pandas中绘制图表

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

In [2]:
```
data = pd.read_table('data-2017.txt', sep=' ')
```

In [3]:
```
data.head()
```

Out[3]:

	城市	平均工资
0	北京市	9227
1	天津市	5729
2	河北省	4511
3	山西省	3299
4	内蒙古自治区	4538

In [4]:
```
data['平均工资'].plot()
```

Out[4]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x1179e3b00>
```

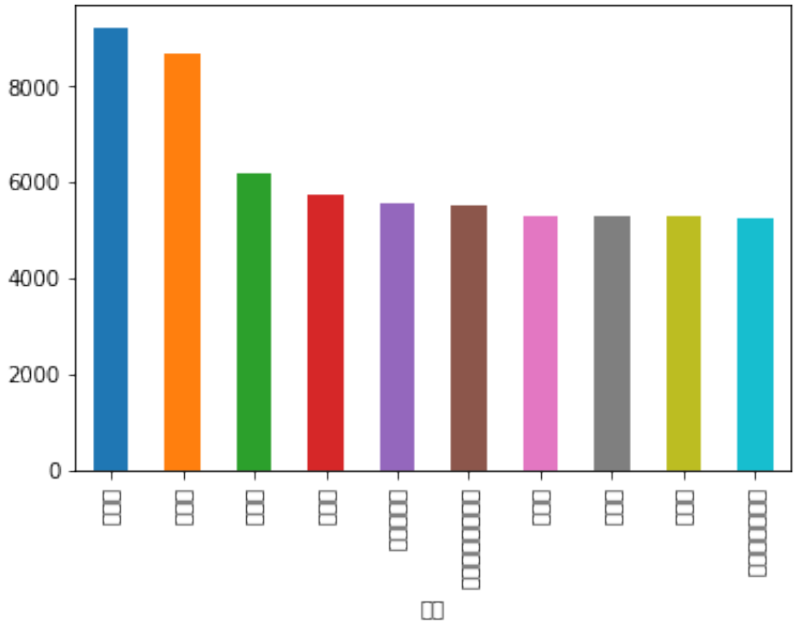
In [5]:
```
import numpy as np
data2 = data.sort_values(by='平均工资', ascending=False)
#data2.index = np.arange(1, len(data2)+1)
data2['排名'] = np.arange(1, len(data2)+1)
data2 = data2.set_index('城市')
data2.head()
```

Out[5]:

	平均工资	排名
城市		
北京市	9227	1
上海市	8664	2
重庆市	6181	3
天津市	5729	4
西藏自治区	5550	5

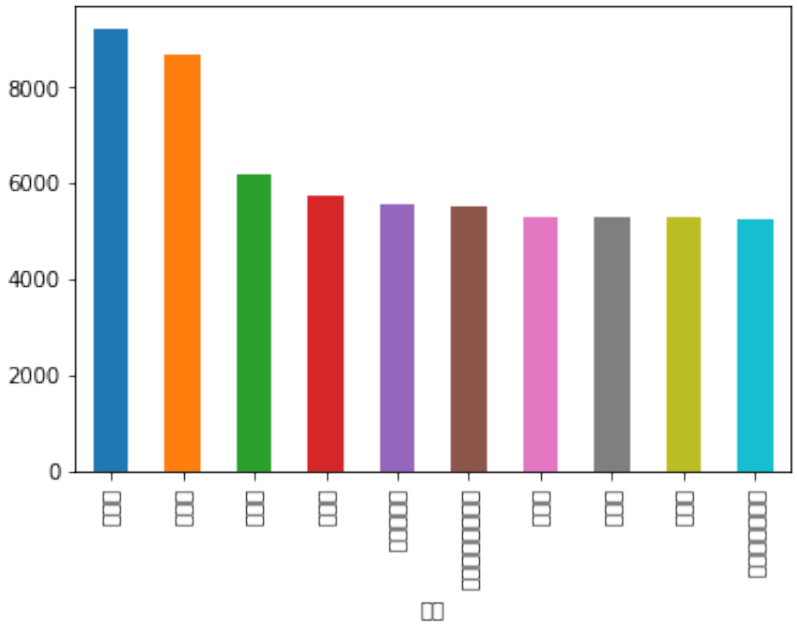
```
In [6]: data2['平均工资'][:10].plot(kind='bar')
```

