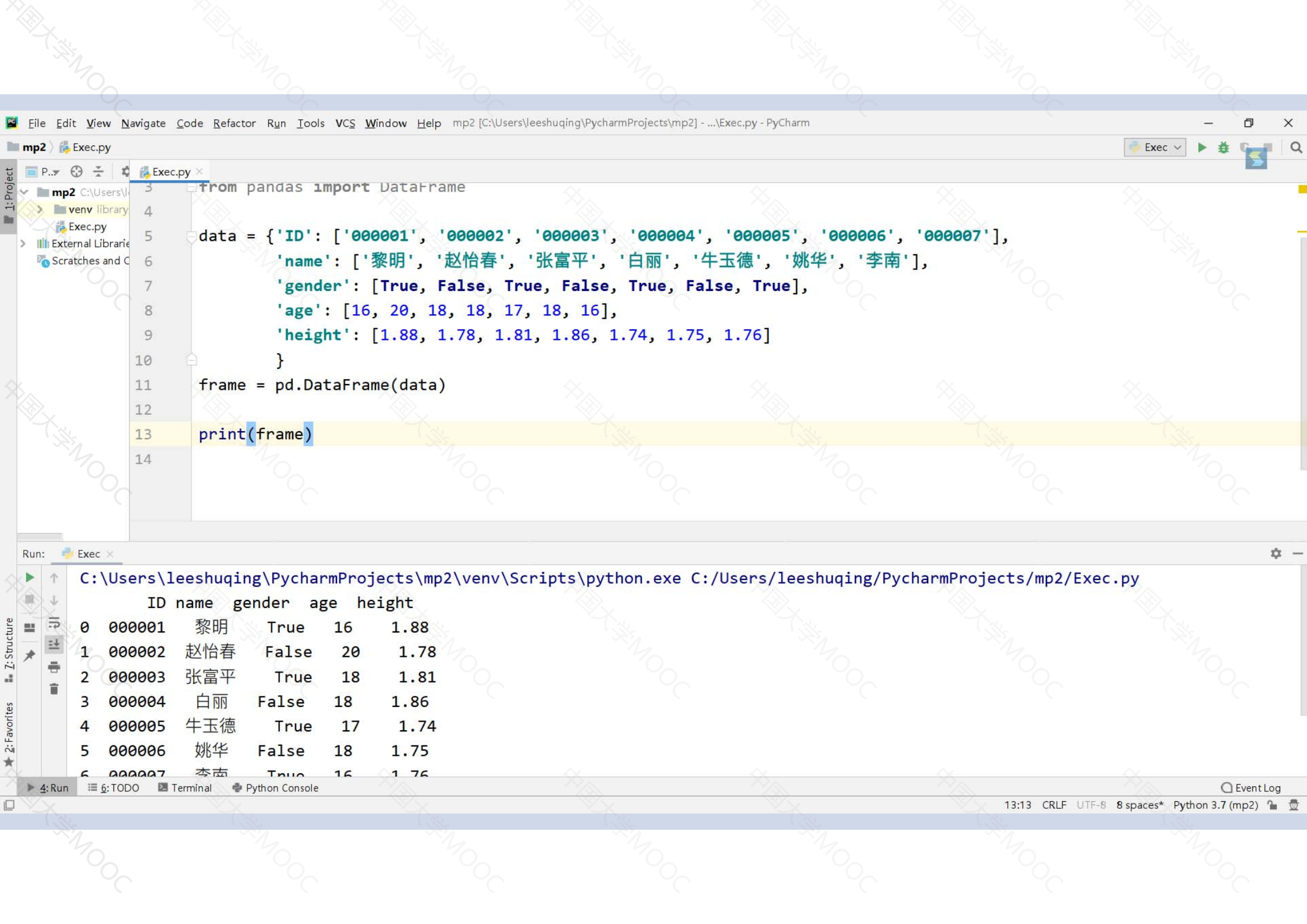


# Python大数据分析

## 三、数据的显示



```
from pandas import DataFrame

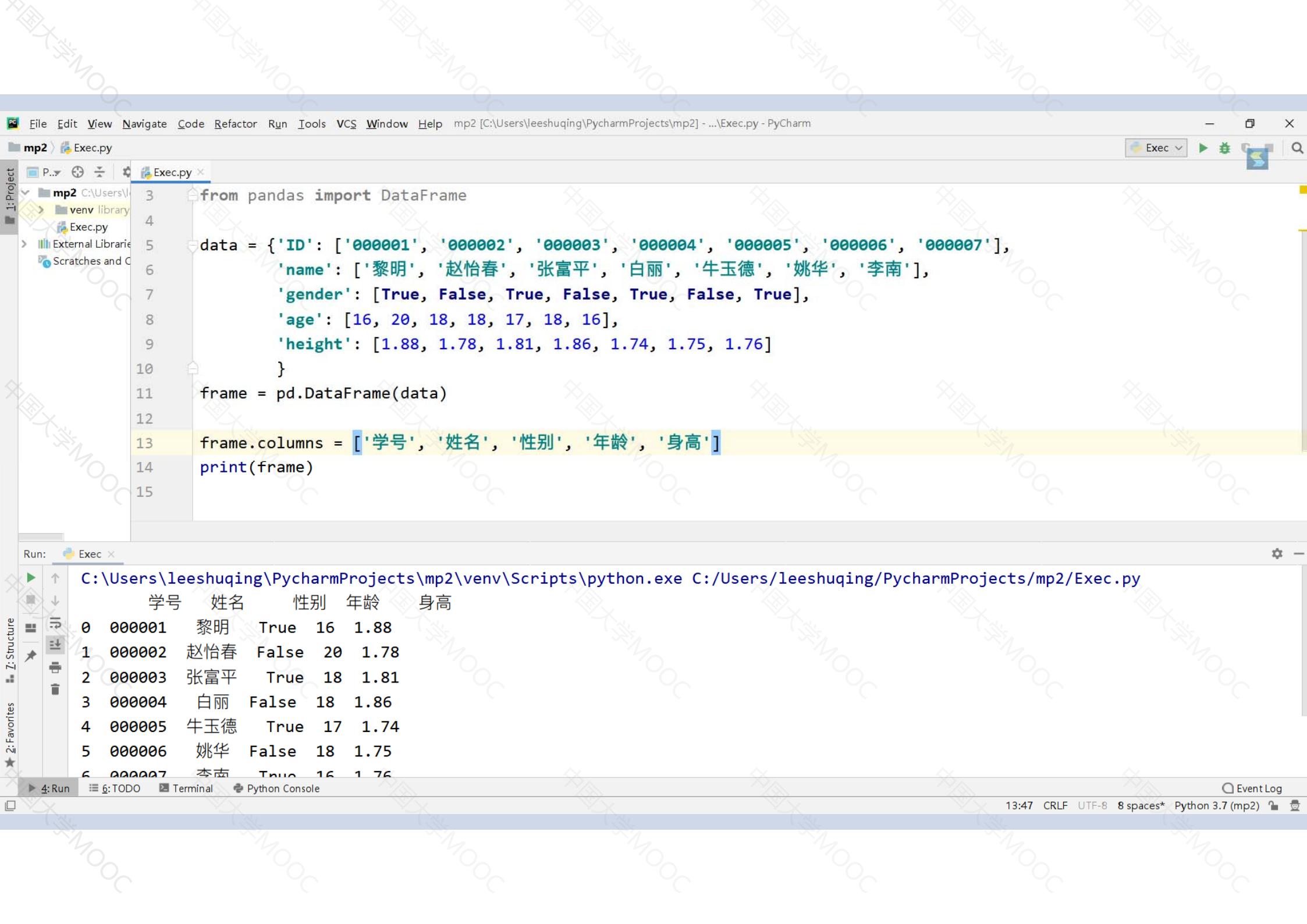
data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],
        'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],
        'gender': [True, False, True, False, True, False, True],
        'age': [16, 20, 18, 18, 17, 18, 16],
        'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]}

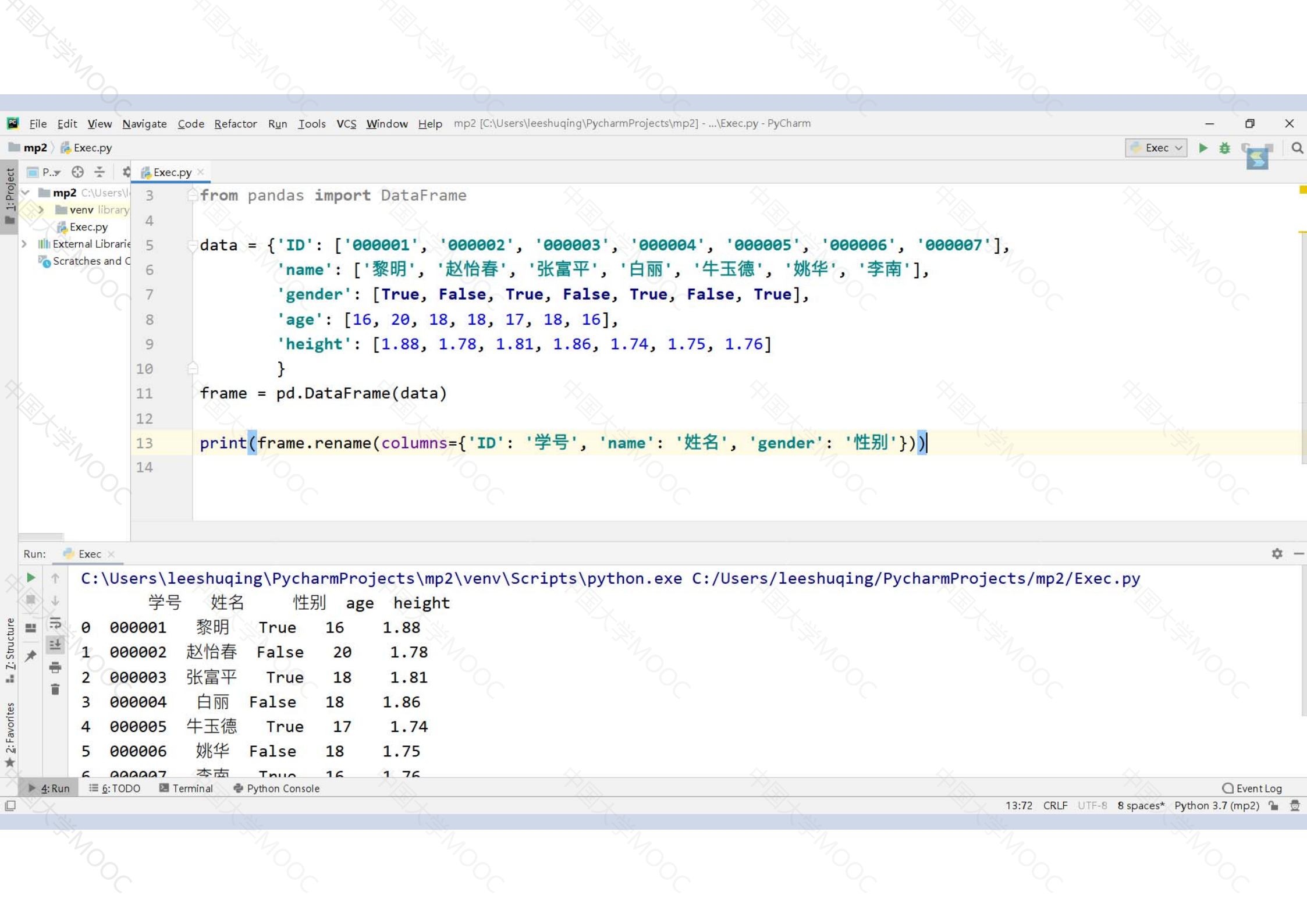
frame = pd.DataFrame(data)

print(frame)
```

