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Stack: SDET BE

REST API AUTOMATION TESTING DEBUGGING AND REPORT

Story

A tester has a job to test the functionality of API given. There are 6 functions in the API given. First, API must be able to add employee manually. Second, API must be able to store employee data from Excel file (.xlsx). Third, API must be able to show all the employee data. Fourth, API must be able to show employee data base on employee ID number. Fifth, API must be able to edit an employee data that have been store. And the final function, API must be able to delete an employee data based on employee ID number. API will be in JSON content type.

Requirements:

- API: <https://5ea23b4db9f5ca00166c25d2.mockapi.io>
- Start with no data.
- API Content Type is JSON.

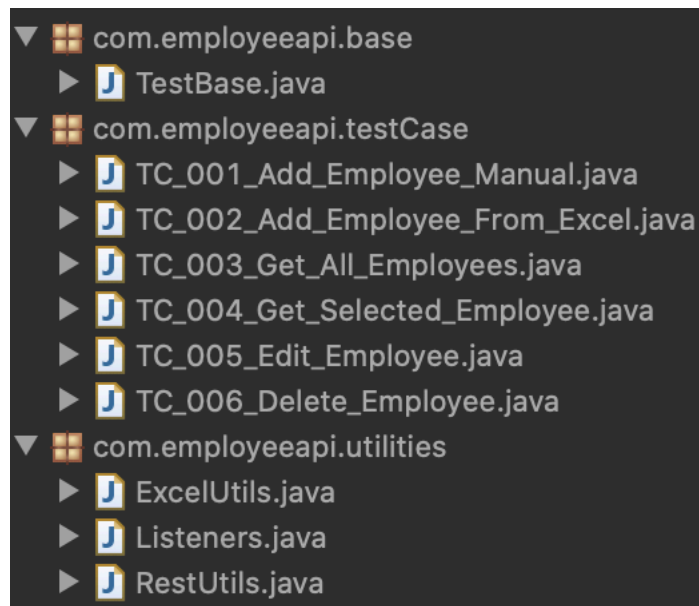
Test Scenario:

1. Add first data to API manually
2. Check if data stored in API showing the right value
3. Import data from excel file (.xlsx) to API
4. Check if data stored in API showing the right value
5. Check show all employee data function.
6. Check show employee data based on employee ID number function.
7. Check edit employee data function.
8. Check delete employee data based on employee ID number function.

Test Structure

- com.employeeapi.base
 - TestBase.java
A class that has a function to create a log file that used to track automation test debugging.
- com.employeeapi.testCase
 - TC_001_Add_Employee_Manual.java
A class that has a function to add employee data manually (hard code) and also to check the response given by the API (body, status code, response time, status line, content type, server type, and content length).
 - TC_002_Add_Employee_From_Excel.java
A class that has a function to add employee data from excel file and also to check the response given by the API (body, status code, response time, status line, content type, server type, and content length).
 - TC_003_Get_All_Employees.java
A class that has a function to show all employees data that stored in API and also to check the response given by the API (body, status code, response time, status line, content type, server type, and content length).

- TC_004_Get_Selected_Employee.java
A class that has a function to show employee data that stored in API based on employee ID number and also to check the response given by the API (body, status code, response time, status line, content type, server type, and content length).
- TC_005_Edit_Employee.java
A class that has a function to edit employee data that stored in API based on employee ID number and also to check the response given by the API (body, status code, response time, status line, content type, server type, and content length).
- TC_006_Delete_Employee.java
A class that has a function to delete employee data that stored in API based on employee ID number and also to check the response given by the API (body, status code, response time, status line, content type, server type, and content length).
- com.employeeapi.utilities
 - ExcelUtils.java
A class that has a function to control excel file in java, such as get cell data, get row number, get cell number, etc.
 - Listeners.java
A class that has a function to catch all testing process which in the end usually used as a test report.
 - RestUtils.java
A class that has a function to generate random data needed as a test case input that is generate random division, gender, and ID number.