```
Out[6]: <matplotlib.axes._subplots.AxesSubplot at 0x116b75198>
```



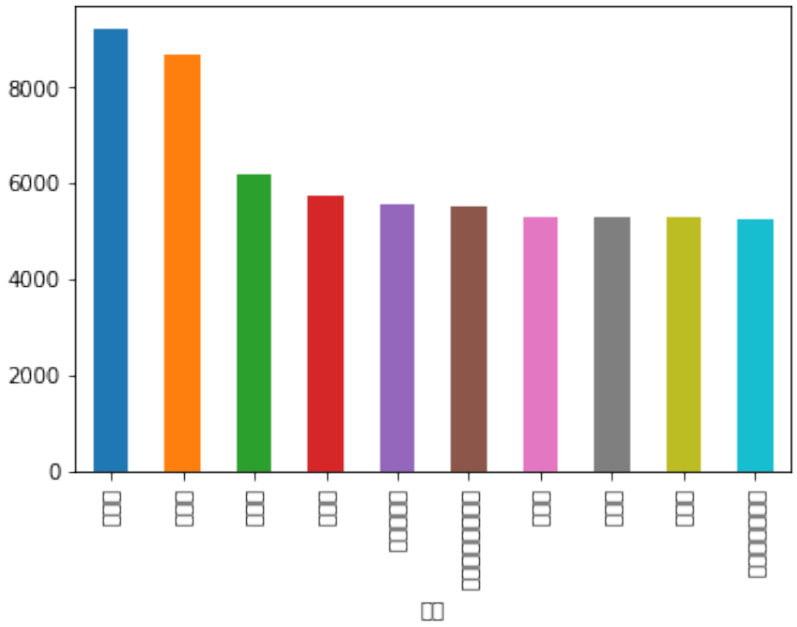
上面画出的图不只出现了图，解决办法：导入matplotlib.pyplot，然后调用plt.show()