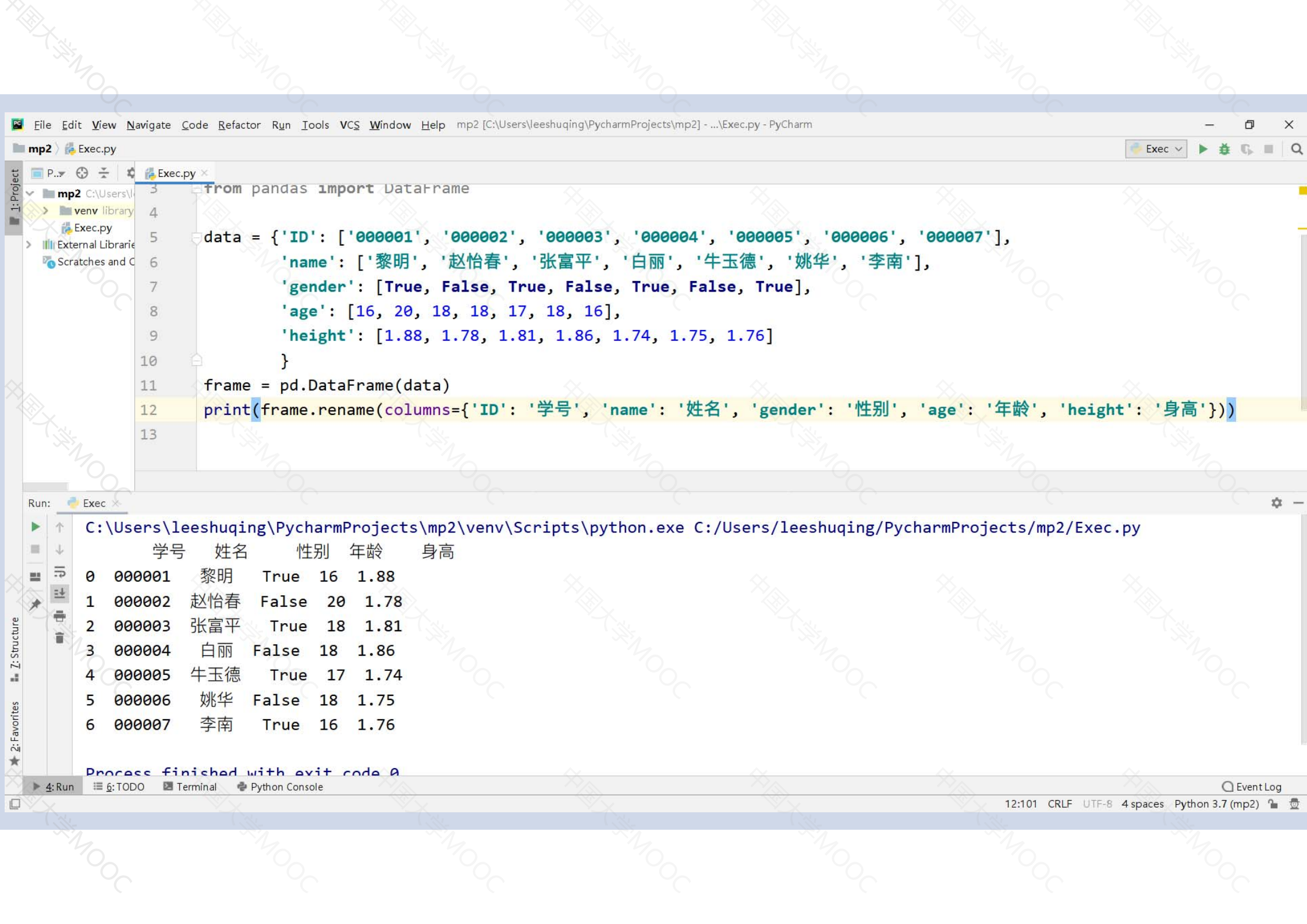
C:\Users\leeshuqing\PycharmProjects\mp2\venv\Scripts\python.exe C:/Users/leeshuqing/PycharmProjects/mp2/Exec.py

	ID	name	gender	age	height
0	000001	黎明	True	16	1.88
1	000002	赵怡春	False	20	1.78
2	000003	张富平	True	18	1.81
3	000004	白丽	False	18	1.86
4	000005	牛玉德	True	17	1.74
5	000006	姚华	False	18	1.75
6	000007	李南	True	16	1.76









```
3 from pandas import DataFrame
```

```
4  
5 data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],  
6         'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],  
7         'gender': [True, False, True, False, True, False, True],  
8         'age': [16, 20, 18, 18, 17, 18, 16],  
9         'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]  
10      }
```