TestNG.xml → Suite test configuration

```
1 <!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd" >
2 <suite name="API Test">
3   <listeners>
4     <listener class-name="com.employeeapi.utilities.Listeners" />
5   </listeners>
6   <test thread-count="1" name="Rest API Test">
7     <classes>
8       <class name="com.employeeapi.testCase.TC_001_Add_Employee_Manual" ></class>
9       <class name="com.employeeapi.testCase.TC_002_Add_Employee_From_Excel" ></class>
10      <class name="com.employeeapi.testCase.TC_003_Get_All_Employees" ></class>
11      <class name="com.employeeapi.testCase.TC_004_Get_Selected_Employee" ></class>
12      <class name="com.employeeapi.testCase.TC_005_Edit_Employee" ></class>
13      <class name="com.employeeapi.testCase.TC_006_Delete_Employee" ></class>
14    </classes>
15  </test>
16 </suite>
```

RESULT






















































Console

```
[RemoteTestNG] detected TestNG version 6.14.3
Apr 29, 2020 4:08:39 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual addEmployee
INFO: ===== TC_001_Add_Employee_Manual START =====
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by org.codehaus.groovy.reflection.CachedClass (file:/Users/jc...
WARNING: Please consider reporting this to the maintainers of org.codehaus.groovy.reflection.Cac...
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access opera...
WARNING: All illegal access operations will be denied in a future release
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkContentLength
INFO: ===== Checking Content Length =====
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkContentLength
INFO: Content Type ==> 67
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkContentType
INFO: ===== Checking Content Type =====
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkContentType
INFO: Content Type ==> application/json
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkResponseBody
INFO: ===== Checking Response Body =====
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkResponseBody
INFO: response body ==> {"id":"1","division":"People","name":"Sample Name","gender":"male"}
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkResponseTime
INFO: ===== Checking Response Time =====
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkResponseTime
INFO: response time ==> 2145 ms
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkServer
INFO: ===== Checking Content Type =====
Apr 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkServer
```

```
.....
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkResponseBody
INFO: response body ==> {"id":"3","division":"Finance","name":"Sheila","gender":"female"}
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkResponseTime
INFO: ===== Checking Response Time =====
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkResponseTime
INFO: response time ==> 1609 ms
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkServer
INFO: ===== Checking Content Type =====
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkServer
INFO: Server ==> Cowboy
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkStatusCode
INFO: ===== Checking Status Code =====
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkStatusCode
INFO: status code ==> 200
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkStatusLine
INFO: ===== Checking Status Line =====
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkStatusLine
INFO: response body ==> HTTP/1.1 200 OK
Apr 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee tearDown
INFO: ===== TC_006_Delete_Employee FINISH =====
```

```
=====
API Test
Total tests run: 40, Failures: 0, Skips: 0
=====
```

