**Test Plan Document**

**Test Plan for API Automation using RestAssured**

**Project Title:** API Testing for Reqres.in

**Version:** 1.0

**Prepared By:** [Esraa Azzam]

**1. Introduction**

This document outlines the test strategy and approach for automating the testing of three APIs from Reqres.in using RestAssured.

**2. Scope**

The scope of this testing includes:

* **List Users**: Validate the response for the GET request.
* **Create User**: Validate the response for the POST request.
* **Update User**: Validate the response for the PUT request.

**3. Test Objectives**

* Validate API responses against expected results.
* Verify status codes, response time, and data accuracy.
* Conduct performance testing to ensure APIs handle concurrent users as specified.

**4. Tools and Technologies**

* **Performance Testing Tool**: JMeter
* **Reporting Tool**: JMeter and HTML Report Generation

**5. Test Environment**

* Base URL: https://reqres.in/api

**6. Test Cases**

| **Test Case ID** | **API Name** | **API URL** | **Method** | **Expected Outcome** |
| --- | --- | --- | --- | --- |
| TC01 | List Users | <https://reqres.in/api/users?page=2> | GET | Status 200, List of Users |
| TC02 | Create User | <https://reqres.in/api/users> | POST | Status 201, User Created |
| TC03 | Update User | <https://reqres.in/api/users/2> | PUT | Status 200, User Updated |

**7. Performance Testing**

* **Objective**: To ensure that the APIs can handle up to 100 concurrent users within 60 seconds over a duration of 15 minutes.
* **Metrics to Monitor**:
  + Response Time
  + Throughput
  + Error Rate