API 手册——材料库部分

材料库

功能介绍

1. 未授权处理
2. 拿到所有该账号下的库存品信息
3. 查看单个库存品的详细信息，可进行删除、修改、查看操作
4. 获取某一库存品的入库记录
5. 查看详细的入库记录
6. 入库操作
7. 获取某一库存品的出库记录
8. 查看详细的出库记录
9. 出库操作
10. 有条件查找库存品

接口说明

1、功能：未授权处理

以下 api 均是库存品操作 api，若未授权，即用户没有登录，则无法执行任何操作，则统一返回如下数据：
{
    "detail": "Authentication credentials were not provided."
}

2、功能：拿到所有该账号下的库存品信息

URL: http://127.0.0.1:8000/api/material/
Method：GET
Parameter：无

测试记录：
调用该 API 会返回所有的该账号下的库存品记录，如果有多条记录就返回多条，形式如下（目前尚未加入分页机制，无论数据量多大会一并返回）：
Return：[

```
    {
        "id": 8,
        "materialID": "Al001",
        "materialType": "铝",
        "materialStoreState": "SELL",
        "materialMark": "002",
        "materialNum": "0.00",
        "materialBand": null,
        "materialOriginal": null,
        "materialYear": null,
        "materialState": null,
        "materialPostion": null,
        "materialUnit": "0.00",
        "description": "金属类"
    },
    {

        "id": 9,
        "materialID": "Mn001",
        "materialType": "铁",
        "materialStoreState": "USING",
        "materialMark": "001",
        "materialNum": "25.00",
        "materialBand": null,
        "materialOriginal": null,
        "materialYear": null,
        "materialState": null,
        "materialPostion": null,
        "materialUnit": "0.00",
        "description": "asasa"
    },
```

3、功能：查看单个库存品的详细信息，可进行删除、修改、查看操作

URL: http://127.0.0.1:8000/api/material/Al001/ 其中 Al001 是材料标号
Method：GET DELETE UPDATE
Parameter：材料标号，参数形式如 URL 所示

测试记录：
一、执行 GET、UPDATE 后返回单个库存品记录数据
```
{
    "id": 8,
    "materialID": "Al001",
    "materialType": "铝",
```

```
        "materialStoreState": "SELL",
        "materialMark": "002",
        "materialNum": "0.00",
        "materialBand": null,
        "materialOriginal": null,
        "materialYear": null,
        "materialState": null,
        "materialPostion": null,
        "materialUnit": "0.00",
        "description": "金属类"
}
```

二、若修改材料标号与数据库中有重复

Return：

```
{
        "materialID": "This ID has been used!"
}
```

三、没有找到相关记录：

Return：

```
{
        "detail": "Not found."
}
```

四、修改的单位原值为负数：

Return:

```
{
        "materialUnit": [
                "Material Unit is negative!"
        ]
}
```

五、日期格式不正确（报错信息见"入库"）

六、其他说明

1、此 API 可以返回当前库存的数量（"materialNum": "xxx"），但是此项不能用 update 修改。影响当前库存数量只能通过出入库来操作，不得擅自改动。

2、由于本系统是多账户系统，目前系统查验 ID 时，UPDATE 时会查验本 ID 下是否标号会重复。

4、功能：获取某一库存品的入库记录

URL: http://127.0.0.1:8000/api/material/inputlist?materialID=Cu001 其中 Cu001 是材料标号

Method：GET

Parameter：库存品标号，参数格式见 URL

测试情况：
一、正常情况
Return：[

    {
        "id": 30,
        "inputDateTime": "2017-07-06",
        "inputOperator": "sa",
        "inputNum": "12.00",
        "inputMaterial": {
            "id": 13,
            "materialID": "Cu001",
            "materialType": "铁",
            "materialStoreState": "USING",
            "materialMark": "001",
            "materialNum": "23.00",
            "materialBand": null,
            "materialOriginal": null,
            "materialYear": null,
            "materialState": null,
            "materialPostion": null,
            "materialUnit": "0.00",
            "description": "sas",
            "owner": 2
        }
    },
    {
        "id": 31,
        "inputDateTime": "2017-07-06",
        "inputOperator": "sa",
        "inputNum": "12.00",
        "inputMaterial": {
            "id": 13,
            "materialID": "Cu001",
            "materialType": "铁",
            "materialStoreState": "USING",
            "materialMark": "001",
            "materialNum": "23.00",
            "materialBand": null,
            "materialOriginal": null,
            "materialYear": null,
            "materialState": null,
            "materialPostion": null,

```
                "materialUnit": "0.00",
                "description": "sas",
                "owner": 2
            }
        }
    }
]
```

