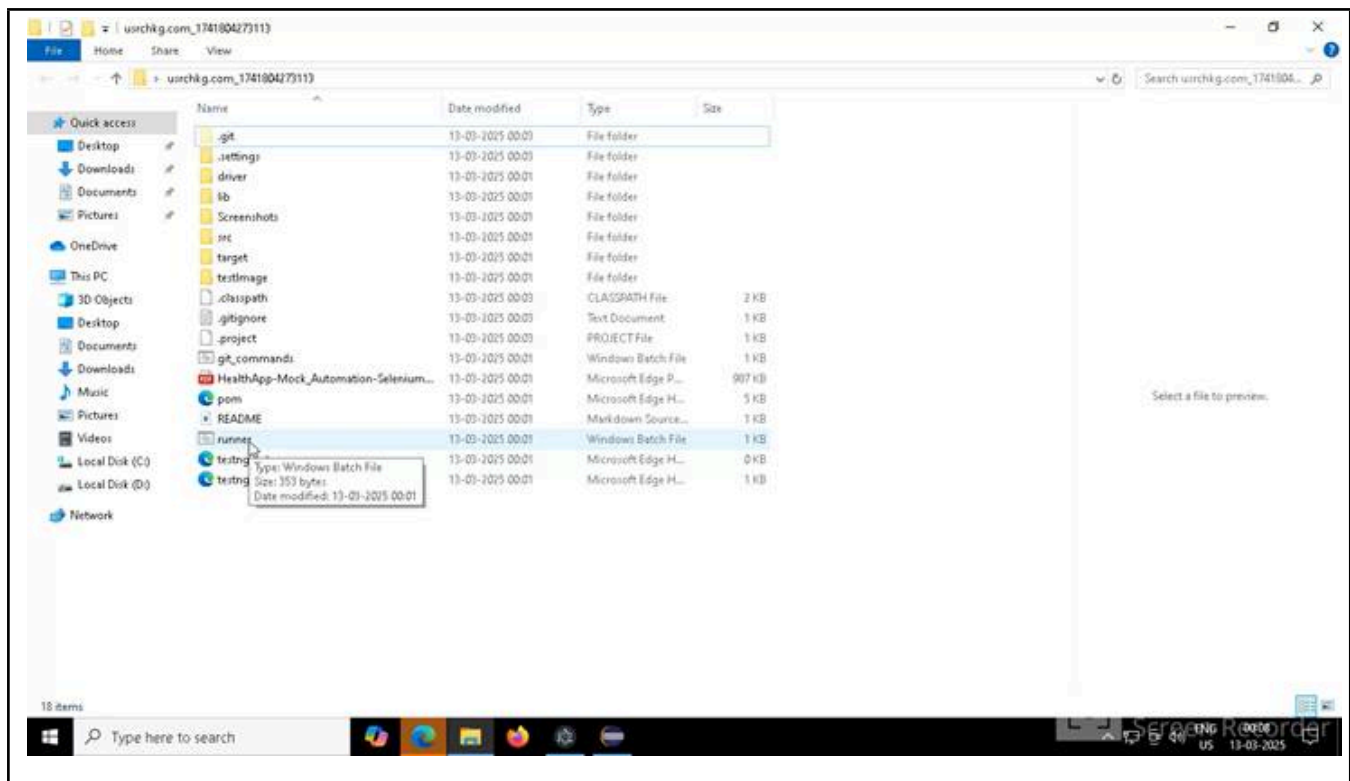


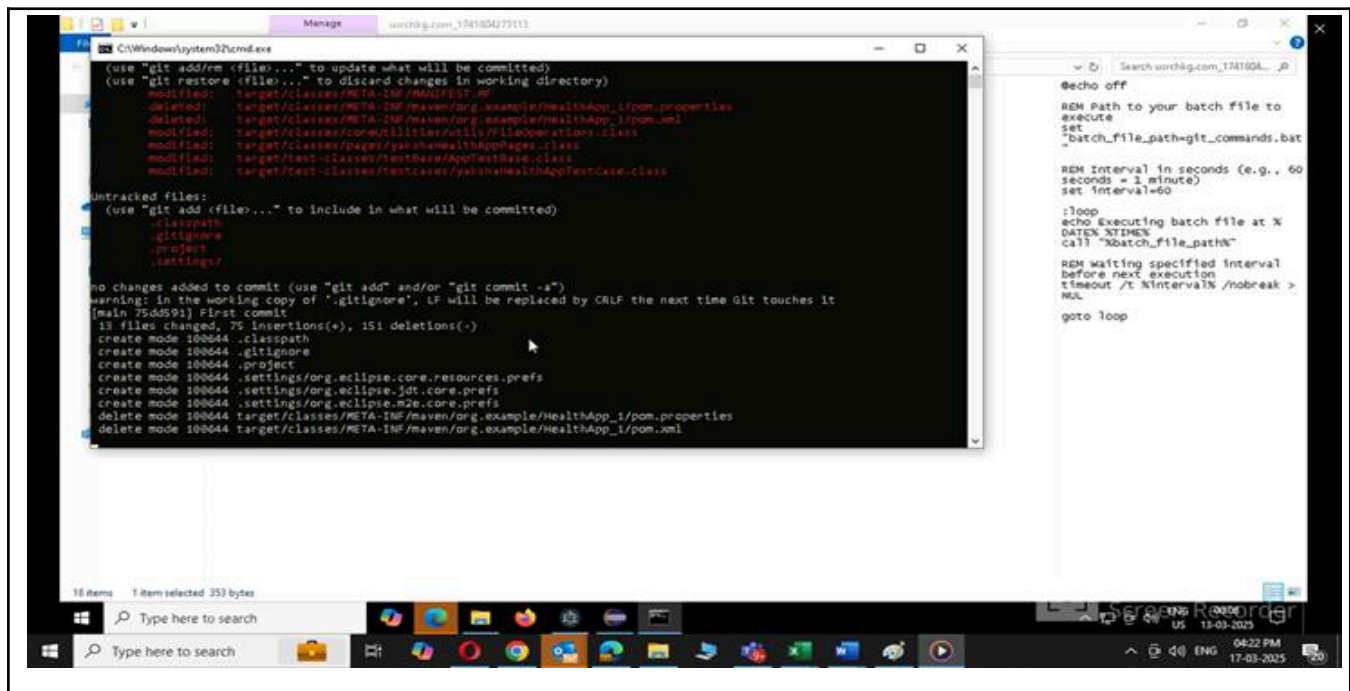
REST-ASSURED
(API-AUTOMATION PROJECT – PL1_8)

Pre-requisite:

Before you start working on your project, execute the runner file present in your project folder (Simply by double click). **This is mandatory.**

