CS673 Software Engineering
Team X - Project Name
Software Test Document

Your project Logo here if any

Team Member	Role(s)	Signature	Date
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Revision history

Version	Author	Date	Change

Testing Summary

In this section, you will summarize what was tested, who is involved in testing, testing techniques used, and testing result. You may have the following tests

- Unit Testing
- Integration testing
- System Testing
- Acceptance Testing
- Regression Testing

Each test is written by the sub group that governs their parts. Tests may include manual and automatic as each sub group sees fit.

Manual Testing Report

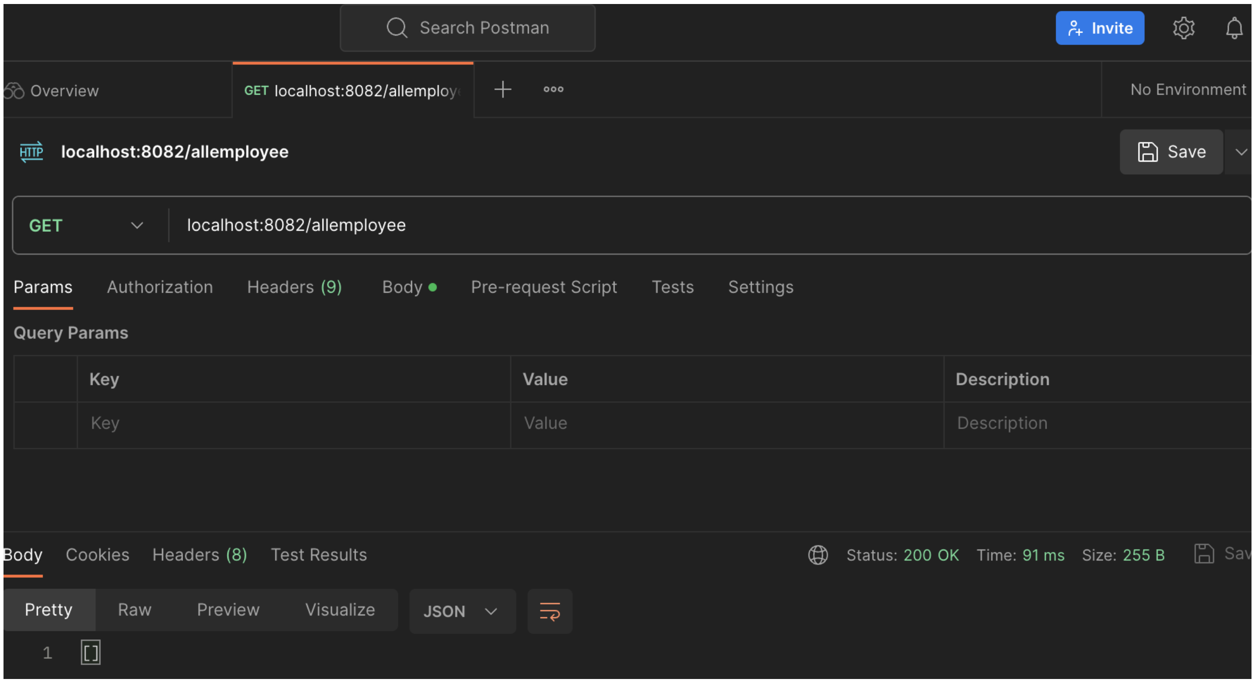
In this section, you will give a detailed description of each manual test case performed and the result. If this is a previous You shall list what are existing tests developed in the previous semester and what are new tests developed currently.

Here is a sample template that can be used for each test case. For system tests or acceptance tests, you may also include some screenshots.

- Test case ID, name
- New or old:
- Test items: (what do you test)
- Test priority (high/medium/low)
- Dependencies (to other test case/requirement if any):
- Preconditions: (if any)
- input data:
- Test steps:
- Postconditions:
- Expected output:
- Actual output:
- Pass or Fail:
- Bug id/link: (this should link to your github issue id)
- Additional notes:

(You can use an additional spreadsheet for this section as well)