```
In [7]: import matplotlib.pyplot as plt
        data2['平均工资'][:10].plot(kind='bar')
        plt.show()
```

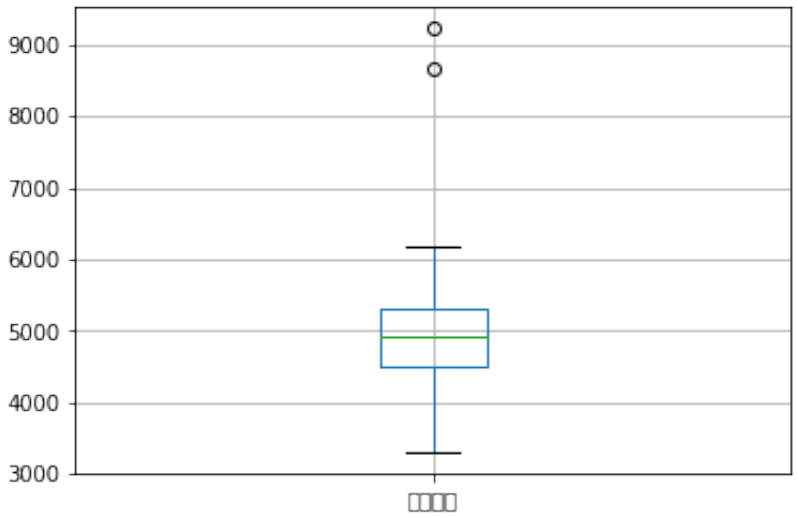


上面画出的图中文乱码，解决办法：设置字体 mac下设置比较麻烦，这里我就不进行配置了

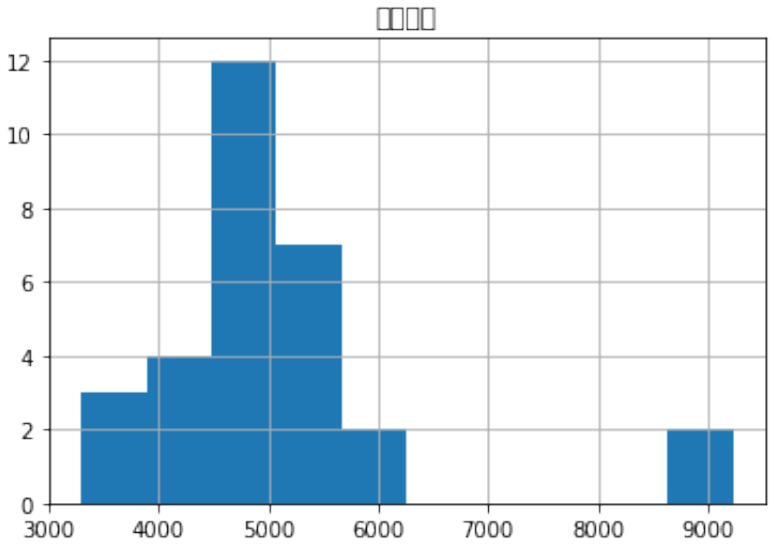
In [8]:
```
# plt.rc('font', **{'family': "Microsoft Yahei, SimHei"})
data2['平均工资'][:10].plot(kind='bar')
plt.show()
```



In [9]:
```
data2[['平均工资']].boxplot()
plt.show()
```



In [10]:
```
data2[['平均工资']].hist()
plt.show()
```

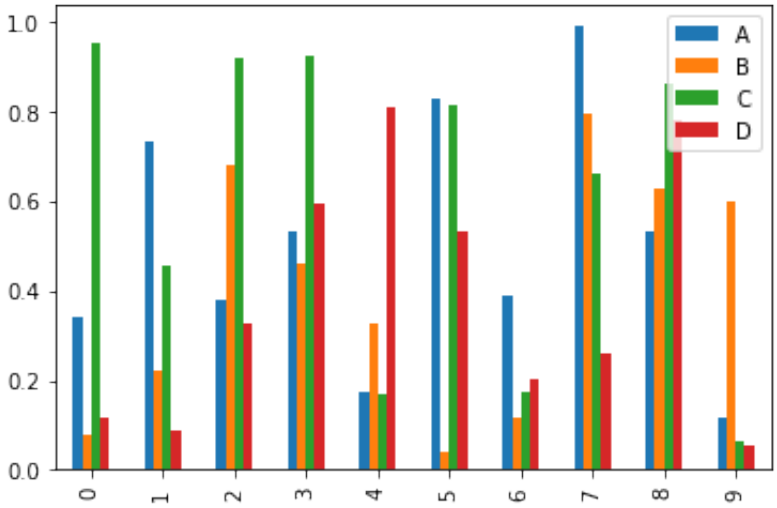


In [11]:
```
import numpy as np
data = pd.DataFrame(np.random.rand(10, 4), columns=list('ABCD'))
data
```

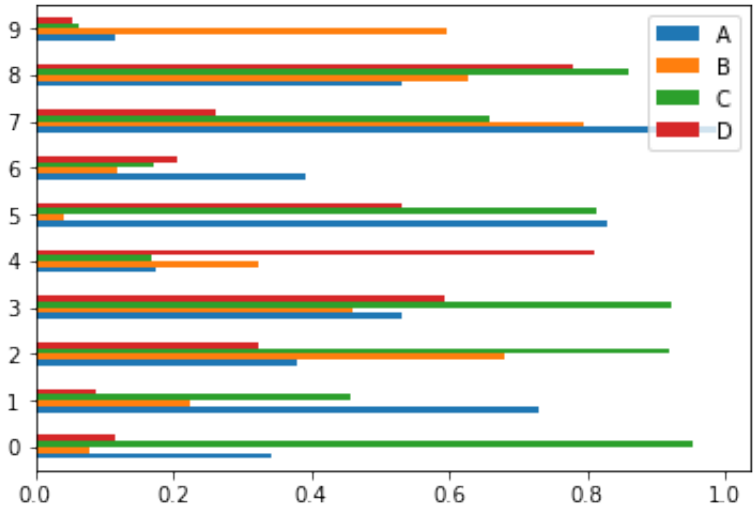
Out[11]:

	A	B	C	D
0	0.340906	0.078106	0.951990	0.116684
1	0.730812	0.223232	0.455845	0.086992
2	0.378520	0.681841	0.920268	0.325177
