

获取指定用户（user1）的标签：

```
C:\Users\Fan>curl http://localhost:8000/users/user1/tags
{"status":"成功","message":"成功获取标签","data":{"user_id":"user1","tags":["acg"]}}
```

如果用户没有标签：

```
C:\Users\Fan>curl http://localhost:8000/users/user2/tags
{"status":"成功","message":"用户没有标签","data":{"user_id":"user2","tags":[]}}
```

为用户添加标签：

```
C:\Users\Fan\PycharmProjects\网易任务1>curl -X POST http://localhost:8000/users/user3/tags -H "Content-Type: application/json" -d '{"tags": ["摇滚乐迷","交响乐爱好者","ACG爱好者"]}'
{"status":"成功","message":"标签添加成功","data":{"user_id":"user3","tags":["交响乐爱好者","ACG爱好者","摇滚乐迷"]}}
```

如果用户不存在：

```
C:\Users\Fan>curl http://localhost:8000/users/user6/tags
{"status":"成功","message":"用户不存在","data":{"user_id":"user6","tags":[]}}
```

添加用户标签：

```
C:\Users\Fan>curl -X POST http://localhost:8000/users/user6/tags -H "Content-Type: application/json" -d '{"tags": ["交响乐","摇滚"]}'
{"status":"成功","message":"标签添加成功","data":{"user_id":"user6","tags":["摇滚","交响乐"]}}
C:\Users\Fan>curl http://localhost:8000/users/user6/tags
{"status":"成功","message":"成功获取标签","data":{"user_id":"user6","tags":["摇滚","交响乐"]}}
C:\Users\Fan>
```

删除用户标签：

```
C:\Users\Fan\PycharmProjects\网易任务1>curl -X DELETE http://localhost:8000/users/user3/tags/交响乐爱好者
{"status":"成功","message":"成功删除标签 '交响乐爱好者'","data":{"user_id":"user3","removed_tag":"交响乐爱好者"}}
```

按照标签筛选用户：

```
C:\Users\Fan\PycharmProjects\网易任务1>curl http://localhost:8000/tags/摇滚乐迷/users
{"status":"成功","message":"成功获取拥有标签 '摇滚乐迷' 的用户","data":{"tag":"摇滚乐迷","users":["user3","user4"]}}
```

显示所有标签：

```
C:\Users\Fan\PycharmProjects\网易任务1>curl http://localhost:8000/tags
{"status":"成功","message":"成功获取所有标签","data":{"tags":["acg","音乐发烧友","摇滚爱好者","交响乐","摇滚","pink floyd","ac/dc","The Ve rve","Beatles","万能青年旅店","摇滚乐迷","ACG爱好者"]}}
```

显示所有用户：

```
C:\Users\Fan\PycharmProjects\网易任务1>curl http://localhost:8000/users
{"status":"成功","message":"成功获取所有用户","data":{"users":["user1","user2","user3","user4","user5","user123","user6","user7"]}}
```

显示所有有标签和没有标签的用户：

```
C:\Users\Fan\PycharmProjects\网易任务1>powershell -ExecutionPolicy Bypass -File list_users.ps1
Users with tags:
-----
user1 - Tags: acg
user123 - Tags: æ»»ç±â¥è, é²ä²âç§â
user6 - Tags: ä°¤ää², æ»»
user7 - Tags: Beatles, ac/dc, pink floyd, ä,è¼éâ²²æâ°, The Verve

Users without tags:
-----
user2
user3
user4
user5

Statistics:
Total users: 8
Users with tags: 4
Users without tags: 4
```

创建没有标签的用户：

### 创建用户

请输入新用户ID

创建没有标签的用户

### 获取用户标签

user7

查询

#### 用户标签：

此用户没有标签

#### API响应：

```
{
  "status": "成功",
  "message": "用户没有标签",
  "data": {
    "user_id": "user7",
    "tags": []
  }
}
```

为用户添加标签：

### 添加标签

+

pink floyd ×

ac/dc ×

The Verve ×

Beatles ×

万能青年旅店 ×

保存标签

获取特定用户的标签

### 获取用户标签

查询

用户标签：

Beatles ac/dc pink floyd 万能青年旅店 The Verve

API响应：

```
{
  "status": "成功",
  "message": "成功获取标签",
  "data": {
    "user_id": "user7",
    "tags": [
      "Beatles",
      "ac/dc",
      "pink floyd",
      "万能青年旅店",
      "The Verve"
    ]
  }
}
```