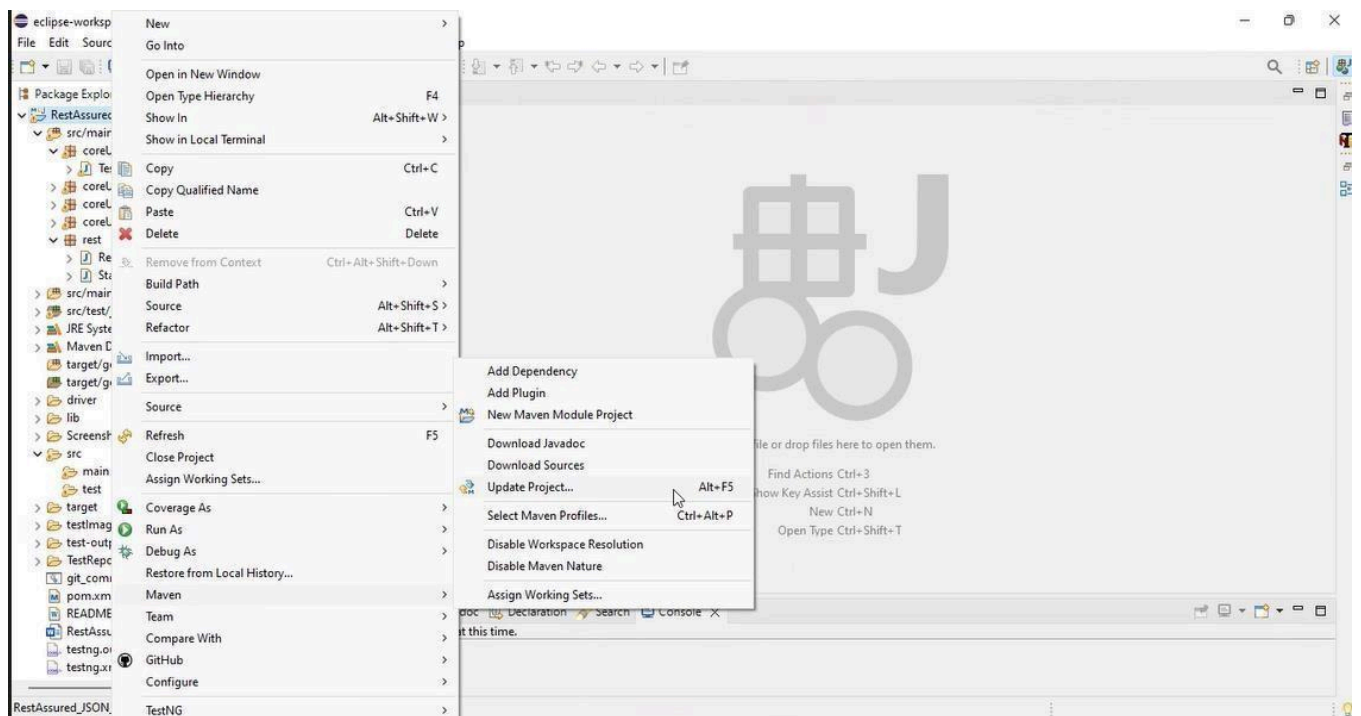


This will launch a command terminal for you where it will keep on pushing your updated code to GIT on regular intervals. Keep that command terminal open at backend and you can continue working on your project.