TestNG Result


- ▼  API Test (40/0/0/0) (8.814 s)
 - ▼  Rest API Test (8.814 s)
 - ▼  com.employeeapi.testCase.TC_001_Add_Employee_Manual
 -  checkContentLength (0.006 s)
 -  checkContentType (0.002 s)
 -  checkResponseBody (0.007 s)
 -  checkResponseTime (0.003 s)
 -  checkServer (0.002 s)
 -  checkStatusCode (0.002 s)
 -  checkStatusLine (0.002 s)
 - ▼  com.employeeapi.testCase.TC_002_Add_Employee_From_Excel
 - ▼  checkResponse (1.58 s)
 -  "Technology","Renaldy","male" (1.58 s)
 - ▼  checkResponse (1.94 s)
 -  "Finance","Sheila","female" (1.94 s)
 - ▼  checkResponse (1.845 s)
 -  "People","Fira","female" (1.845 s)
 - ▼  checkResponse (1.487 s)
 -  "Finance","Melly","female" (1.487 s)
 - ▼  checkResponse (1.885 s)
 -  "Technology","Jovananda","male" (1.885 s)
 - ▼  com.employeeapi.testCase.TC_003_Get_All_Employees
 -  checkContentLength (0.005 s)
 -  checkContentType (0.003 s)
 -  checkResponseBody (0.002 s)
 -  checkResponseTime (0.002 s)
 -  checkServer (0.002 s)
 -  checkStatusCode (0.002 s)
 -  checkStatusLine (0.002 s)
 - ▼  com.employeeapi.testCase.TC_004_Get_Selected_Employee
 -  checkContentLength (0.004 s)
 -  checkContentType (0.002 s)
 -  checkResponseBody (0.002 s)
 -  checkResponseTime (0.002 s)
 -  checkServer (0.001 s)
 -  checkStatusCode (0.001 s)
 -  checkStatusLine (0.002 s)
 - ▼  com.employeeapi.testCase.TC_005_Edit_Employee
 -  checkContentLength (0.003 s)
 -  checkContentType (0.002 s)
 -  checkResponseBody (0.002 s)
 -  checkResponseTime (0.001 s)
 -  checkServer (0.001 s)
 -  checkStatusCode (0.001 s)
 -  checkStatusLine (0.002 s)
 - ▼  com.employeeapi.testCase.TC_006_Delete_Employee
 -  checkContentLength (0.001 s)
 -  checkContentType (0.001 s)
 -  checkResponseBody (0.002 s)
 -  checkResponseTime (0.002 s)
 -  checkServer (0.001 s)
 -  checkStatusCode (0.001 s)
 -  checkStatusLine (0.001 s)

restAPI.log

```
1 Apr. 29, 2020 4:08:39 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual addEmployee
2 INFO: ===== TC_001_Add_Employee_Manual START =====
3 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkContentLength
4 INFO: ===== Checking Content Length =====
5 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkContentLength
6 INFO: Content Type ==> 67
7 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkContentType
8 INFO: ===== Checking Content Type =====
9 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkContentType
10 INFO: Content Type ==> application/json
11 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkResponseBody
12 INFO: ===== Checking Response Body =====
13 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkResponseBody
14 INFO: response body ==> {"id":"1","division":"People","name":"Sample Name","gender":"male"}
15 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkResponseTime
16 INFO: ===== Checking Response Time =====
17 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkResponseTime
18 INFO: response time ==> 2145 ms
19 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkServer
20 INFO: ===== Checking Content Type =====
21 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkServer
22 INFO: Server ==> Cowboy
23 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkStatusCode
24 INFO: ===== Checking Status Code =====
25 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkStatusCode
26 INFO: status code ==> 201
27 Apr. 29, 2020 4:08:42 PM com.employeeapi.testCase.TC_001_Add_Employee_Manual checkStatusLine
```

```
.....
263 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_005_Edit_Employee checkServer
264 INFO: ===== Checking Content Type =====
265 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_005_Edit_Employee checkServer
266 INFO: Server ==> Cowboy
267 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_005_Edit_Employee checkStatusCode
268 INFO: ===== Checking Status Code =====
269 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_005_Edit_Employee checkStatusCode
270 INFO: status code ==> 200
271 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_005_Edit_Employee checkStatusLine
272 INFO: ===== Checking Status Line =====
273 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_005_Edit_Employee checkStatusLine
274 INFO: response body ==> HTTP/1.1 200 OK
275 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_005_Edit_Employee tearDown
276 INFO: ===== TC_005_Edit_Employee FINISH =====
277 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_006_Delete_Employee deleteEmployee
278 INFO: ===== TC_006_Delete_Employee START =====
279 Apr. 29, 2020 4:08:57 PM com.employeeapi.testCase.TC_006_Delete_Employee deleteEmployee
280 INFO: Sample Test ID = 3
281 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkContentLength
282 INFO: ===== Checking Content Length =====
283 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkContentLength
284 INFO: Content Type ==> 65
285 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkContentType
286 INFO: ===== Checking Content Type =====
287 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkContentType
288 INFO: Content Type ==> application/json
289 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkResponseBody
290 INFO: ===== Checking Response Body =====
291 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkResponseBody
292 INFO: response body ==> {"id":"3","division":"Finance","name":"Sheila","gender":"female"}
293 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkResponseTime
294 INFO: ===== Checking Response Time =====
295 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkResponseTime
296 INFO: response time ==> 1609 ms
297 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkServer
298 INFO: ===== Checking Content Type =====
299 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkServer
300 INFO: Server ==> Cowboy
301 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkStatusCode
302 INFO: ===== Checking Status Code =====
303 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkStatusCode
304 INFO: status code ==> 200
305 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkStatusLine
306 INFO: ===== Checking Status Line =====
307 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee checkStatusLine
308 INFO: response body ==> HTTP/1.1 200 OK
309 Apr. 29, 2020 4:08:58 PM com.employeeapi.testCase.TC_006_Delete_Employee tearDown
310 INFO: ===== TC_006_Delete_Employee FINISH =====
```