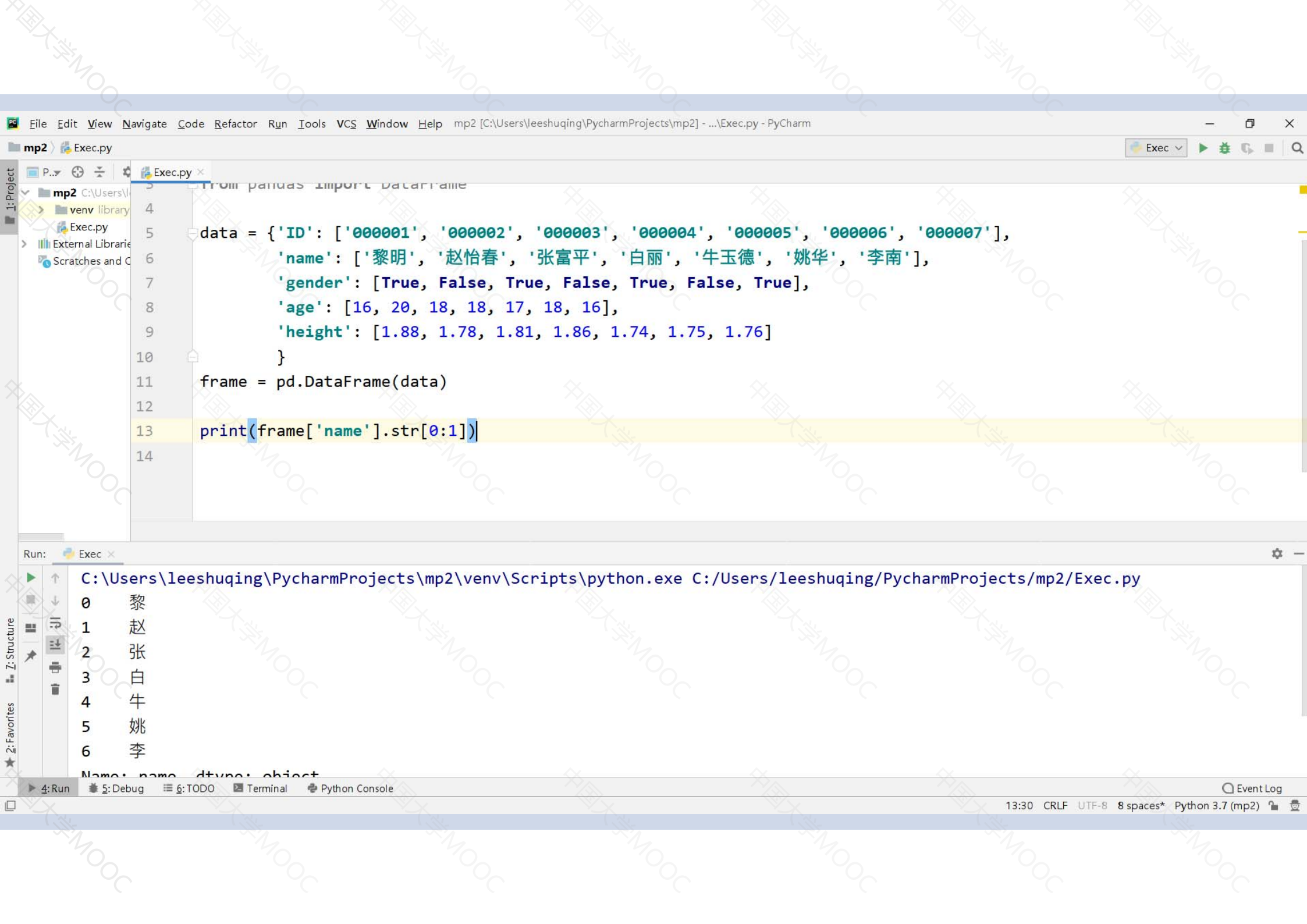
```
11 frame = pd.DataFrame(data)
```

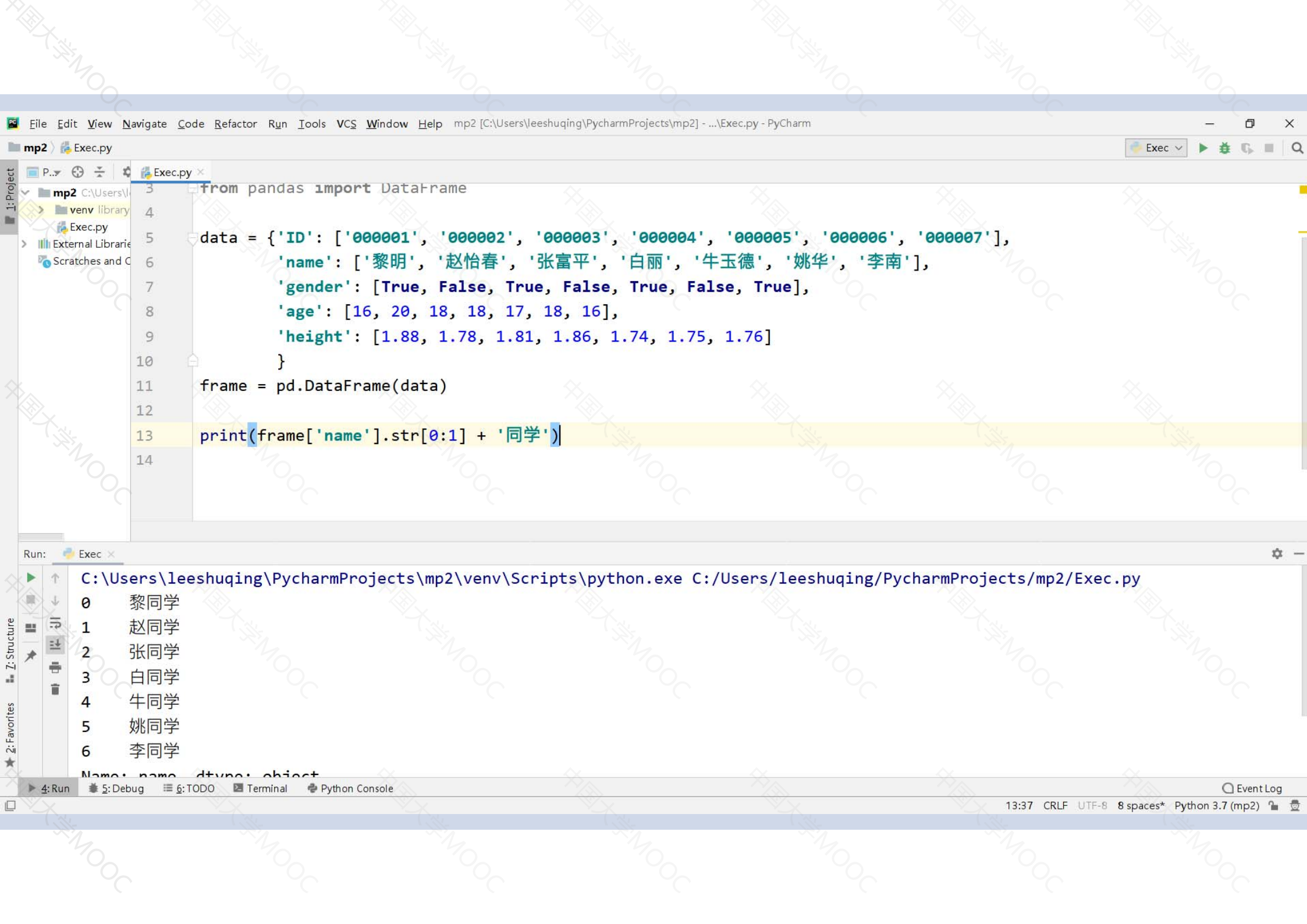
```
12 print(frame.rename(columns={'ID': '学号', 'name': '姓名', 'gender': '性别', 'age': '年龄', 'height': '身高'}))  
13
```

C:\Users\leeshuqing\PycharmProjects\mp2\venv\Scripts\python.exe C:/Users/leeshuqing/PycharmProjects/mp2/Exec.py

	学号	姓名	性别	年龄	身高
0	000001	黎明	True	16	1.88
1	000002	赵怡春	False	20	1.78
2	000003	张富平	True	18	1.81
3	000004	白丽	False	18	1.86
4	000005	牛玉德	True	17	1.74
5	000006	姚华	False	18	1.75
6	000007	李南	True	16	1.76

Process finished with exit code 0





File Edit View Navigate Code Refactor Run Tools VCS Window Help mp2 [C:\Users\leeshuqing\PycharmProjects\mp2] - ...Exec.py - PyCharm

mp2 Exec.py

Exec

Run Debug Run All Stop

```
1 from pandas import DataFrame
2
3 data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],
4         'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],
5         'gender': [True, False, True, False, True, False, True],
6         'age': [16, 20, 18, 18, 17, 18, 16],
7         'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]
8     }
9
10 frame = pd.DataFrame(data)
11
12 print(frame['name'].str[0:1] + '同学')
```

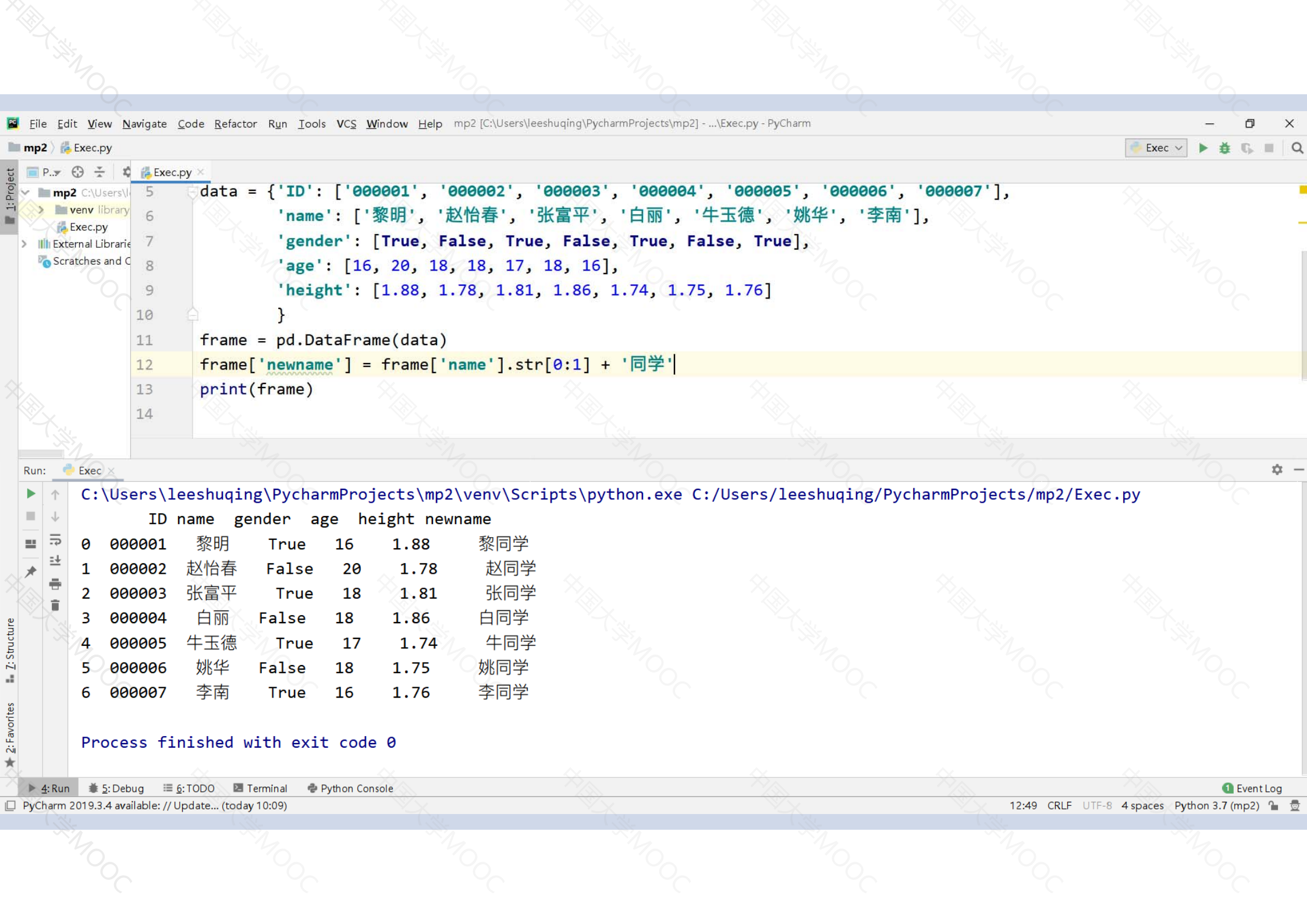
Run: Exec

```
C:\Users\leeshuqing\PycharmProjects\mp2\venv\Scripts\python.exe C:/Users/leeshuqing/PycharmProjects/mp2/Exec.py
0 黎同学
1 赵同学
2 张同学
3 白同学
4 牛同学
5 姚同学
6 李同学
Name: name, dtype: object
```

4: Run 5: Debug 6: TODO 7: Terminal 8: Python Console

Event Log

13:37 CRLF UTF-8 8 spaces\* Python 3.7 (mp2)