- Test case ID: 1
- Test Name: Backend Server Testing for getMapping(“/allEmployee”)
- Test items: getMapping(“/allEmployee”)
- Test priority: Medium
- Dependencies (to other test case/requirement if any):
- Preconditions: Server must be actively running
- input data: none
- Test steps: enter ‘localhost:8082/allemployee’ into Get Postman’
- Postconditions: status 200 ok, return all employee entity
- Expected output: status 200 ok, empty array (no current employee entity)
- Actual output: status 200 ok, empty array
- Pass or Fail: pass



localhost:8082/allemployee

GET localhost:8082/allemployee

Status: 200 OK Time: 91 ms Size: 255 B

```
[]
```

Test case ID: 1

- Test Name: Backend Server Testing for getMapping(“/allEmployee”)
- Test items: getMapping(“/allEmployee”)
- Test priority: Medium
- Dependencies (to other test case/requirement if any):
- Preconditions: Server must be actively running
- input data: none
- Test steps: enter ‘localhost:8082/allemployee’ into Get Postman’
- Postconditions: status 200 ok, return all employee entity
- Expected output: status 200 ok, empty array (no current employee entity)
- Actual output: status 200 ok, empty array
- Pass or Fail: pass

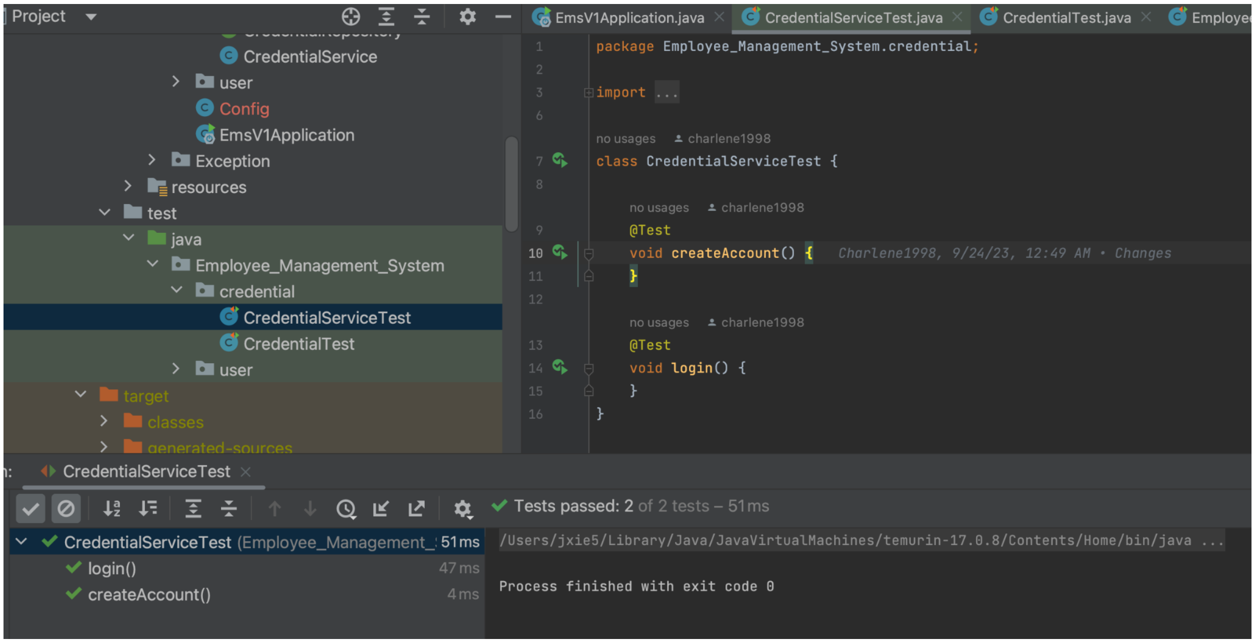
- ## Automated Testing Report

Describe briefly the automated testing you have done, including where the test code resides in your code repository, what test frameworks are used, and the screen shots or generated testing report.

System testing:

These tests reside in project-team-3/code/Employee_management_system/src/test/java/Employee_Management_system according to Intellij and under the database-frontend-backend branch. There are currently 2 folders of tests, credential and user.