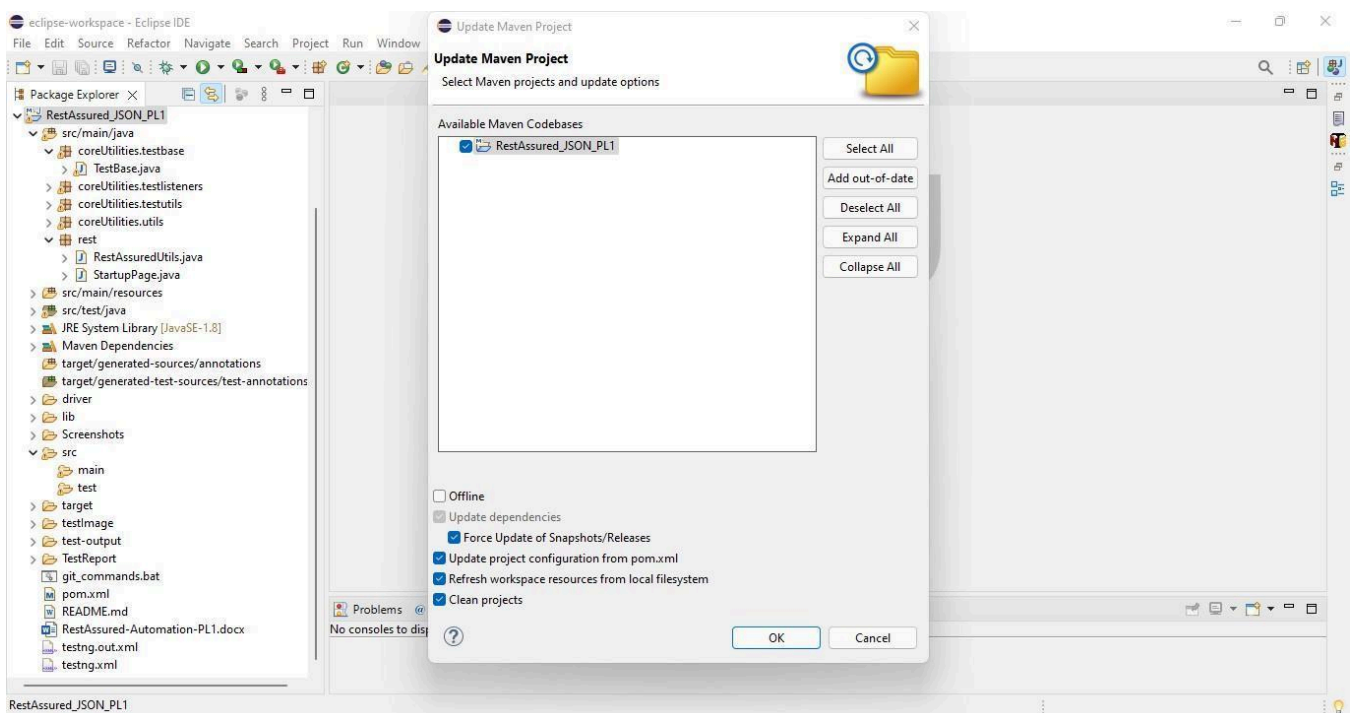


As soon as you import a project in eclipse, update the project using the maven update option as below. This is to resolve issue if any maven dependency not downloaded properly:

1. Right click on project : Go to “Maven” : Select “Update Project”



2. In Update Maven Project Box Select “Force Update of Snapshots/Releases” and click OK



Template Code Structure:

- Below are the packages and files you will be required to work upon.
- Other Files and packages you can ignore.
- In other Files and packages do not do any changes. It would affect your evaluation.
- You are not required to work in the “Test” Folder. Files there are noneditable. Editing those files and trying to save them will throw errors and would affect your evaluation.

Package	Class/File	Description
src/main/java/coreUtilities/utils/	FileOperations.java	<ol style="list-style-type: none">1. Contains methods to read from excel file.2. The method is already implemented.
/src/main/java/rest	ApiUtil.java	<ol style="list-style-type: none">1. All core activities to be performed here.2. The comments associated with each templated method here describe the expectation.3. Declare any variable/object you need to share data/status between different methods.4. Do not modify the signature of methods declared here. Do not modify the signature of methods declared here. Signature means method name, method return type, number of arguments, any exception thrown (if present, if not then please don't add).5. You can create additional supportive common methods in CommonEvents class.
/src/main/resources/	TestData.xlsx	Data is present for creating post and put requests

/src/main/java/coreUtilities/utlis	CommonEvents.java	<ol style="list-style-type: none"> 1. Contains all common activities. 2. Certain templated common methods declared here. 3. You implement them as per your need. 4. You can add any additional method for common activity here
	Testng.xml	Execution needs to kick started from TestNG xml

PROBLEM STATEMENT

Need to automate the following activities using RestAssured.