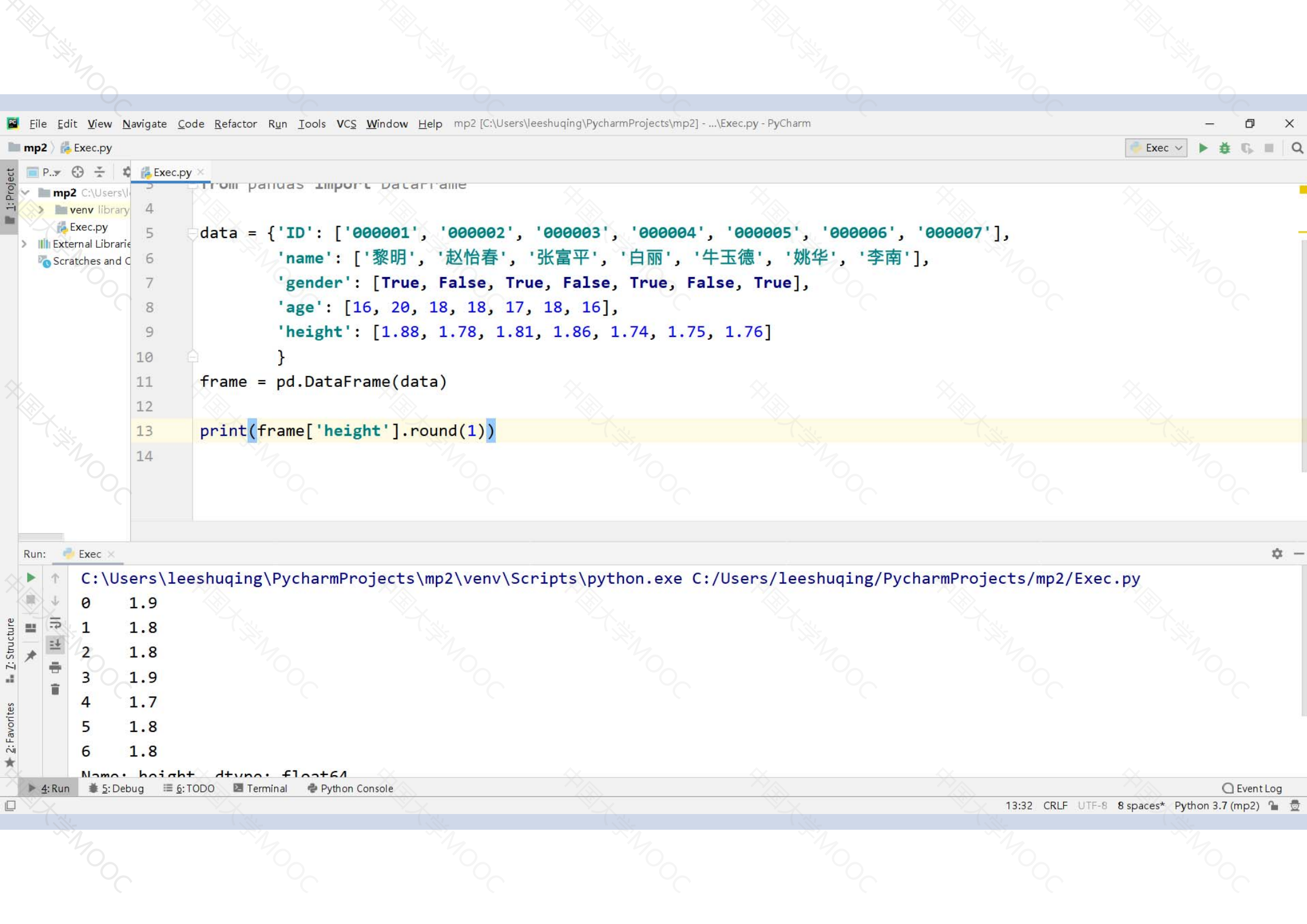
```
5 data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],
6         'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],
7         'gender': [True, False, True, False, True, False, True],
8         'age': [16, 20, 18, 18, 17, 18, 16],
9         'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]
10        }
11 frame = pd.DataFrame(data)
12 frame['newname'] = frame['name'].str[0:1] + '同学'
13 print(frame)
14
```

C:\Users\leeshuqing\PycharmProjects\mp2\venv\Scripts\python.exe C:/Users/leeshuqing/PycharmProjects/mp2/Exec.py

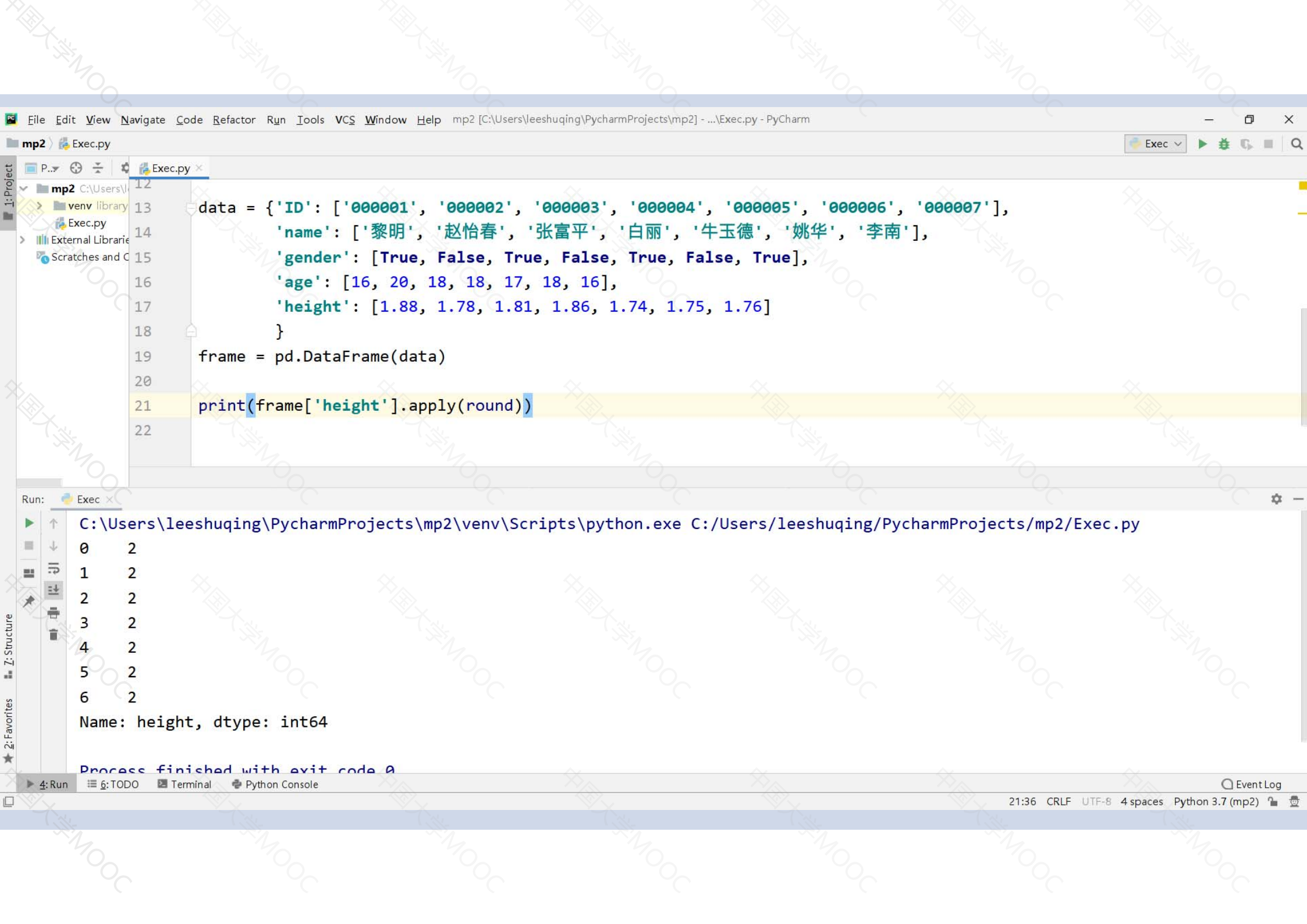
	ID	name	gender	age	height	newname
0	000001	黎明	True	16	1.88	黎同学
1	000002	赵怡春	False	20	1.78	赵同学
2	000003	张富平	True	18	1.81	张同学
3	000004	白丽	False	18	1.86	白同学
4	000005	牛玉德	True	17	1.74	牛同学
5	000006	姚华	False	18	1.75	姚同学
6	000007	李南	True	16	1.76	李同学

Process finished with exit code 0









```
data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],
        'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],
        'gender': [True, False, True, False, True, False, True],
        'age': [16, 20, 18, 18, 17, 18, 16],
        'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]}

frame = pd.DataFrame(data)

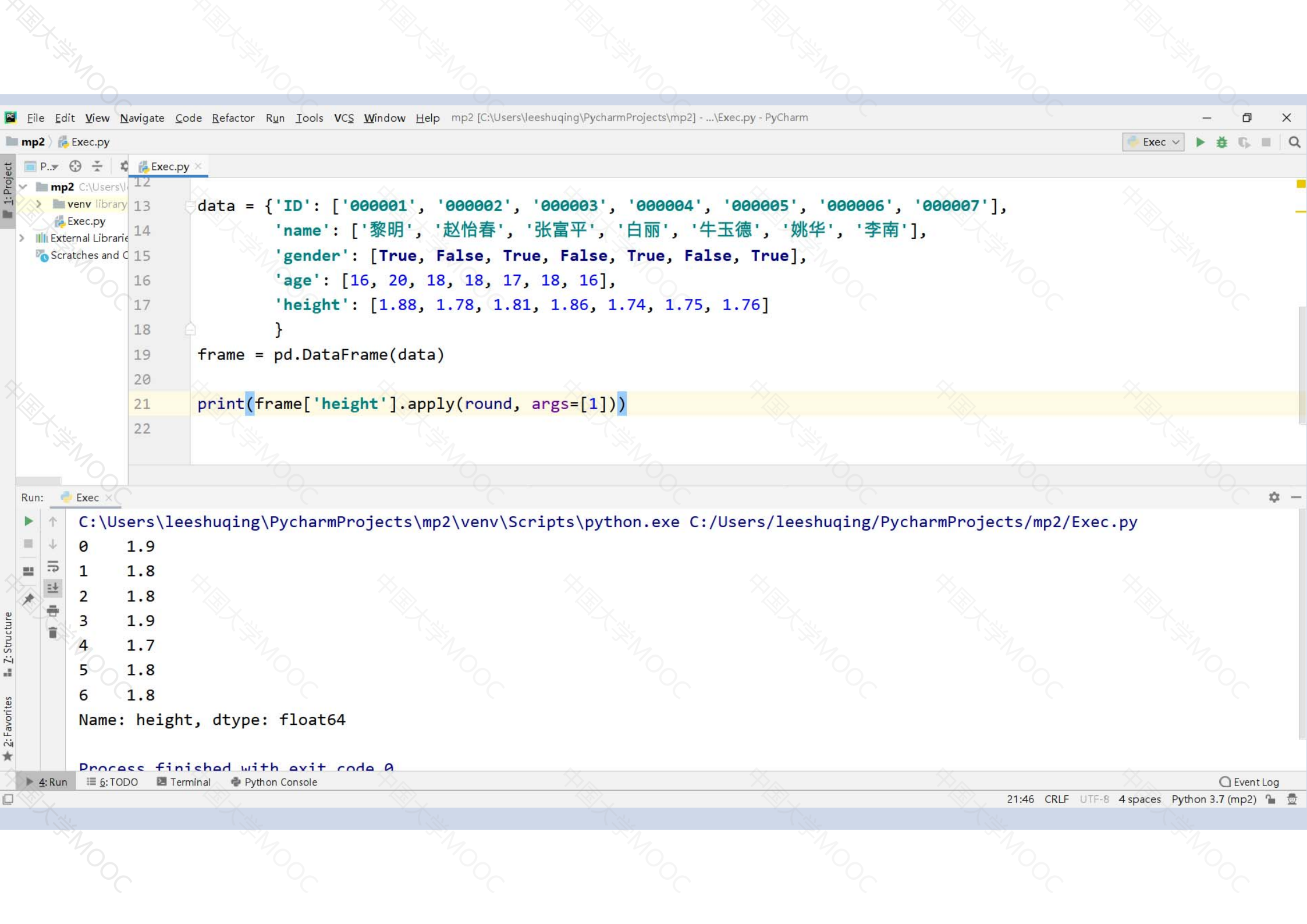
print(frame['height'].apply(round))
```