二、没有找到相关记录：
Return：
[]
并不返回错误提示，而是一个空的查询结果。

5、功能：查看详细的入库记录

URL: http://127.0.0.1:8000/api/material_input_detail/23/
Method：GET
Parameter：入库记录的数据库 id, URL 中的 23 为入库记录的数据库 id，前一 api 已经返回

测试情况：
一、正常情况
```
Return：{
    "id": 30,
    "inputDateTime": "2017-07-06",
    "inputOperator": "sa",
    "inputNum": "12.00",
    "inputMaterial": {
        "id": 13,
        "materialID": "Cu001",
        "materialType": "铁",
        "materialStoreState": "USING",
        "materialMark": "001",
        "materialNum": "23.00",
        "materialBand": null,
        "materialOriginal": null,
        "materialYear": null,
        "materialState": null,
        "materialPostion": null,
        "materialUnit": "0.00",
        "description": "sas",
        "owner": 2
    }
}
```
二、找不到相关记录：

Return:

```
{
    "detail": "Not found."
}
```

6、功能：入库操作

URL: http://127.0.0.1:8000/api/material_input/
Method：POST
Content：

```
{
    "inputMaterial": {
        "materialID": "",
        "materialType": "",
        "materialStoreState": null,
        "materialMark": "",
        "materialBand": "",
        "materialOriginal": "",
        "materialYear": null,
        "materialState": "",
        "materialPostion": "",
        "materialUnit": null,
        "description": ""
    },
    "inputOperator": "",
    "inputNum": null
}
```

Parameter：无

测试情况
一、正常情况
Return：

```
{
    "id": 33,
    "inputMaterial": {
        "id": 15,
        "materialID": "k112",
        "materialType": "铁",
        "materialStoreState": "USING",
        "materialMark": "001",
        "materialBand": "APPLE",
        "materialOriginal": "中国",
        "materialYear": "2017-06-30",
```

                    "materialState": "优",
                    "materialPostion": "2 号仓库",
                    "materialUnit": "12.00",
                    "description": "sas"
                },
                "inputDateTime": "2017-07-09",
                "inputOperator": "zhang",
                "inputNum": "15.00"
        }
返回此数据表示入库成功

二、错误输入
1、空缺测试：
Return:
{
        "inputMaterial": {
                "materialID": [
                        "This field may not be blank."
                ],
                "materialUnit": [
                        "This field may not be blank."
                ]
        },
        "inputOperator": [
                "This field may not be blank."
        ],
        "inputNum": [
                "A valid number is required."
        ]
}

2、长字符串：
Return:
{
        "inputMaterial": {
                "materialID": [
                        "Ensure this field has no more than 100 characters."
                ],
                "materialType": [
                        "Ensure this field has no more than 100 characters."
                ],
                "materialMark": [
                        "Ensure this field has no more than 100 characters."
                ],

```
        "materialBand": [
            "Ensure this field has no more than 100 characters."
        ],
        "materialOriginal": [
            "Ensure this field has no more than 100 characters."
        ],
        "materialState": [
            "Ensure this field has no more than 100 characters."
        ],
        "materialPostion": [
            "Ensure this field has no more than 100 characters."
        ],
        "materialUnit": [
            "String value too large."
        ]
    },
    "inputOperator": [
        "Ensure this field has no more than 100 characters."
    ],
    "inputNum": [
        "String value too large."
    ]
}
```