Key Activities to implement:

SI No.	Summary	Action	Expected Result
1	<p>Retrieve the Holidays Data in the Method:</p> <p>GetHolidayData(String endpoint, String cookieValue, Map<String, String> body)</p>	<ol style="list-style-type: none"> 1. Create an URL by combining the BASE_URL (already declared) and endpoint ("/web/index.php/api/v2/leave/holidays?fromDate=2025-01-01&toDate=2025-12-31") URL becomes: "opensource-demo.orangehrmlive.com/web/index.php/api/v2/leave/holidays?fromDate=2025-01-01&toDate=2025-12-31" 2. Initialize a RequestSpecification using RestAssured: <ul style="list-style-type: none"> ● Add the session cookie "orangehrm" with the provided cookieValue. ● Set the header "Content-Type" to "application/json". 3. Trigger a GET call to the specified endpoint. 4. Parse the response using JsonPath and retrieve the "data" object as a List<Map<String, Object>>. 5. From this list, extract and wrap values into separate lists as follows: <ul style="list-style-type: none"> ● id to be extracted and saved in ids list ● name to be extracted and saved in names list ● date to be extracted and saved in dates list ● recurring to be extracted and saved in recurrings list 	<p>-The method should Returns an object of type CustomResponse containing:</p> <ul style="list-style-type: none"> ● statusCode=200 ● status=OK. <p>-Implementation should be corrects</p> <p>-Non null and non empty List for:</p> <ul style="list-style-type: none"> ● ids ● names ● dates ● recurrings ● lengths ● lengthNames <p>-The complete raw response.</p>

		<ul style="list-style-type: none"> length to be extracted and saved in lengths list lengthName to be extracted and saved in lengthNames list <p>6. Create an object of type CustomResponse and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> Response The extracted statusCode in variable statusCode and statusLine in variable status. All extracted lists: <ul style="list-style-type: none"> → ids → names → dates → recurrings → lengths → lengthNames <p>7. Return the CustomResponse object from the method.</p>	
2	<p>Retrieve the employees Data in the Method:</p> <p>GetLeaveData(String endpoint, String cookieValue, Map<String, String> body)</p>	<p>1. Create an URL by combining the BASE_URL (already declared) and endpoint "/web/index.php/api/v2/leave/holidays?fromDate=2025-01-01&toDate=2025-12-31") URL becomes: "opensource-demo.orangehrmlive.com"/web/index.php/api/v2/leave/holidays?fromDate=2025-01-01&toDate=2025-12-31"</p> <p>2. Initialize a RequestSpecification using RestAssured:</p> <ul style="list-style-type: none"> Add the session cookie "orangehrm" with the provided cookieValue. Set the header "Content-Type" to "application/json". <p>3. Trigger a GET call to the specified endpoint.</p> <p>4. Parse the response using JsonPath and retrieve the "data" object as a List<Map<String, Object>>.</p> <p>5. From this list, extract and wrap values into separate lists as follows:</p> <ul style="list-style-type: none"> id to be extracted and saved in ids list name to be extracted and saved in names list date to be extracted and saved in dates list recurring to be extracted and saved in recurrings list length to be extracted and saved in lengths list lengthName to be extracted and saved in lengthNames list 	<p>-The method should Returns an object of type CustomResponse containing:</p> <ul style="list-style-type: none"> statusCode=200 status=OK. <p>-Implementation should be corrects</p> <p>-Non null and non empty List for:</p> <ul style="list-style-type: none"> ids names dates recurrings lengths lengthNames <p>-The complete raw response.</p>

