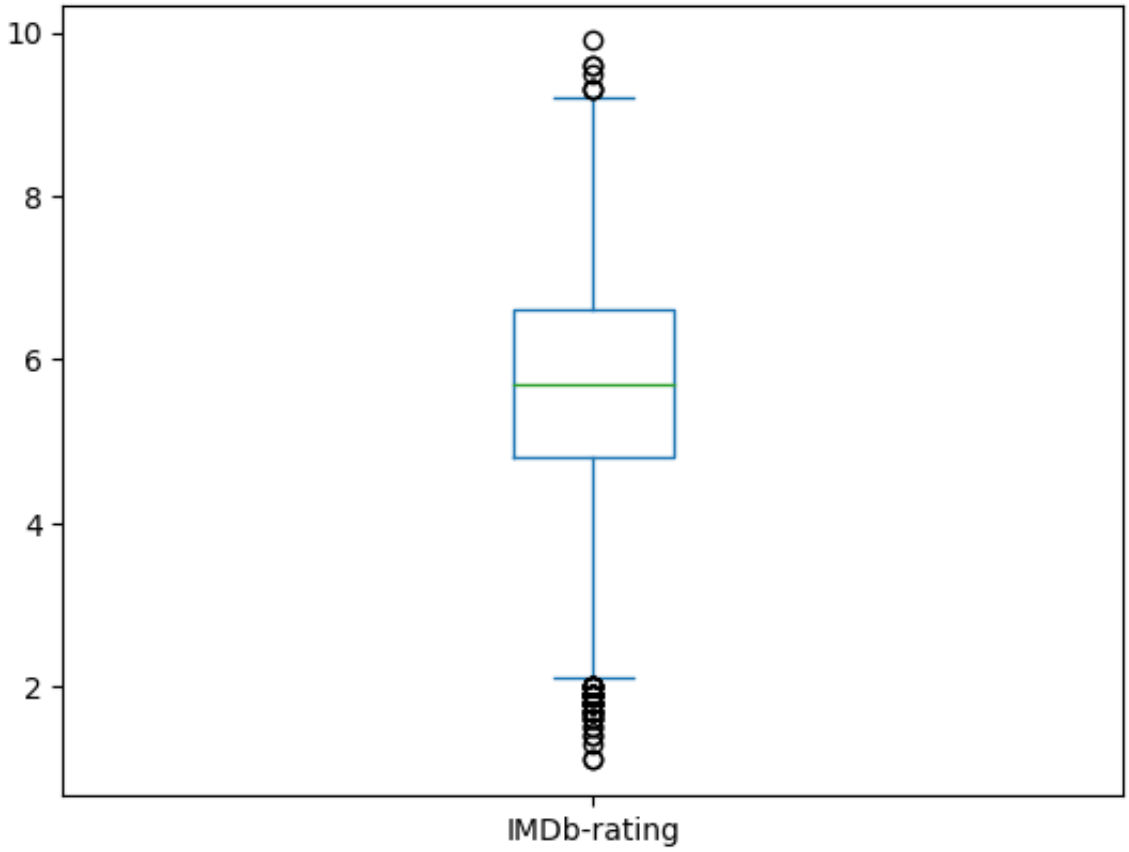

```
# 用最高频率值来填补缺失值
data_fillna=df["IMDb-rating"].fillna(df["IMDb-rating"].mode())
data_fillna.hist() # 直方图
```

```
<Axes: >
```




```
data_fillna.plot.box()
```

```
<Axes: >
```


10
8
6
4
2
IMDb-rating