3、各种格式问题：

Return:

```
{
    "inputMaterial": {
        "materialYear": [
            "Date has wrong format. Use one of these formats instead: YYYY[-MM[-DD]]."
        ],
      "materialUnit": [//输入的不是数字时
            "A valid number is required."
        ],
    "materialUnit": [//输入负数
            "Material Unit is negative!"
        ]
    },
      "materialUnit": [//输入数字过大时
            "Ensure that there are no more than 8 digits in total."
        ],
    "inputNum": [//输入的不是数字或为空时
        "A valid number is required."
    ]
```

```
    "inputNum": [//输入负数
        "Input Number is negative!"
    ]
}
```

三、入库量位数问题：

目前设计出库和入库量都是小数浮点型，共 8 位，小数点后两位。

```
{
    "inputNum": [
        "Ensure that there are no more than 6 digits before the decimal point."
    ]
}
```


7、功能：获取某一库存品的出库记录

URL: http://127.0.0.1:8000/api/material/outputlist?materialID=Cu001 其中 Cu001 是材料标号
Method：GET
Parameter：材料标号，具体形式见 URL

测试情况：
一、正常情况
Return：

```
[
    {
        "id": 148,
        "outputDateTime": "2017-08-23",
        "materialUser": "英国",
        "outputOperator": "zhang",
        "leftNum": "999.00",
        "outputNum": "1.00",
        "outputMaterial": {
            "id": 30,
            "materialID": "Le001",
            "materialType": "镭",
            "materialStoreState": "在用",
            "materialMark": "001",
            "materialNum": "991.00",
            "materialBand": "APPLE",
            "materialOriginal": "中国",
            "materialYear": "2017-08-10",
            "materialState": "优",
            "materialPostion": "1 号仓库",
            "materialUnit": "12.00",
```

```json
                "description": "放射性",
                "owner": 2
            }
        },
        {
            "id": 149,
            "outputDateTime": "2017-08-23",
            "materialUser": "英国",
            "outputOperator": "zhang",
            "leftNum": "997.00",
            "outputNum": "2.00",
            "outputMaterial": {
                "id": 30,
                "materialID": "Le001",
                "materialType": "镭",
                "materialStoreState": "在用",
                "materialMark": "001",
                "materialNum": "991.00",
                "materialBand": "APPLE",
                "materialOriginal": "中国",
                "materialYear": "2017-08-10",
                "materialState": "优",
                "materialPostion": "1 号仓库",
                "materialUnit": "12.00",
                "description": "放射性",
                "owner": 2
            }
        }
]
```

二、没有找到相关记录：

Return：

[]

并不返回错误提示，而是一个空的查询结果。

8、功能：查看详细的出库记录

URL: http://127.0.0.1:8000/api/material_output_detail/6/

Method：UPDATE, DELETE, GET

Parameter：出库记录的数据库 id 号

测试情况：

一、正常情况

{

```
        "id": 6,
        "outputDateTime": "2017-07-06",
        "materialUser": "英国",
        "outputOperator": "zhang",
        "outputNum": "1.00",
        "outputMaterial": {
            "id": 13,
            "materialID": "Cu001",
            "materialType": "铁",
            "materialStoreState": "USING",
            "materialMark": "001",
            "materialNum": "23.00",
            "materialBand": null,
            "materialOriginal": null,
            "materialYear": null,
            "materialState": null,
            "materialPostion": null,
            "materialUnit": "0.00",
            "description": "sas",
            "owner": 2
        }
}
```

二、其他说明

1、delete 的使用会存在负值的问题，此问题待解决，或者直接取消删除操作，用户不能删除记录，只能查看和修改。

9、功能：出库操作

URL: http://127.0.0.1:8000/api/material_output/
Method：POST
Content：
```
{
    "outputMaterial": {
        "materialID": ""
    },
    "outputDateTime": null,
    "materialUser": "",
    "outputOperator": "",
    "outputNum": null
}
```
Parameter：无

测试情况：

一、正常情况
Return：{
    "id": 10,
    "outputMaterial": {
        "materialID": "Cu001"
    },
    "outputDateTime": "2017-07-09",
    "materialUser": "英国",
    "outputOperator": "zhang",
    "outputNum": "2.00"
}