		<p>6. Create an object of type CustomResponse and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> • Response • The extracted statusCode in variable statusCode and statusLine in variable status. • All extracted lists: <ul style="list-style-type: none"> → ids → names → dates → recurrings → lengths → lengthNames <p>7. Return the CustomResponse object from the method.</p>	
3	<p>Retrieve the employees count in the Method:</p> <p>GetEmpCount(String endpoint, String cookieValue, Map<String, String> body)</p>	<p>1. Create an URL by combining the BASE_URL (already declared) and endpoint ("/web/index.php/api/v2/pim/employees/count")) URL becomes: "opensource-demo.orangehrmlive.com/web/index.php/api/v2/pim/employees/count"</p> <p>2. Initialize a RequestSpecification using RestAssured:</p> <ul style="list-style-type: none"> • Add the session cookie "orangehrm" with the provided cookieValue. • Set the header "Content-Type" to "application/json". <p>3. Trigger a GET call to the specified endpoint.</p> <p>4. Parse the response using JsonPath and retrieve the "data" object as a Map<String, Object>.</p> <p>5. From this map, extract and store the following:</p> <ul style="list-style-type: none"> • count to be extracted and saved in the count variable <p>6. Create an object of type CustomResponse and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> • Response • The extracted statusCode in variable statusCode and statusLine in variable status. • Extracted count int. <p>7. Return the CustomResponse object from the method.</p>	<p>-The method should Returns an object of type CustomResponse containing:</p> <ul style="list-style-type: none"> • statusCode=200 • status=OK. <p>-Implementation should be corrected.</p> <p>-Non null value for:</p> <ul style="list-style-type: none"> • count. <p>-The complete raw response.</p>
4	<p>retrieve all leave types with no limit:</p> <p>GetLeaveType(String endpoint, String</p>	<p>1. Create an URL by combining the BASE_URL (already declared) and endpoint ("/web/index.php/api/v2/leave/leave-types?limit=0") URL becomes: "opensource-demo.orangehrmlive.com/web/index.php/api/v2/leave/leave-types?limit=0"</p>	<p>-The method should Returns an object of type CustomResponse containing:</p> <ul style="list-style-type: none"> • statusCode=200 • status=OK.

	cookieValue, Map<String, String> body)	<p>2. Initialize a RequestSpecification using RestAssured:</p> <ul style="list-style-type: none"> ● Add the session cookie "orangehrm" with the provided cookieValue. ● Set the header "Content-Type" to "application/json". <p>3. Trigger a GET call to the specified endpoint.</p> <p>4. Parse the response using JsonPath and retrieve the "data" array as a List<Map<String, Object>>.</p> <p>5. From this list, extract and wrap values into separate lists as follows:</p> <ul style="list-style-type: none"> ● id to be extracted and saved in ids list ● name to be extracted and saved in names list ● situational to be extracted and saved in situationals list ● deleted to be extracted and saved in Deletes list <p>6. Create an object of type CustomResponse and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> ● Response ● The extracted statusCode in variable statusCode and statusLine in variable status. ● All Extracted lists: <ul style="list-style-type: none"> → ids → names → situationals → Deletes <p>7. Return the CustomResponse object from the method.</p>	<p>-Implementation should be corrected.</p> <p>-Non null and non empty List for:</p> <ul style="list-style-type: none"> ● ids ● names ● situationals ● deletes <p>-The complete raw response.</p>
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5	<p>Retrieve the Usage Reports:</p> <p>GetUsageReport(String endpoint, String cookieValue, Map<String, String> body)</p>	<p>1. Create an URL by combining the BASE_URL (already declared) and endpoint ("/web/index.php/api/v2/leave/reports?name=my_leave_entitlements_and_usage") URL becomes: "opensource-demo.orangehrmlive.com/web/index.php/api/v2/leave/reports?name=my_leave_entitlements_and_usage"</p> <p>2. Initialize a RequestSpecification using RestAssured:</p> <ul style="list-style-type: none"> ● Add the session cookie "orangehrm" with the provided cookieValue. ● Set the header "Content-Type" to "application/json". <p>3. Trigger a GET call to the specified endpoint.</p>	<p>- The method should Returns an object of type CustomResponse containing:</p> <ul style="list-style-type: none"> ● statusCode= 200 ● status=OK. <p>-Implementation should be corrected.</p> <p>-Non null and non empty List for:</p> <ul style="list-style-type: none"> ● names ● props ● sizes ● pins ● cellProperties
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		<p>4. Parse the response using JsonPath and retrieve the "data.headers" array as a List<Map<String, Object>> and store it in the variable headers.</p> <p>5. From this list, extract and wrap values into separate lists as follows:</p> <ul style="list-style-type: none"> • prop to be extracted and saved in props list • name to be extracted and saved in names list • size to be extracted and saved in sizes list • pin to be extracted and saved in pins list • cellProperties to be extracted and saved in cellProperties list <p>6. Create an object of type CustomResponse and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> • Response • The extracted statusCode in variable statusCode and statusLine in variable status. • All Extracted lists: <ul style="list-style-type: none"> → props → names → sizes → pins → cellProperties <p>7. Return the CustomResponse object from the method</p>	<p>-The complete raw response.</p>
6	<p>Update termination reason by ID using the Method:</p> <p>PutTerminationReason(String endpoint, String cookieValue, String requestBody).</p>	<p>1. Create an URL by combining the BASE_URL (already declared) and endpoint ("/web/index.php/api/v2/pim/termination-reasons/1") URL becomes: "opensource-demo.orangehrmlive.com/web/index.php/api/v2/pim/termination-reasons/1"</p> <p>2. Initialize a RequestSpecification using RestAssured:</p> <ul style="list-style-type: none"> • Add the session cookie "orangehrm" with the provided cookieValue. • Set the header "Content-Type" to "application/json". <p>3. body must be included in request object using <code>.body()</code>.</p> <p>4. Trigger a PUT call to the specified endpoint with the request body (passed in argument).</p> <p>45 Parse the response using JsonPath and retrieve the "data" object as a Map<String, Object>.</p> <p>6. From this map, extract and save values as follows:</p> <ul style="list-style-type: none"> • id to be extracted and saved in id variable • name to be extracted and saved in name variable 	<p>- The method should Returns an object of type CustomResponse containing:</p> <ul style="list-style-type: none"> • statusCode= 200 • Status=OK. <p>-Implementation should be corrected.</p> <p>-Non null value for:</p> <ul style="list-style-type: none"> • id • name. <p>-The complete raw response.</p>