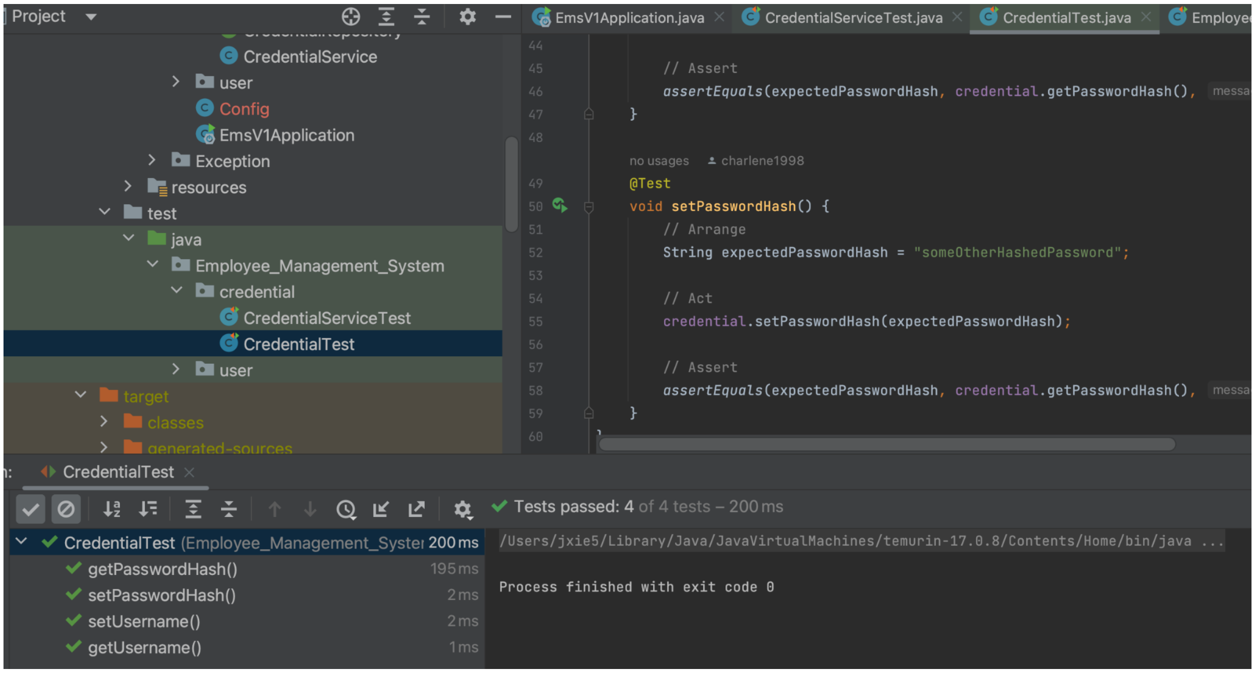
CredentialServiceTest: We are testing the methods of the CredentialService entity.



```
package Employee_Management_System.credential;

import ...

no usages  charlene1998
class CredentialServiceTest {

    no usages  charlene1998
    @Test
    void createAccount() {   Charlene1998, 9/24/23, 12:49 AM • Changes
    }

    no usages  charlene1998
    @Test
    void login() {
    }
}
```

```
✓ Tests passed: 2 of 2 tests – 51ms
✓ CredentialServiceTest (Employee_Management_  51ms
    ✓ login()            47ms
    ✓ createAccount()     4ms

/Users/jxie5/Library/Java/JavaVirtualMachines/temurin-17.0.8/Contents/Home/bin/java ...

Process finished with exit code 0
```