C:\Users\leeshuqing\PycharmProjects\mp2\venv\Scripts\python.exe C:/Users/leeshuqing/PycharmProjects/mp2/Exec.py

```
0    2
1    2
2    2
3    2
4    2
5    2
6    2
```

Name: height, dtype: int64

Process finished with exit code 0



```
data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],  
        'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],  
        'gender': [True, False, True, False, True, False, True],  
        'age': [16, 20, 18, 18, 17, 18, 16],  
        'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]  
    }
```

```
frame = pd.DataFrame(data)
```

```
print(frame['height'].apply(round, args=[1]))
```

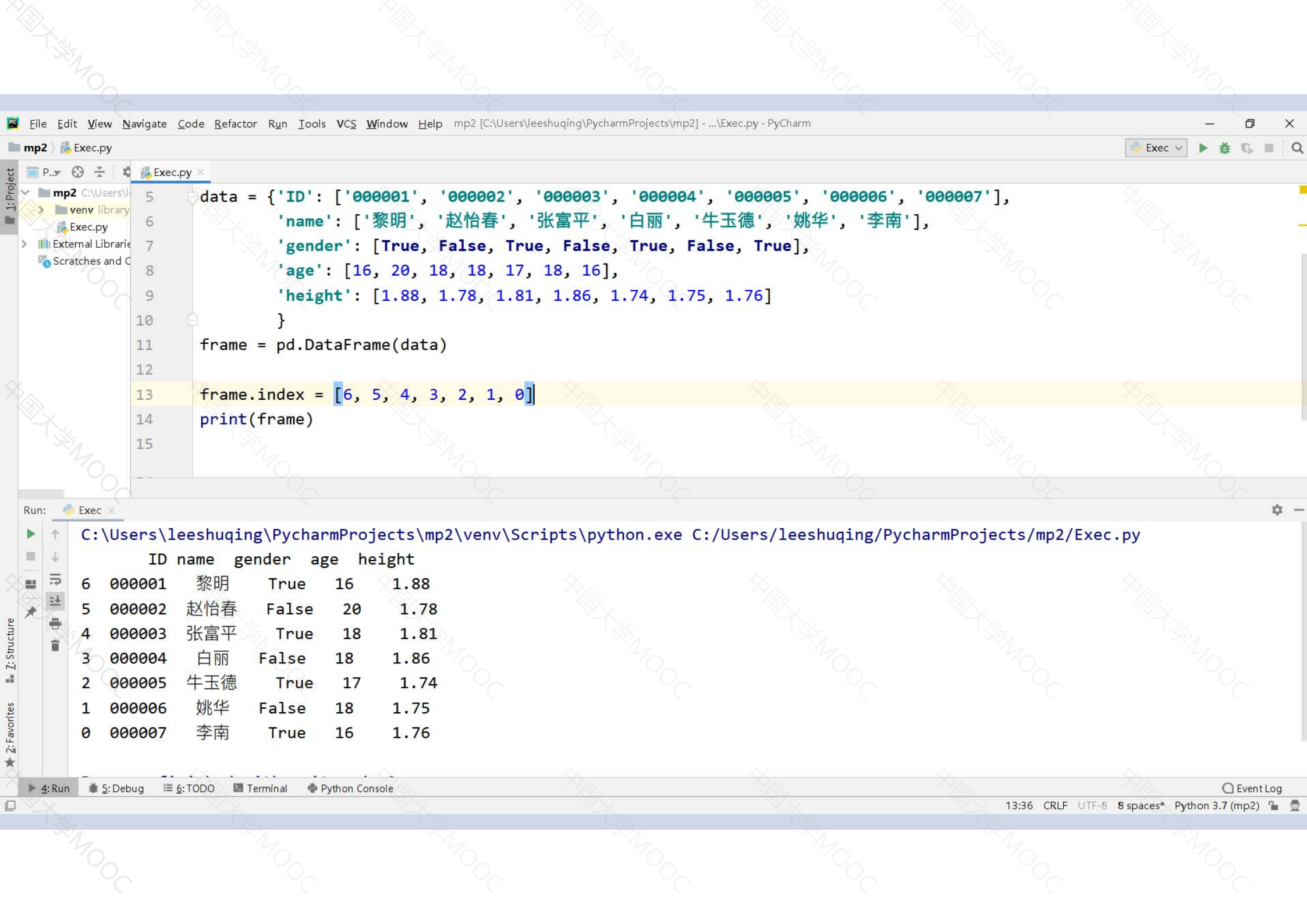
C:\Users\leeshuqing\PycharmProjects\mp2\venv\Scripts\python.exe C:/Users/leeshuqing/PycharmProjects/mp2/Exec.py

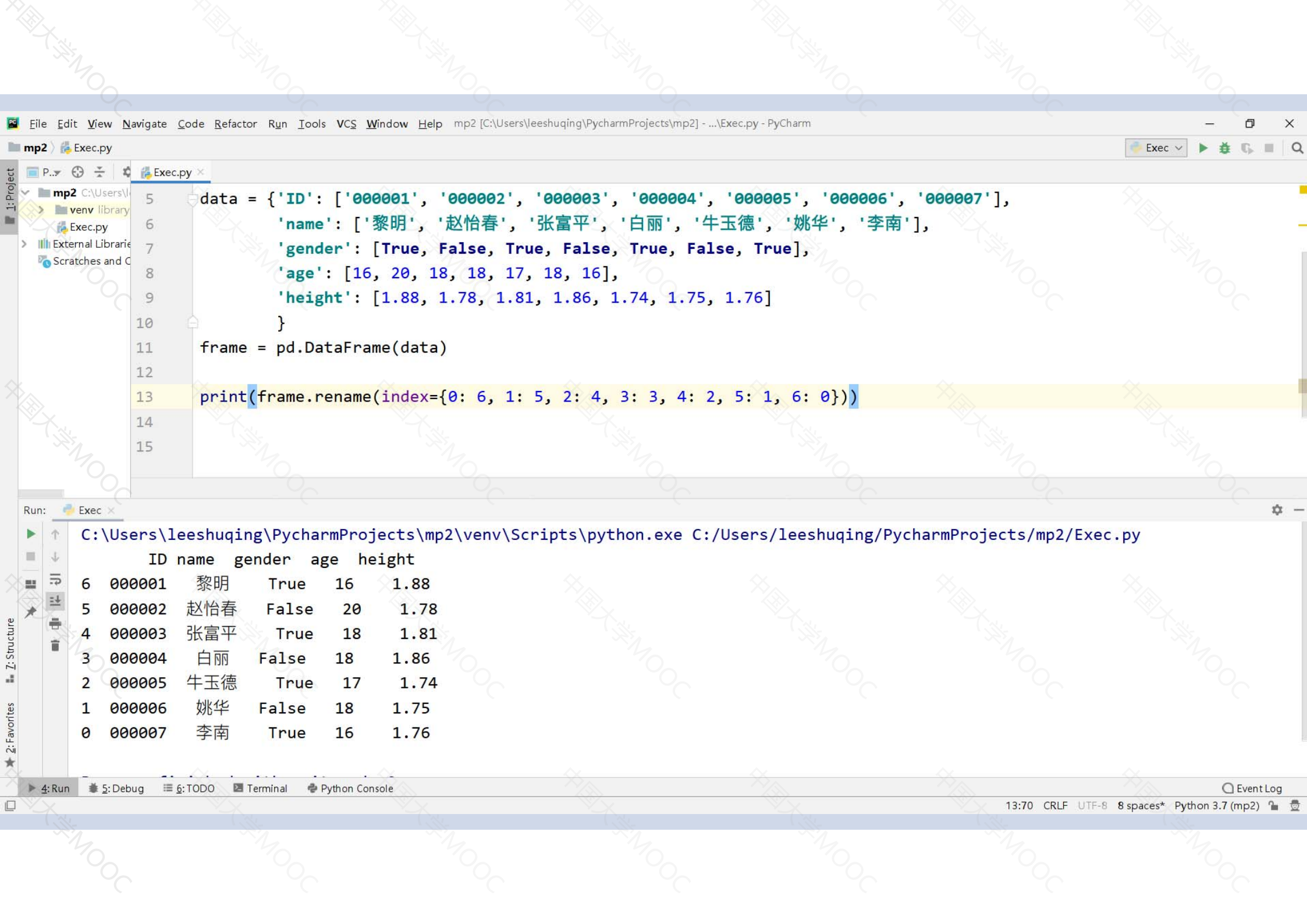
```
0    1.9  
1    1.8  
2    1.8  
3    1.9  
4    1.7  
5    1.8  
6    1.8
```