Test 1 POST Data from Excel.html

 Rest API Testing Report Apr 29, 2020 04:08:39 PM

Dashboard

Tests

40 test(s) passed
0 test(s) failed, 0 others

Timeline (seconds)

Tests	Steps	Start	End	Time Taken
40	0	Apr 29, 2020 04:08:39 PM	Apr 29, 2020 04:08:58 PM	0h 0m 19s+225ms



Pass
Fail
Fatal
Error
Warning
Skip

Index.html (Chronological View)

Test results		
1 suite		
All suites	Methods in chronological order	
API Test Info <ul style="list-style-type: none">TestNG.xml1 test0 groupsTimesReporter outputIgnored methodsChronological view Results <ul style="list-style-type: none">40 methods, 40 passedPassed methods (show)	<div>com.employeeapi.testCase.TC_001_Add_Employee_Manual</div> <div>0 ms</div> <div>setup</div> <div>addEmployee</div> <div>checkContentLength 26 ms</div> <div>checkContentType 2567 ms</div> <div>checkResponseBody 2582 ms</div> <div>checkResponseTime 2585 ms</div> <div>checkServer 2593 ms</div> <div>checkStatus 2597 ms</div> <div>checkStatusLine 2600 ms</div> <div>tearDown 2602 ms</div> <div>com.employeeapi.testCase.TC_002_Add_Employee_From_Excel</div> <div>2605 ms</div> <div>setup</div> <div>addEmployee</div> <div>checkResponse(Technology, Renaldy, male) 2607 ms</div> <div>checkResponse(Finance, Sheila, female) 2609 ms</div> <div>checkResponse(People, Fira, female) 3113 ms</div> <div>checkResponse(Finance, Melly, female) 4694 ms</div> <div>checkResponse(Technology, Jovananda, male) 6636 ms</div> <div>tearDown 8482 ms</div> <div>com.employeeapi.testCase.TC_003_Get_All_Employees</div> <div>9970 ms</div> <div>setup</div> <div>getAllEmployees</div> <div>checkContentLength 11857 ms</div> <div>checkContentType 11859 ms</div> <div>checkResponseBody 13489 ms</div> <div>checkResponseTime 13495 ms</div> <div>checkServer 13499 ms</div> <div>checkStatus 13502 ms</div> <div>checkStatusLine 13505 ms</div> <div>tearDown 13508 ms</div> <div>com.employeeapi.testCase.TC_004_Get_Selected_Employee</div> <div>13511 ms</div> <div>setup</div> <div>getSelectedEmployee</div> <div>checkContentLength 13515 ms</div> <div>checkContentType 13517 ms</div> <div>checkResponseBody 15436 ms</div> <div>checkResponseTime 15442 ms</div> <div>checkServer 15446 ms</div> <div>checkStatus 15449 ms</div> <div>checkStatusLine 15452 ms</div> <div>tearDown 15457 ms</div> <div>com.employeeapi.testCase.TC_005_Edit_Employee</div> <div>15460 ms</div> <div>setup</div> <div>editEmployee</div> <div>checkContentLength 15461 ms</div> <div>checkContentType 15463 ms</div> <div>checkResponseBody 17483 ms</div> <div>checkResponseTime 17487 ms</div> <div>checkServer 17490 ms</div> <div>checkStatus 17493 ms</div> <div>checkStatusLine 17496 ms</div> <div>tearDown 17498 ms</div> <div>com.employeeapi.testCase.TC_006_Delete_Employee</div> <div>17500 ms</div> <div>setup</div> <div>deleteEmployee</div> <div>checkContentLength 17504 ms</div> <div>checkContentType 17506 ms</div> <div>checkResponseBody 19123 ms</div> <div>checkResponseTime 19126 ms</div> <div>checkServer 19128 ms</div> <div>checkStatus 19131 ms</div> <div>checkStatusLine 19134 ms</div> <div>tearDown 19136 ms</div>	