显示所有用户和存在的标签：

## 系统信息

获取所有用户

系统中的用户：

user3

user4

user5

user123

user6

获取所有标签

系统中的标签：

acg

音乐发烧友

摇滚爱好者

交响乐

摇滚

pink floyd

ac/dc

The Verve

Beatles

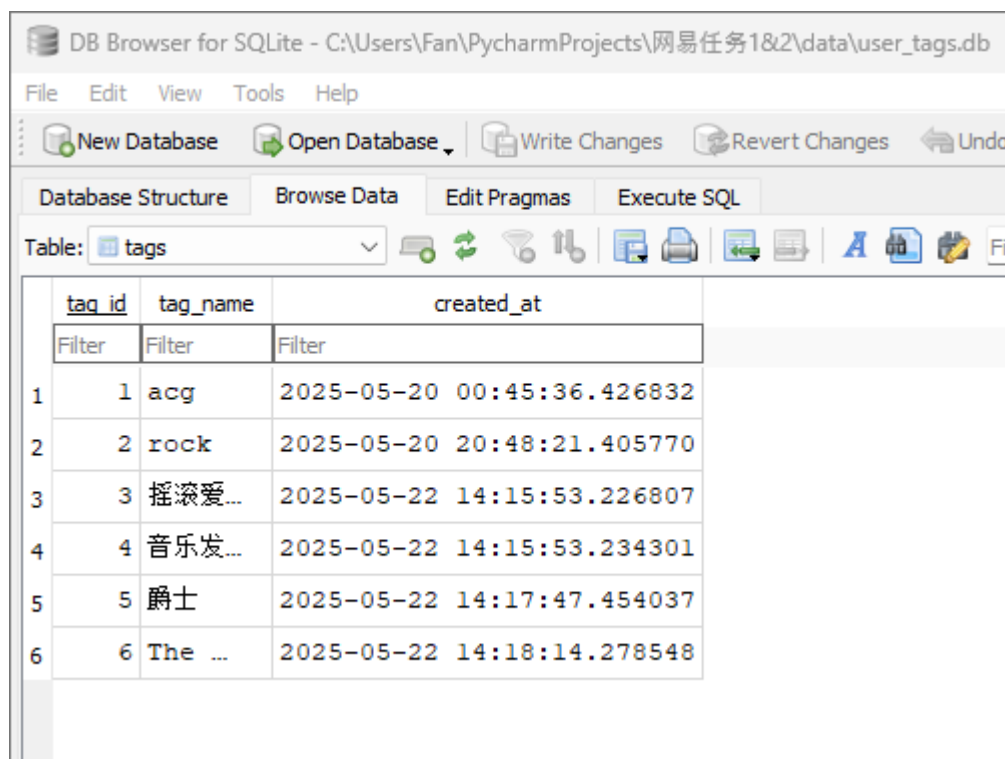
万能青年旅店

## 任务 2:

获取特定用户所有标签→删除特定用户所有标签→获取特定用户所有标签

```
C:\Users\Fan\PycharmProjects\网易任务1&2>curl -X GET "http://localhost:8000/users/1/tags"
{"status":"成功","message":"成功获取标签","data":{"user_id":1,"username":"user1","tags":["摇滚爱好者","音乐发烧友","爵士","The Pillows"]}}
C:\Users\Fan\PycharmProjects\网易任务1&2>curl -X DELETE "http://localhost:8000/users/1/all_tags"
{"status":"成功","message":"成功清空所有标签","data":{"user_id":1,"username":"user1","tags":[]}}
C:\Users\Fan\PycharmProjects\网易任务1&2>curl -X GET "http://localhost:8000/users/1/tags"
{"status":"成功","message":"用户没有标签","data":{"user_id":1,"username":"user1","tags":[]}}
C:\Users\Fan\PycharmProjects\网易任务1&2>
```

SQLite 数据库用户标签系统数据浏览：标签（tags）、用户标签关联（user\_tags）与用户信息（users）：



The screenshot shows the DB Browser for SQLite interface. The title bar indicates the database file is 'C:\Users\Fan\PycharmProjects\网易任务1&2\data\user\_tags.db'. The 'Browse Data' tab is selected, and the 'tags' table is chosen from the 'Table:' dropdown. The table has three columns: 'tag\_id', 'tag\_name', and 'created\_at'. The data is displayed in a table with 6 rows. The first row is a header with 'Filter' text in each cell. The subsequent rows contain numerical IDs, tag names (some truncated), and timestamps.

	tag_id	tag_name	created_at
	Filter	Filter	Filter
1	1	acg	2025-05-20 00:45:36.426832
2	2	rock	2025-05-20 20:48:21.405770
3	3	摇滚爱...	2025-05-22 14:15:53.226807
4	4	音乐发...	2025-05-22 14:15:53.234301
5	5	爵士	2025-05-22 14:17:47.454037
6	6	The ...	2025-05-22 14:18:14.278548

DB Browser for SQLite - C:\Users\Fan\PycharmProjects\网易任务1&2\data\user\_tags.db

File Edit View Tools Help

New Database Open Database Write Changes Revert Changes Undo Open Project

Database Structure Browse Data Edit Pragmas Execute SQL

Table: user\_tags

	user_id	tag_id	created_at
	Filter	Filter	Filter
1	2	2	2025-05-22 13:47:15.843010
2	3	2	2025-05-22 13:49:02.706103
3	1	3	2025-05-22 14:15:53.235300
4	1	4	2025-05-22 14:15:53.238369
5	1	5	2025-05-22 14:17:47.458493
6	1	6	2025-05-22 14:18:14.283547

DB Browser for SQLite - C:\Users\Fan\PycharmProjects\网易任务1&2\data\user\_tags.db

File Edit View Tools Help

New Database Open Database Write Changes Revert Changes Undo Open Project Save Project

Database Structure Browse Data Edit Pragmas Execute SQL

Table: users

	user_id	username	created_at	updated_at
	Filter	Filter	Filter	Filter
1	1	user1	2025-05-19 18:45:31.074565	2025-05-19 18:45:31.074565
2	2	user5	2025-05-20 00:45:01.712165	2025-05-20 00:45:01.712165
3	3	user3	2025-05-20 21:02:40.353926	2025-05-20 21:02:40.353926
4	4	user4	2025-05-22 13:49:23.660683	2025-05-22 13:49:23.660683
5	5	user6	2025-05-22 13:49:41.289650	2025-05-22 13:49:41.289650
6	6	user2	2025-05-22 13:49:54.192054	2025-05-22 13:49:54.192054
7	7	user7	2025-05-22 13:50:36.157277	2025-05-22 13:50:36.157277
8	8	user8	2025-05-22 13:50:40.832280	2025-05-22 13:50:40.832280
9	9	user9	2025-05-22 13:50:44.807165	2025-05-22 13:50:44.807165
10	10	user10	2025-05-22 13:50:49.687292	2025-05-22 13:50:49.687292