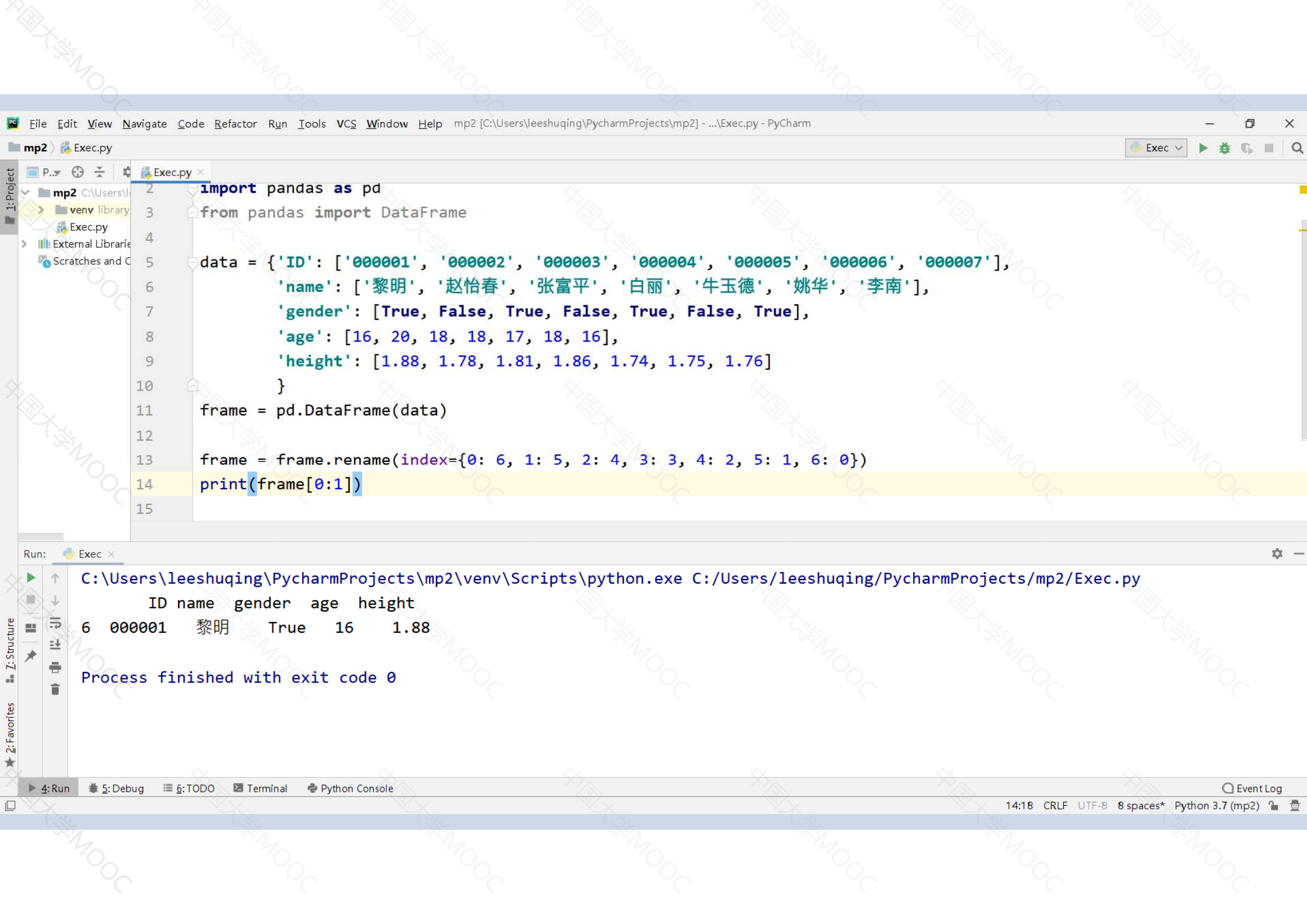
Name: height, dtype: float64

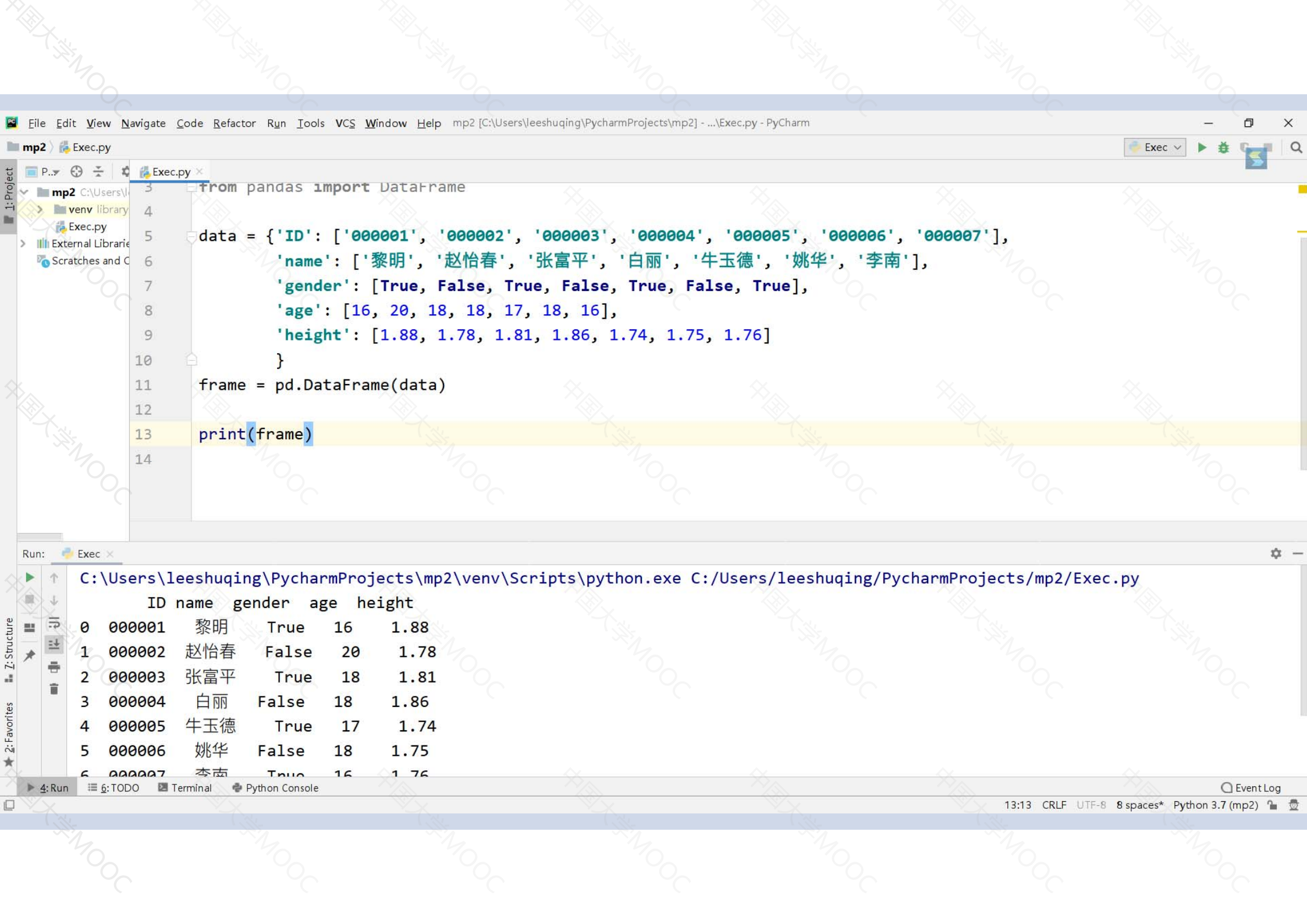
Process finished with exit code 0











```
from pandas import DataFrame

data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],
        'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],
        'gender': [True, False, True, False, True, False, True],
        'age': [16, 20, 18, 18, 17, 18, 16],
        'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]}

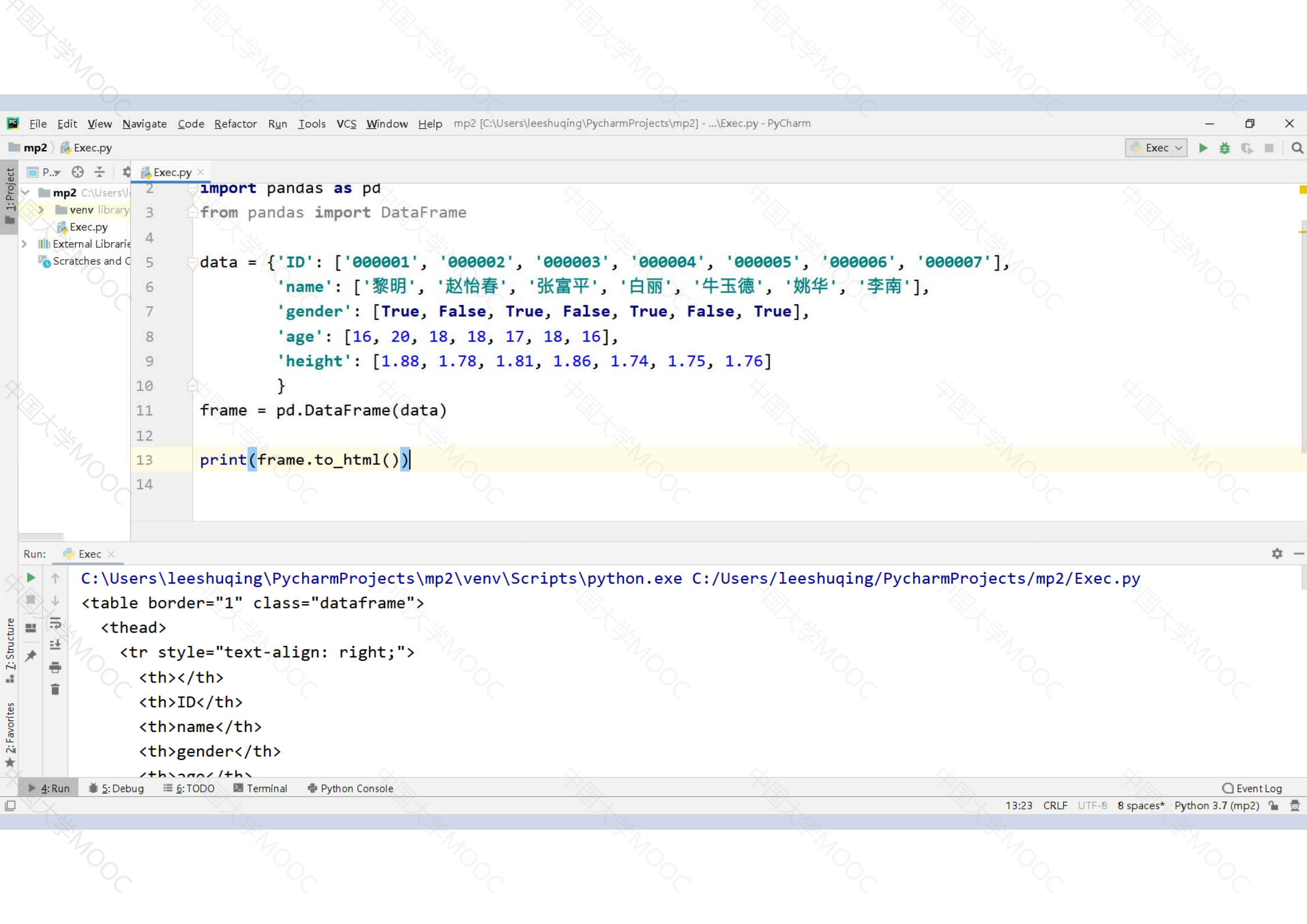
frame = pd.DataFrame(data)

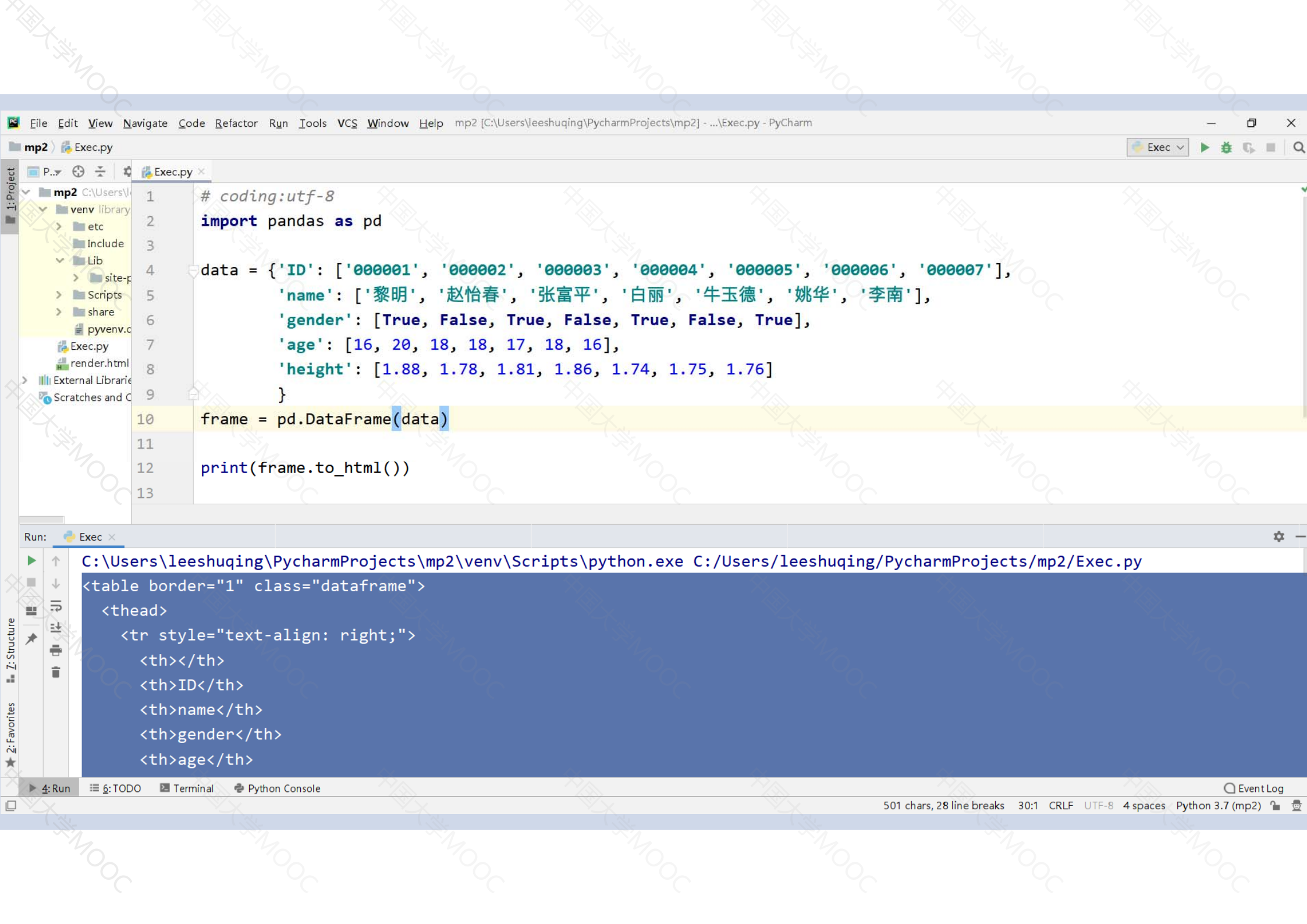
print(frame)
```