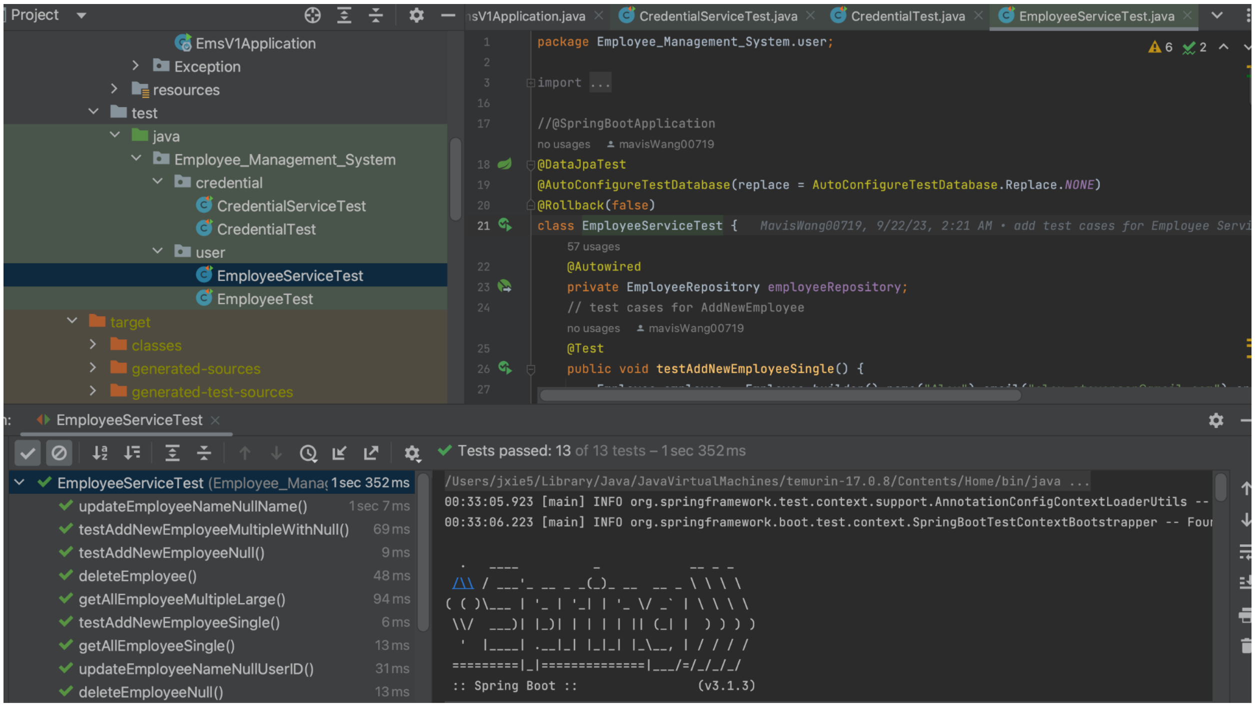
CredentialTest: Testing Credential entity



```

        // Assert
        assertEquals(expectedPasswordHash, credential.getPasswordHash(),  messa
    }

    no usages  charlene1998
    @Test
    void setPasswordHash() {
        // Arrange
        String expectedPasswordHash = "someOtherHashedPassword";

        // Act
        credential.setPasswordHash(expectedPasswordHash);

        // Assert
        assertEquals(expectedPasswordHash, credential.getPasswordHash(),  messa
    }
```

```
✓ Tests passed: 4 of 4 tests – 200 ms
✓ CredentialTest (Employee_Management_Syster  200 ms
    ✓ getPasswordHash()    195 ms
    ✓ setPasswordHash()      2 ms
    ✓ setUsername()          2 ms
    ✓ getUsername()          1 ms

/Users/jxie5/Library/Java/JavaVirtualMachines/temurin-17.0.8/Contents/Home/bin/java ...

Process finished with exit code 0
```

EmployeeServiceTest: Testing for SpringBoot initialization and EmployeeSerivce class entity methods.



```
package Employee_Management_System.user;

import ...

//@SpringBootApplication
no usages  mavisWang00719
@DataJpaTest
@AutoConfigureTestDatabase(replace = AutoConfigureTestDatabase.Replace.NONE)
@Rollback(false)
class EmployeeServiceTest {   MavisWang00719, 9/22/23, 2:21 AM • add test cases for Employee Servi
    57 usages
    @Autowired
    private EmployeeRepository employeeRepository;
    // test cases for AddNewEmployee
    no usages  mavisWang00719
    @Test
    public void testAddNewEmployeeSingle() {
```