3	0.531014	0.460652	0.921516	0.592271
4	0.174237	0.325204	0.168322	0.810857
5	0.829891	0.040597	0.815237	0.530930
6	0.391019	0.117640	0.171889	0.204434
7	0.988667	0.795516	0.658790	0.261062
8	0.532024	0.628772	0.861626	0.780230
9	0.116765	0.596877	0.064195	0.053095

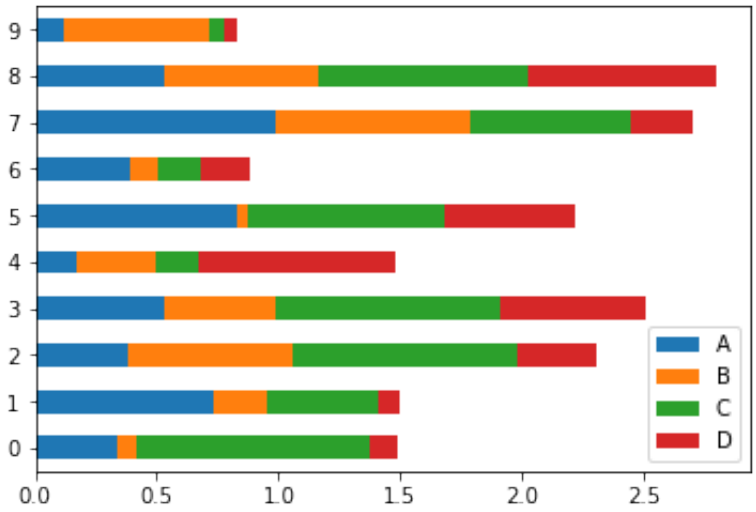
In [12]:
```
data.plot(kind='bar')
plt.show()
```



In [13]:
```
data.plot(kind='barh')
plt.show()
```

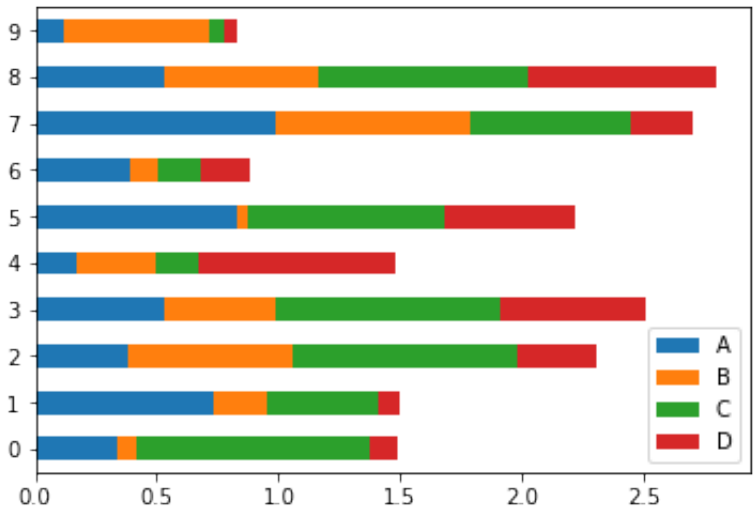


In [14]:
```
# 叠加
data.plot(kind='barh', stacked=True)
plt.show()
```



保存图为图片或pdf--plt.savefig()

In [15]:
```
data.plot(kind='barh', stacked=True)
plt.savefig('test.png')          #  jpg  png   pdf
```



In [16]:
```
data.plot(kind='barh', stacked=True)
plt.savefig('test.pdf')        #  jpg  png   pdf
```