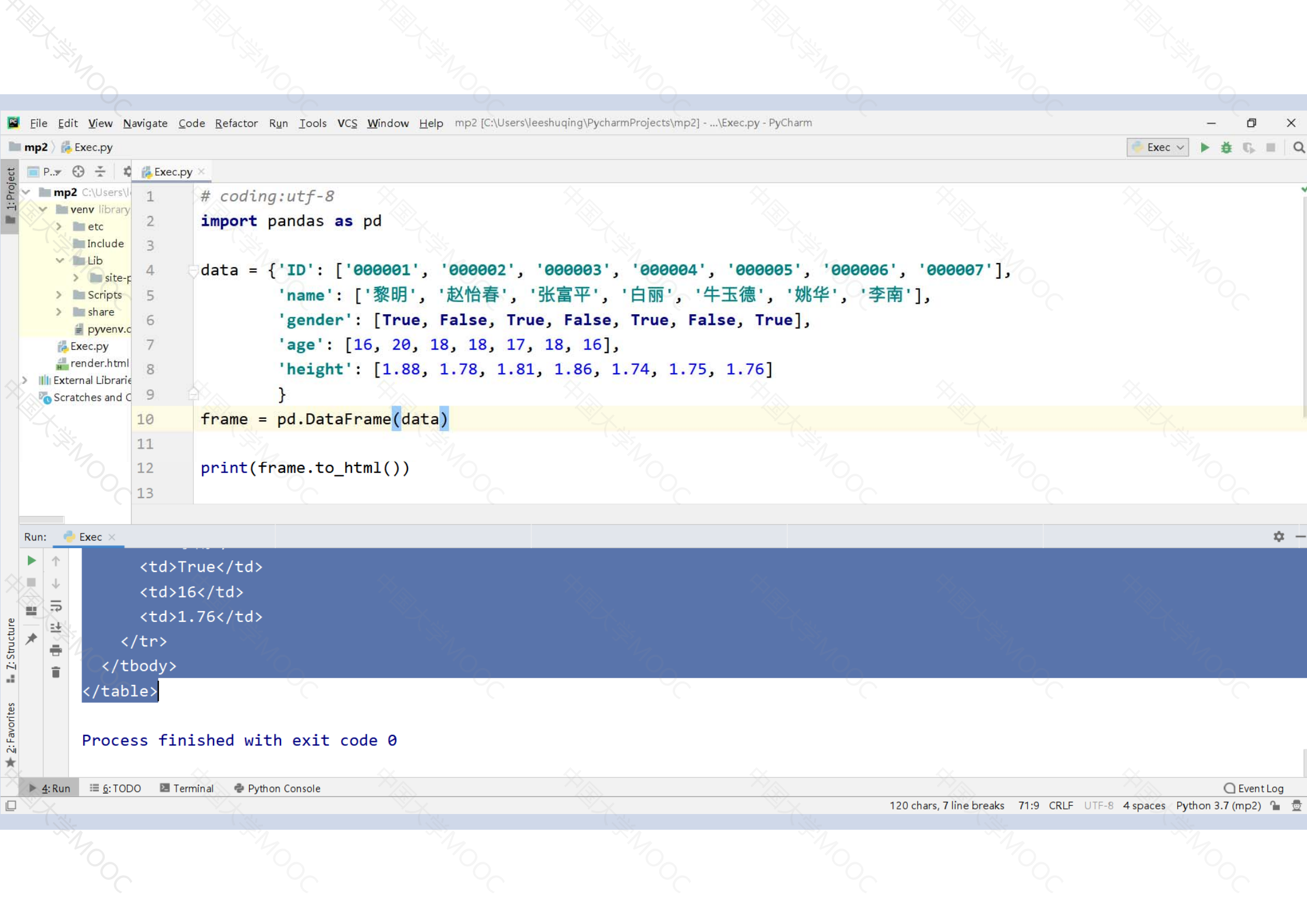
C:\Users\leeshuqing\PycharmProjects\mp2\venv\Scripts\python.exe C:/Users/leeshuqing/PycharmProjects/mp2/Exec.py

	ID	name	gender	age	height
0	000001	黎明	True	16	1.88
1	000002	赵怡春	False	20	1.78
2	000003	张富平	True	18	1.81
3	000004	白丽	False	18	1.86
4	000005	牛玉德	True	17	1.74
5	000006	姚华	False	18	1.75
6	000007	李南	True	16	1.76









```
# coding:utf-8
import pandas as pd

data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],
        'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],
        'gender': [True, False, True, False, True, False, True],
        'age': [16, 20, 18, 18, 17, 18, 16],
        'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]}

frame = pd.DataFrame(data)

print(frame.to_html())
```

```
<td>True</td>
<td>16</td>
<td>1.76</td>
</tr>
</tbody>
</table>
```

Process finished with exit code 0



```
1 # coding:utf-8
2 import pandas as pd
3
4 data = {'ID': ['000001', '000002', '000003', '000004', '000005', '000006', '000007'],
5         'name': ['黎明', '赵怡春', '张富平', '白丽', '牛玉德', '姚华', '李南'],
6         'gender': [True, False, True, False, True, False, True],
7         'age': [16, 20, 18, 18, 17, 18, 16],
8         'height': [1.88, 1.78, 1.81, 1.86, 1.74, 1.75, 1.76]}
9
10 frame = pd.DataFrame(data)
11
12 print(frame.to_html())
13
```