Tests passed: 13 of 13 tests – 1 sec 352 ms

```
EmployeeServiceTest (Employee_Mana  1 sec 352 ms
  updateEmployeeNameNullName()          1 sec 7 ms
  testAddNewEmployeeMultipleWithNull()       69 ms
  testAddNewEmployeeNull()                    9 ms
  deleteEmployee()                           48 ms
  getAllEmployeeMultipleLarge()              94 ms
  testAddNewEmployeeSingle()                  6 ms
  getAllEmployeeSingle()                     13 ms
  updateEmployeeNameNullUserID()             31 ms
  deleteEmployeeNull()                       13 ms
```

```
/Users/jxie5/Library/Java/JavaVirtualMachines/temurin-17.0.8/Contents/Home/bin/java ...
00:33:05.923 [main] INFO org.springframework.test.context.support.AnnotationConfigContextLoaderUtils --
00:33:06.223 [main] INFO org.springframework.boot.test.context.SpringBootTestContextBootstrapper -- Four

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( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::                (v3.1.3)
```
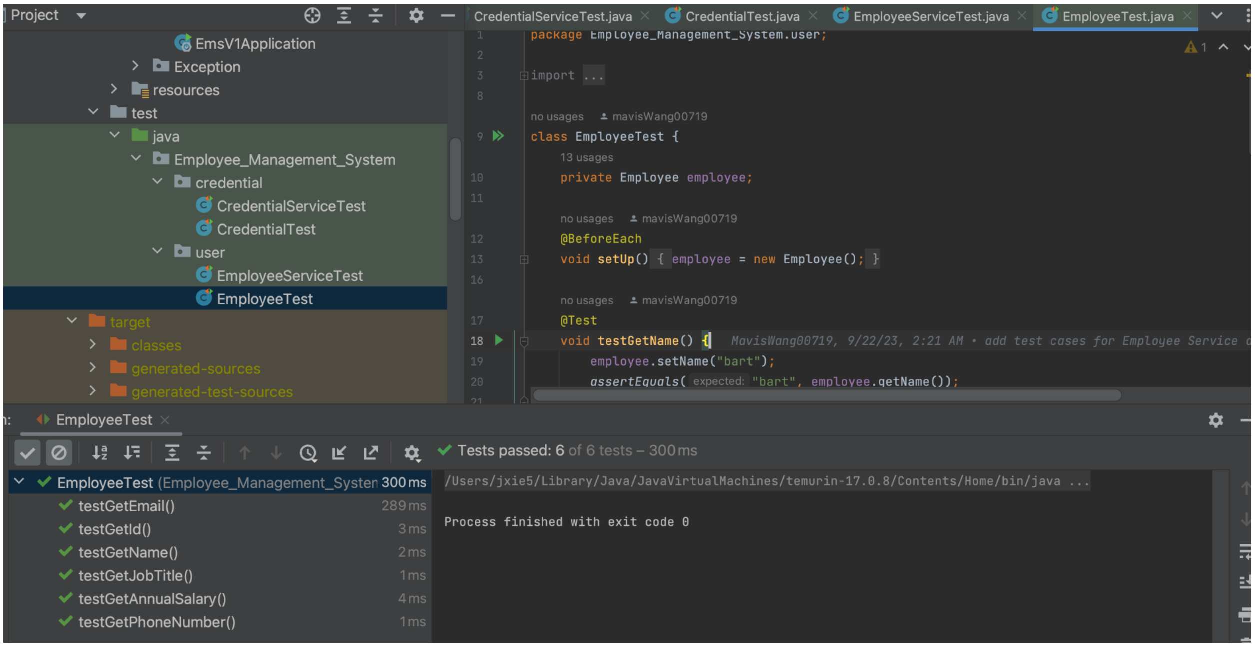

EmployeeTest: Testing for Employee entity’s methods.



```
package Employee_Management_System.user;

import ...

no usages  mavisWang00719
class EmployeeTest {
    13 usages
    private Employee employee;

    no usages  mavisWang00719
    @BeforeEach
    void setUp() { employee = new Employee(); }

    no usages  mavisWang00719
    @Test
    void testGetName() {   MavisWang00719, 9/22/23, 2:21 AM • add test cases for Employee Service
        employee.setName("bart");
        assertEquals( expected: "bart", employee.getName());
```

Tests passed: 6 of 6 tests – 300 ms

```
EmployeeTest (Employee_Management_Systen  300 ms
  testGetEmail()         289 ms
  testGetId()              3 ms
  testGetName()            2 ms
  testGetJobTitle()        1 ms
  testGetAnnualSalary()    4 ms
  testGetPhoneNumber()     1 ms
```

