# TEST PLAN FOR TESTING APIs

# ON reqres.in

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# Introduction

# The purpose of this test plan is to thoroughly test the APIs provided by “reqres.in” to ensure their functionality, reliability, and security.

# Objective

# 2.1 To validate the correctness of API responses, handling of different scenarios, and adherence to specifications.

# Test Environment

# Postman or similar API testing tool

# Programming language with libraries for API testing

# Automation Framework (Cypress)

# Test Cases

# Positive Test Cases

# Validate User Details

|  |  |
| --- | --- |
| Test ID |  |
| Test Title | Verify all the Positive Test Cases Scenarios |
| Author | Vasu Bagga |
| Test Objective | This test case verifies all the Positive Test case Scenarios. |
| Topology | NA |
| Configuration | NA |
| Test Type | Feature Functionality |
| Pass Criteria | Positive Test Cases should work successfully. |
| Procedure | 1. Send requests to retrieve user details with valid user IDs (1, 2, 3, etc.).  2. Verify that the response status code is 200 (OK).  3. Validate the structure and content of the response JSON.  4. Ensure that all expected fields (id, email, first\_name, last\_name, avatar) are present in the response. |
| GUI Test | Yes |
| Priority | High |
| Product | NA |
| Tools | NA |
| Automation | Yes |
| Result: | Mark Test Case as pass If all the Positive Test Cases scenarios are getting passed. |
| Comments: - | NA |

# Verify Pagination of the Web Page.

|  |  |
| --- | --- |
| Test ID |  |
| Test Title | Verify the Pagination of the Web Page |
| Author | Vasu Bagga |
| Test Objective | This test case verifies the Pagination of the Web Page. |
| Topology | NA |
| Configuration | NA |
| Test Type | Feature Functionality |
| Pass Criteria | Pagination of the Web Page should be well arranged and correct. |
| Procedure | 1. Send requests to retrieve user details with pagination parameters (page and per\_page).  2. Verify that the response contains the correct number of users per page and total pages.  3. Validate the structure and content of each page's data. |
| GUI Test | Yes |
| Priority | High |
| Product | NA |
| Tools | NA |
| Automation | Yes |
| Result: | Mark Test Case as pass If user able to see the pagination of the well arranged and accurate. |
| Comments: - | NA |

# Negative Test Cases

# Validate Invalid User ID

|  |  |
| --- | --- |
| Test ID |  |
| Test Title | Validate the failure on Invalid User ID. |
| Author | Vasu Bagga |
| Test Objective | This test case verifies the failure on Invalid User ID. |
| Topology | NA |
| Configuration | NA |
| Test Type | Feature Functionality |
| Pass Criteria | An error prompt should come with error in response as well for invalid User ID. |
| Procedure | 1. Send requests to retrieve user details with invalid user IDs (0, -1, non-existent IDs).  2. Verify that the response status code is 404 (Not Found).  3. Ensure that the response body contains appropriate error messages indicating the user is not found. |
| GUI Test | Yes |
| Priority | High |
| Product | NA |
| Tools | NA |
| Automation | Yes |
| Result: | Mark Test Case as pass If user is able to see the errors when Invalid User ID is provided. |
| Comments: - | NA |

# 5.2.2 Validate the Response with Missing Parameters.

|  |  |
| --- | --- |
| Test ID |  |
| Test Title | Validate the failure for Missing Parameters. |
| Author | Vasu Bagga |
| Test Objective | This test case verifies the failure on Missing Parameters. |
| Topology | NA |
| Configuration | NA |
| Test Type | Feature Functionality |
| Pass Criteria | An error prompt should come with error in response as well for Missing Parameters. |
| Procedure | 1. Send requests with missing parameters (e.g., omitting page or per\_page).  2. Verify that the API handles missing parameters and returns appropriate error messages. |
| GUI Test | Yes |
| Priority | High |
| Product | NA |
| Tools | NA |
| Automation | Yes |
| Result: | Mark Test Case as pass If user is not able to login when invalid password is entered. |
| Comments: - | NA |

# Edge Test Cases

# Validate Boundary Conditions

|  |  |
| --- | --- |
| Test ID |  |
| Test Title | Validate the Boundary Conditions |
| Author | Vasu Bagga |
| Test Objective | This test case verifies the Boundary Conditions related to the Web Page. |
| Topology | NA |
| Configuration | NA |
| Test Type | Feature Functionality |
| Pass Criteria | All the side case or Boundary Cases should be successfully tested and they should be working according to the Scenarios. |
| Procedure | 1. Test boundary conditions for pagination parameters (e.g., maximum and minimum valid values for page and per\_page).  2. Verify that the API behaves correctly at the boundaries and returns the expected number of users. |
| GUI Test | Yes |
| Priority | High |
| Product | NA |
| Tools | NA |
| Automation | Yes |
| Result: | Mark Test Case as pass If all the Side cases/scenarios are working successfully. |
| Comments: - | NA |

# Validate Special Characters and Long Strings

|  |  |
| --- | --- |
| Test ID |  |
| Test Title | Validate Special Characters and Long Strings. |
| Author | Vasu Bagga |
| Test Objective | This test case verifies the Special Characters and Long Strings. |
| Topology | NA |
| Configuration | NA |
| Test Type | Feature Functionality |
| Pass Criteria | The special Characters or Long Strings should pass successfully in the body and work according to the functionality. |
| Procedure | 1. Send requests with special characters and long strings in parameters.  2. Validate that the API properly handles special characters and long strings without errors. |
| GUI Test | Yes |
| Priority | High |
| Product | NA |
| Tools | NA |
| Automation | Yes |
| Result: | Mark Test Case as pass If special characters and Long Strings are getting successfully passed. |
| Comments: - | NA |

# Automated Testing : i) Implement automated test scripts using a programming language with JSON validation libraries. ii) Write test cases to validate JSON structure and content automatically. iii) Execute automated tests to ensure consistent and reliable validation of APIs.