		<p>7. Create an object of type CustomResponse and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> ● Response ● The extracted statusCode in variable statusCode and statusLine in variable status. ● The Extracted: <ul style="list-style-type: none"> → id Object → name Object <p>8. Return the CustomResponse object from the method.</p>	
7	<p>Delete employee by ID using Method:</p> <p>DeletePim(String deleteEndPoint, String cookieValue, String requestBody)</p>	<p>1. Create an URL by combining the BASE_URL (already declared) and endpoint ("/web/index.php/api/v2/pim/employees") URL becomes: "opensource-demo.orangehrmlive.com/web/index.php/api/v2/pim/employees"</p> <p>2. Initialize a RequestSpecification using RestAssured:</p> <ul style="list-style-type: none"> ● Add the session cookie "orangehrm" with the provided cookieValue. ● Set the header "Content-Type" to "application/json". <p>3. body must be included in request object using <code>.body()</code>.</p> <p>4. Trigger a DELETE call to the specified endpoint with passed body in requestBody.</p> <p>5. Parse the response using JsonPath and retrieve the "data" array as a <code>List<Object></code> and store it in the variable <code>dataList</code>.</p> <p>6. From this list:</p> <ul style="list-style-type: none"> ● Extract the first element of the "data" array and save it in dataValue variable <p>7. Create an object of type CustomResponse and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> ● Response ● The extracted statusCode in variable statusCode and statusLine in variable status. ● The Extracted dataValue Object (value at index 0 of the data array) <p>8. Return the CustomResponse object from the method.</p>	<p>- The method should Returns an object of type CustomResponse containing:</p> <ul style="list-style-type: none"> ● statusCode= ● 200 ● Status=OK. ● dataValue <p>-Implementation should be corrected.</p> <p>-The complete raw response.</p>
8	<p>Generate Employee dynamically using Method:</p>	<p>1. Create an URL by combining the BASE_URL (already declared) and endpoint ("/web/index.php/api/v2/pim/employees")</p>	<p>-The method should Returns an object of type</p>

	PostPimEmp(String endpoint, String cookieValue, String requestBody)	<p>)</p> <p>URL becomes: "opensource-demo.orangehrmlive.com/web/index.php/api/v2/pim/employees"</p> <p>2. Initialize a RequestSpecification using RestAssured:</p> <ul style="list-style-type: none"> • Add the session cookie "orangehrm" with the provided cookieValue. • Set the header "Content-Type" to "application/json". <p>3. body must be included in request object using <code>.body()</code>.</p> <p>4. Trigger a POST call to the specified endpoint and pass the body.</p> <p>5. Parse the response using JsonPath and retrieve the "data" object as a <code>Map<String, Object></code>.</p> <p>6. From this map:</p> <ul style="list-style-type: none"> • Extract firstName and save it in <code>firstName</code> variable • Extract employeeId and save it in <code>employeeId</code> variable <p>7. Create an object of type <code>CustomResponse</code> and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> • Response • The extracted <code>statusCode</code> in variable <code>statusCode</code> and <code>statusLine</code> in variable <code>status</code>. • The Extracted: <ul style="list-style-type: none"> → firstName Object → employeeId Object <p>8. Return the <code>CustomResponse</code> object from the method.</p>	<p><code>CustomResponse</code> containing:</p> <ul style="list-style-type: none"> • <code>statusCode=200</code> • <code>status=OK</code>. <p>-Implementation should be corrected. -Request Body should have:</p> <ul style="list-style-type: none"> • <code>firstName</code> • <code>employeeId</code> <p>-The complete raw response.</p>
9	<p>Update the Vim employee using the method:</p> PutVimEmp(String endpoint, String cookieValue, String requestBody)	<p>1. Create an URL by combining the <code>BASE_URL</code> (already declared) and endpoint ("/web/index.php/api/v2/pim/employees")</p> <p>URL becomes: "opensource-demo.orangehrmlive.com/web/index.php/api/v2/pim/employees"</p> <p>2. Initialize a RequestSpecification using RestAssured:</p> <ul style="list-style-type: none"> • Add the session cookie "orangehrm" with the provided cookieValue. • Set the header "Content-Type" to "application/json". 	<p>-The method should Returns an object of type <code>CustomResponse</code> containing:</p> <ul style="list-style-type: none"> • <code>statusCode=200</code> • <code>status=OK</code>. <p>-Implementation should be corrected. -Response should have:</p> <ul style="list-style-type: none"> • firstName = achrrr • lastName= haji