Index.html (Passed Method)

Test results	
1 suite	
All suites	<div><div><div>API Test</div><div><div>Info</div><div><ul style="list-style-type: none">TestNG.xml1 test0 groupsTimesReporter outputIgnored methodsChronological view</div></div><div><div>Results</div><div><ul style="list-style-type: none">40 methods, 40 passedPassed methods (hide)checkContentLengthcheckContentLengthcheckContentLengthcheckContentLengthcheckContentLengthcheckContentTypecheckContentTypecheckContentTypecheckContentTypecheckResponse(Finance, Melly, female)checkResponse(Finance, Sheila, female)checkResponse(Technology, Renaldy, male)checkResponse(Technology, Jovananda, male)checkResponse(People, Fira, female)checkResponseBodycheckResponseBodycheckResponseBodycheckResponseBodycheckResponseBodycheckResponseTimecheckResponseTimecheckResponseTime</div></div></div></div> <div><div><div>com.employeeapi.testCase.TC_001_Add_Employee_Manual</div><div><div>checkContentLength</div><div>checkContentType</div><div>checkResponseBody</div><div>checkResponseTime</div><div>checkServer</div><div>checkStatusCode</div><div>checkStatusLine</div></div></div></div> <div><div><div>com.employeeapi.testCase.TC_002_Add_Employee_From_Excel</div><div><div>checkResponse (Finance, Melly, female)</div><div>checkResponse (Finance, Sheila, female)</div><div>checkResponse (Technology, Renaldy, male)</div><div>checkResponse (Technology, Jovananda, male)</div><div>checkResponse (People, Fira, female)</div></div></div></div> <div><div><div>com.employeeapi.testCase.TC_005_Edit_Employee</div><div><div>checkContentLength</div><div>checkContentType</div><div>checkResponseBody</div><div>checkResponseTime</div><div>checkServer</div><div>checkStatusCode</div><div>checkStatusLine</div></div></div></div> <div><div><div>com.employeeapi.testCase.TC_003_Get_All_Employees</div><div><div>checkContentLength</div><div>checkContentType</div><div>checkResponseBody</div><div>checkResponseTime</div><div>checkServer</div><div>checkStatusCode</div><div>checkStatusLine</div></div></div></div> <div><div><div>com.employeeapi.testCase.TC_006_Delete_Employee</div><div><div>checkContentLength</div><div>checkContentType</div><div>checkResponseBody</div><div>checkResponseTime</div><div>checkServer</div><div>checkStatusCode</div><div>checkStatusLine</div></div></div></div> <div><div><div>com.employeeapi.testCase.TC_004_Get_Selected_Employee</div><div><div>checkContentLength</div><div>checkContentType</div><div>checkResponseBody</div><div>checkResponseTime</div><div>checkServer</div></div></div></div>