Ctrl+C

```
<td>True</td>
<td>16</td>
<td>1.76</td>
</tr>
</tbody>
</table>
```

Process finished with exit code 0

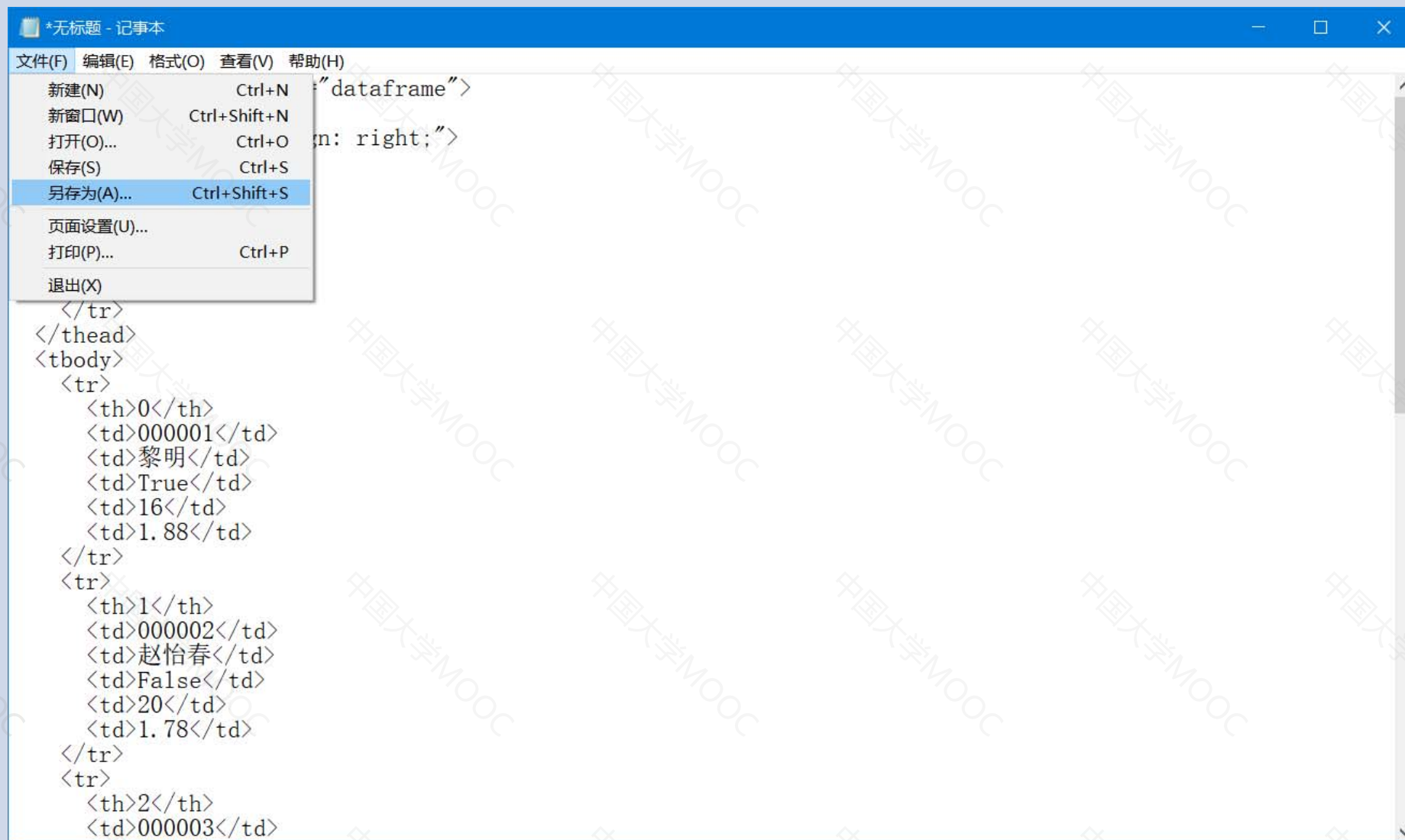


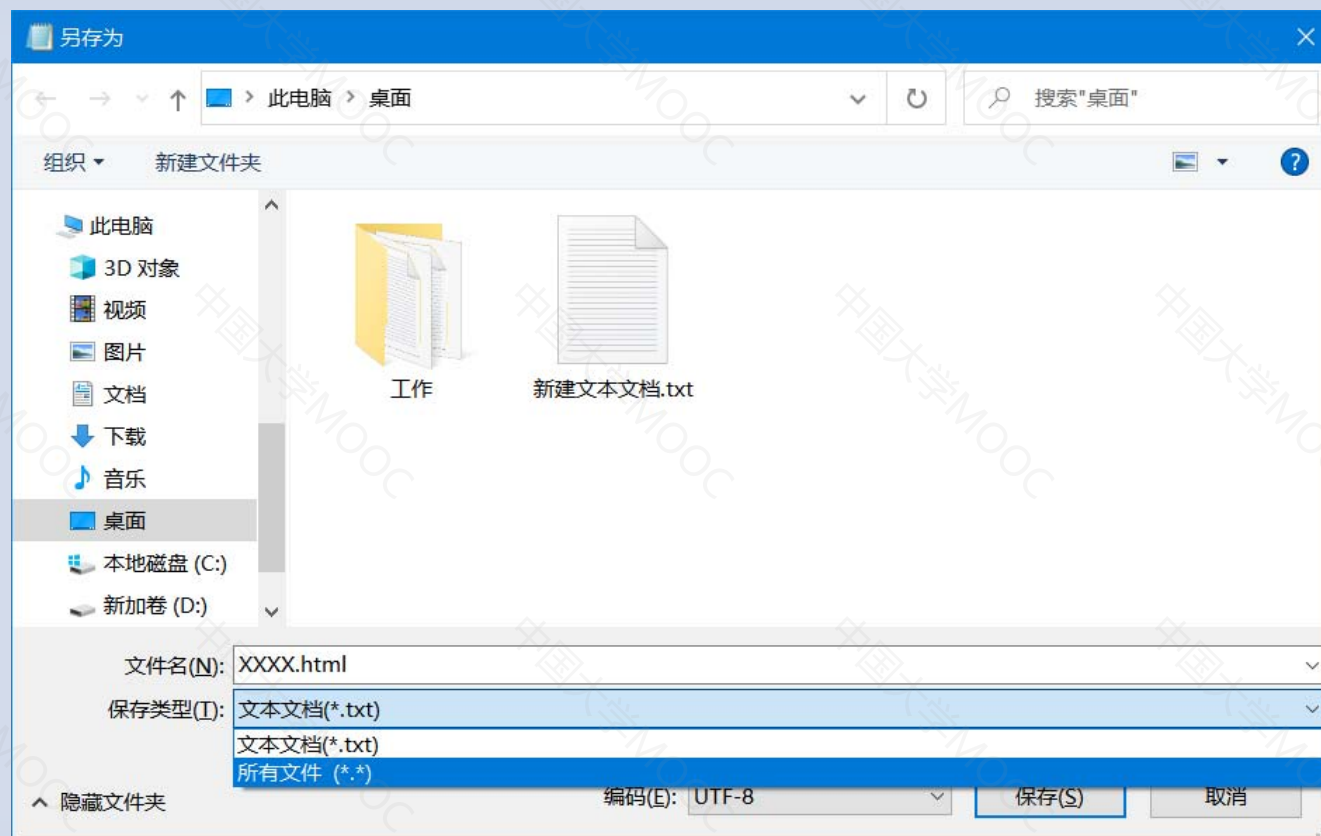
\*无标题 - 记事本

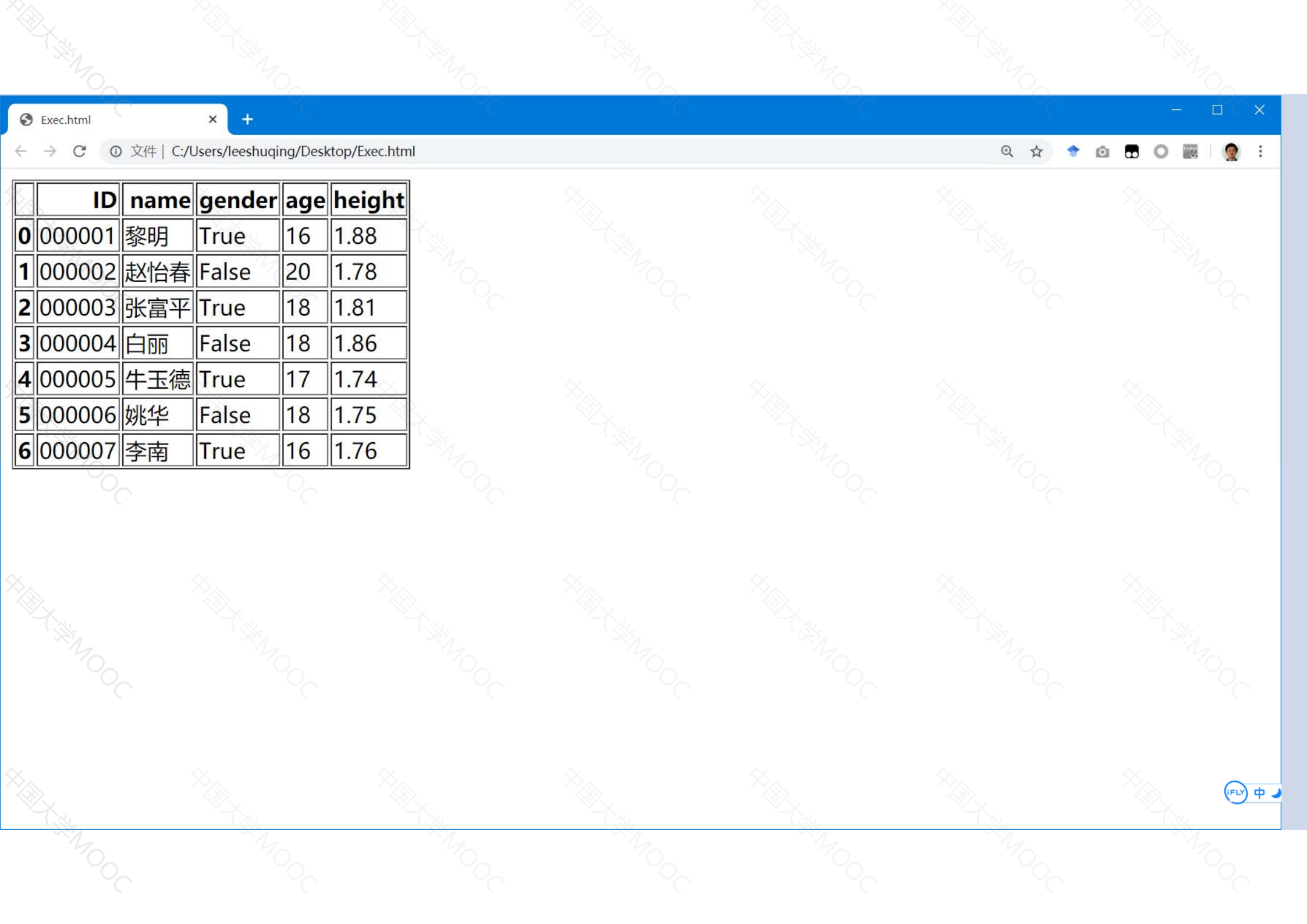
文件(F) 编辑(E) 格式(O) 查看(V) 帮助(H)

```
<table border="1" class="dataframe">
  <thead>
    <tr style="text-align: right;">
      <th></th>
      <th>ID</th>
      <th>name</th>
      <th>gender</th>
      <th>age</th>
      <th>height</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <th>0</th>
      <td>000001</td>
      <td>黎明</td>
      <td>True</td>
      <td>16</td>
      <td>1.88</td>
    </tr>
    <tr>
      <th>1</th>
      <td>000002</td>
      <td>赵怡春</td>
      <td>False</td>
      <td>20</td>
      <td>1.78</td>
    </tr>
    <tr>
      <th>2</th>
      <td>000003</td>
```

Ctrl+V







	ID	name	gender	age	height
0	000001	黎明	True	16	1.88
1	000002	赵怡春	False	20	1.78
2	000003	张富平	True	18	1.81
3	000004	白丽	False	18	1.86
4	000005	牛玉德	True	17	1.74
5	000006	姚华	False	18	1.75
6	000007	李南	True	16	1.76



**一次不学多，下次再学**