		<p>3. body must be included in request object using <code>.body()</code>.</p> <p>4. Trigger a PUT call to the specified endpoint and pass the body.</p> <p>5. Parse the response using JsonPath and retrieve the "data" object as a <code>Map<String, Object></code>.</p> <p>6. From this map:</p> <ul style="list-style-type: none"> ● Extract empNumber and save it in <code>id</code> variable ● Extract firstName and save it in <code>name</code> variable ● Extract lastName and save it in <code>lastName</code> variable <p>7. Create an object of type <code>CustomResponse</code> and initialize it with values extracted from the <code>Response</code> object:</p> <ul style="list-style-type: none"> ● <code>Response</code> ● The extracted <code>statusCode</code> in variable <code>statusCode</code> and <code>statusLine</code> in variable <code>status</code>. ● The Extracted: <ul style="list-style-type: none"> ➔ <code>id</code> Object ➔ <code>name</code> Object ➔ <code>lastName</code> Object <p>8. Return the <code>CustomResponse</code> object from the method.</p>	<ul style="list-style-type: none"> ● employee number=not null <p>-The complete raw response.</p>
10	<p>Delete a specific employee by dynamically retrieving the PIM employee id using the method:</p> <p>DeletePimEmp(String endpoint, String cookieValue, String requestBody)</p> <p>.</p>	<p>1. Create an URL by combining the <code>BASE_URL</code> (already declared) and endpoint (<code>"/web/index.php/api/v2/pim/employees"</code>)</p> <p>URL becomes:</p> <p><code>"opensource-demo.orangehrmlive.com/web/index.php/api/v2/pim/employees"</code></p> <p>2. Initialize a <code>RequestSpecification</code> using <code>RestAssured</code>:</p> <ul style="list-style-type: none"> ● Add the session cookie "orangehrm" with the provided <code>cookieValue</code>. ● Set the header "Content-Type" to "application/json". <p>3. body must be included in request object using <code>.body()</code>.</p> <p>4. Parse the response using JsonPath and retrieve the "data" array as a <code>List<Object></code>.</p> <p>5. From this list:</p> <ul style="list-style-type: none"> ● Extract the first element (employee ID) and save it in the <code>employeeId</code> variable to confirm the deleted employee record. <p>6. Send a DELETE req to the url</p>	<p>-The method should Returns an object of type <code>CustomResponse</code> containing:</p> <ul style="list-style-type: none"> ● <code>statusCode=200</code> ● <code>status=OK</code> ● <code>employeeId</code> <p>-Implementation should be corrected.</p> <p>-The complete raw response.</p>

		<p>7. You must attach the passed body.</p> <p>8. Create an object of type CustomResponse and initialize it with values extracted from the Response object:</p> <ul style="list-style-type: none"> • Response • The extracted statusCode in variable statusCode and statusLine in variable status. • employeeId 	
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NOTE: "Please do not delete any file in the src folder. But you are free to add any other file".

Expectations:

- 1) **Learners should write automation scripts using Java and REST Assured to automate the API testing for all the provided methods (e.g., GET, POST, PUT, DELETE).** In other words, the automation script should perform all mentioned API interactions, including validation of responses.
- 2) **Learners should not use any pre-built libraries or tools to validate API responses (e.g., JSON schema validation tools).** They should manually validate the response content (e.g., status codes, response body, etc.) by writing their own logic for assertion.