二、库存余量不足，无法出库：
{
    "materialNum": "Left Number is insufficient!"
}

三、空缺情况：
Return：
{
    "outputMaterial": {
        "materialID": [
            "This field may not be blank."
        ]
    },
    "outputOperator": [
        "This field may not be blank."
    ],
    "outputNum": [
        "A valid number is required."
    ]
}

四、长字符串：
Return:
{
    "outputMaterial": {
        "materialID": [
            "Ensure this field has no more than 100 characters."
        ]
    },
    "materialUser": [
        "Ensure this field has no more than 100 characters."

```
        ],
        "outputOperator": [
                "Ensure this field has no more than 100 characters."
        ],
        "outputNum": [
                "String value too large."
        ]
}
```

五、格式问题：
Return:
```
{
        "outputNum": [
                "A valid number is required."
        ]
}
```

六、没找到相关货物：
Return:
```
{
        "detail": "There is no such goods!"
}
```

七、出货为负数:
```
{
        "outputNum": [
                "Output Number is negative!"
        ]
}
```

八、出货量位数问题：
目前设计出库和入库量都是小数浮点型，共 8 位，小数点后两位。
```
{
        "outputNum": [
                "Ensure that there are no more than 6 digits before the decimal point."
        ]
}
```


10、功能：有条件查找库存品

URL: http://127.0.0.1:8000/api/material/search?materialID=C
Method：get
Parameter ： materialID materialType materialBand materialOriginal materialPostion
```

materialYearstart materialYearend 可以按照上述字段查找库存品

**测试情况：**
**一、正常情况：**
Return：[

    {

        "id": 18,

        "materialID": "Fe001",

        "materialType": "铁 1",

        "materialStoreState": "RNET",

        "materialMark": "00211",

        "materialNum": "7.00",

        "materialBand": "APPLE11",

        "materialOriginal": "中国 111",

        "materialYear": "2017-07-27",

        "materialState": "优 11",

        "materialPostion": "2 号仓库 11",

        "materialUnit": "12.10",

        "description": "asa111"

    },

    {

        "id": 19,

        "materialID": "Al0011",

        "materialType": "铁 111",

        "materialStoreState": "UNUSED",

        "materialMark": "001311",

        "materialNum": "30.00",

        "materialBand": "APPLE",

        "materialOriginal": "中国",

        "materialYear": "2017-07-11",

        "materialState": "优",

        "materialPostion": "2 号仓库",

        "materialUnit": "12.00",

        "description": "asa"

    },

    {

        "id": 20,

        "materialID": "A001",

        "materialType": "铁 111",

        "materialStoreState": "USING",

        "materialMark": "0013",

        "materialNum": "75.00",

        "materialBand": "APPLE",

        "materialOriginal": "中国",

```
            "materialYear": "2017-07-11",
            "materialState": "优",
            "materialPostion": "2 号仓库",
            "materialUnit": "12.00",
            "description": "asa"
        },
        {
            "id": 22,
            "materialID": "Cu001",
            "materialType": "铁",
            "materialStoreState": "USING",
            "materialMark": "三角铁",
            "materialNum": "333.00",
            "materialBand": "APPLE",
            "materialOriginal": "中国",
            "materialYear": "2017-07-06",
            "materialState": "优",
            "materialPostion": "2 号仓库",
            "materialUnit": "-12.00",
            "description": ""
        },
        {
            "id": 30,
            "materialID": "Le001",
            "materialType": "镭",
            "materialStoreState": "USING",
            "materialMark": "001",
            "materialNum": "991.00",
            "materialBand": "APPLE",
            "materialOriginal": "中国",
            "materialYear": "2017-08-10",
            "materialState": "优",
            "materialPostion": "1 号仓库",
            "materialUnit": "12.00",
            "description": "放射性"
        }
]
```

返回所有满足查询条件的结果。

二、没有找到相关记录：

Return：

[]

并不返回错误提示，而是一个空的查询结果。

三、时间格式不正确

注意，materialYearstart 和 materialYearend 格式为"2000-01-01"这样的标准日期时间格式。

```
{
    "detail": "Invalid time format!"
}
```