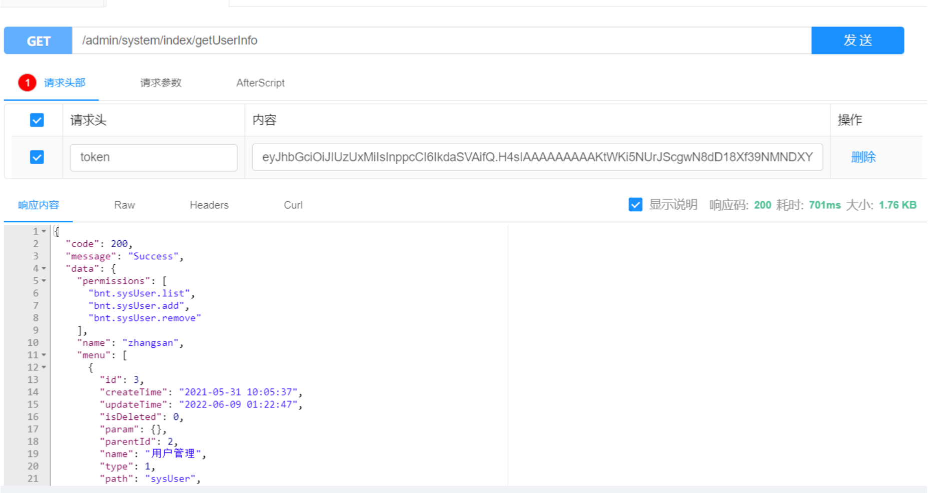
```
/Users/jxie5/Library/Java/JavaVirtualMachines/temurin-17.0.8/Contents/Home/bin/java ...

Process finished with exit code 0
```

SpringSecurity:

After adding SpringSecurity dependencies, even if you bypass the front-end login page and go directly to use the method url like " http://localhost:8800/admin/system/sysRole/findAll" , you will not get the information. It will show that

```
{"code":209,"message":"No permission","data":null}
```

After adding the global variable token, prove that you are logged in. All the methods will work just as before

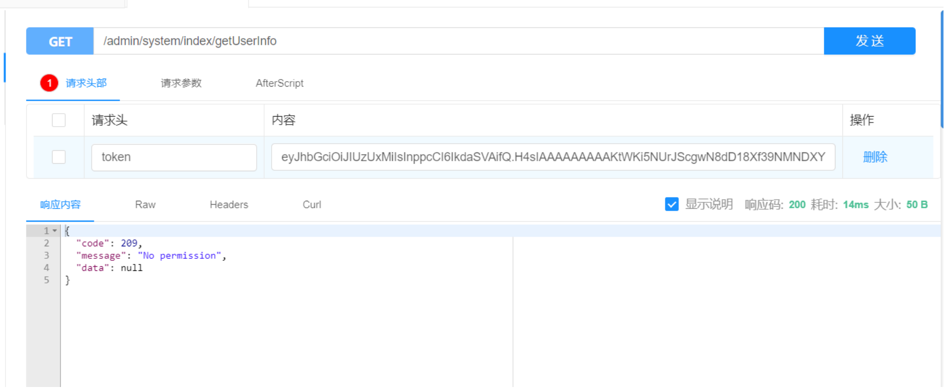


☑	请求头	内容	操作
☑	token	eyJhbGciOiJIUzUxMiIsInppcCI6IkdaSVAifQ.H4sIAAAAAAAAAKtWKi5NUrJScgwN8dD18Xf39NMNDXY	删除

☑ 显示说明 响应码: 200 耗时: 701ms 大小: 1.76 KB

```
{
  "code": 200,
  "message": "Success",
  "data": {
    "permissions": [
      "bnt.sysUser.list",
      "bnt.sysUser.add",
      "bnt.sysUser.remove"
    ],
    "name": "zhangsan",
    "menu": [
      {
        "id": 3,
        "createTime": "2021-05-31 10:05:37",
        "updateTime": "2022-06-09 01:22:47",
        "isDeleted": 0,
        "param": {},
        "parentId": 2,
        "name": "用户管理",
        "type": 1,
        "path": "sysUser",
```

Without Token:



□	请求头	内容	操作
□	token	eyJhbGciOiJIUzUxMiIsInppcCI6IkdaSVAifQ.H4sIAAAAAAAAAKtWKi5NUrJScgwN8dD18Xf39NMNDXY	删除

☑ 显示说明 响应码: 200 耗时: 14ms 大小: 50 B

```
{
  "code": 209,
  "message": "No permission",
  "data": null
}
```

- ## Testing Metrics

  In this section, you shall report any metrics used for the evaluation, e.g. # of test cases, test coverage, defects rate, etc.

- ## References

- ## Glossary