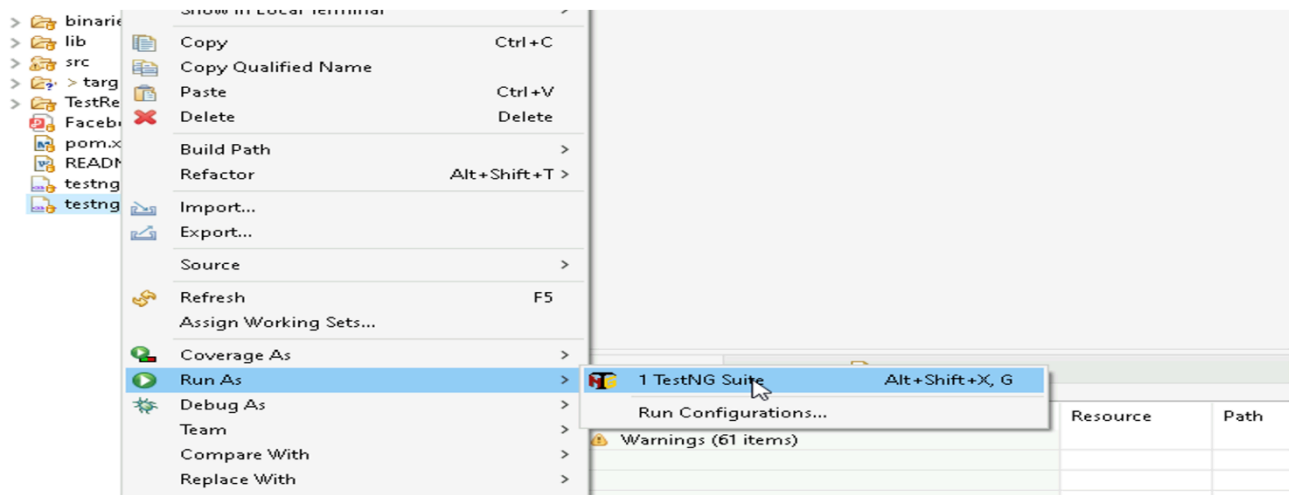
IMPLEMENTATION/FUNCTIONAL REQUIREMENT

1.1 CODE QUALITY/OPTIMIZATIONS

1. Associates should have written clean code that is readable.
2. Associates need to follow SOLID programming principles.

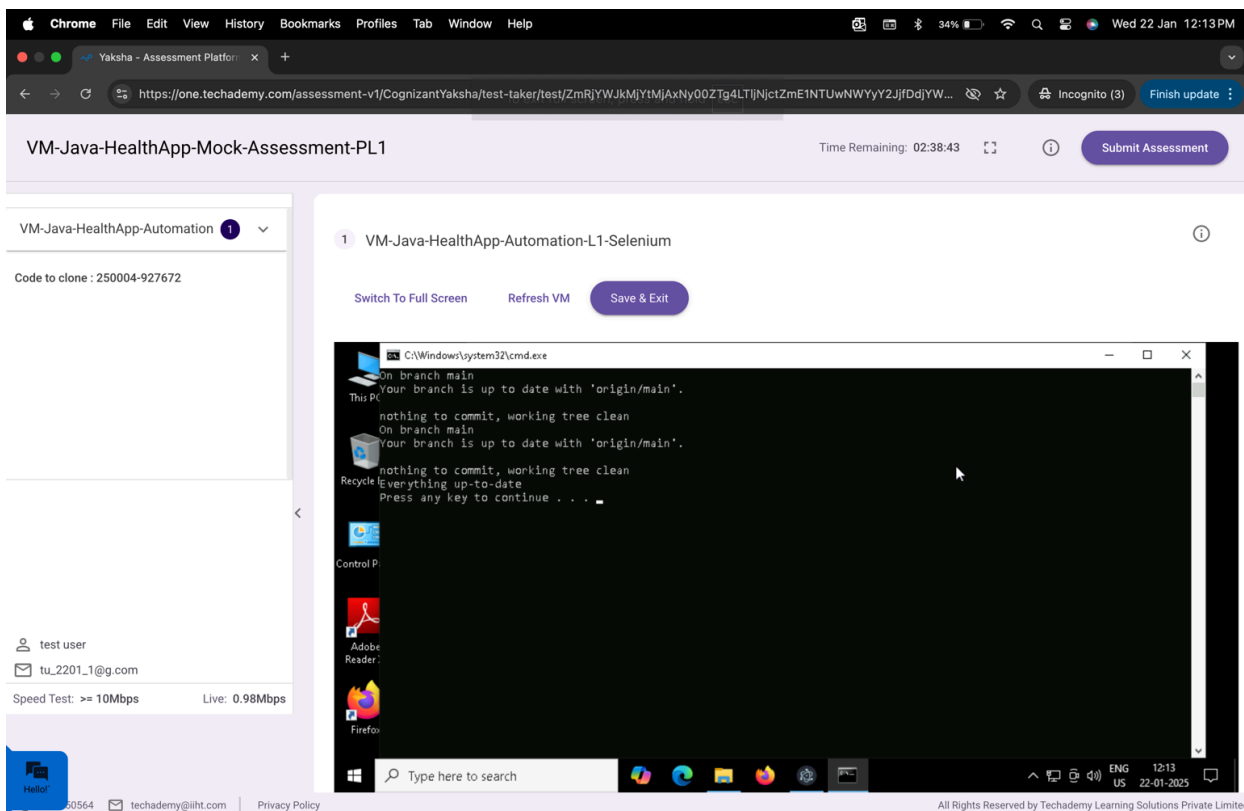
EXECUTION STEPS TO FOLLOW

1. **You are mandatory required to run test cases for applications before final submission. Without this project evaluation will not happen.**
2. **You can launch test cases any time as follows: Right-click on testng.xml and run TestNGSuite.**



NOTE:

- When executing test cases via TestNG.xml, it launches the application UI using Selenium WebDriver. This is intentional behavior to facilitate cookie extraction for authentication.
- To do the final submission of the assessment :
 - Press escape to come out of Fullscreen mode.
 - Submit the assessment.



After the successful submission of the assessment, you will get a confirmation message displayed on your screen.

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All the Best
