

Project2_Postman_v1.1

Monday, February 13, 2023 2:19 PM

Project 2: Integration Testing with Postman

Revised: 7/5/25

General Instructions

Introduction

This assignment allows you to apply the concepts of this class using an tool for working with APIs, which represent the integration interfaces for a distributed software. Our focus in this assignment will be "Integration Testing." We will access API endpoints and examine the data that is returned. This is a very common methodology to perform integration testing.

Focus on understanding the following:

- All the possible interfaces (endpoints).
- Verbs are used to access the URIs.
- The expected result for success?
- The possible failure scenarios.

Prerequisite

- Postman installed

Group Work

This is a *group collaboration assignment*. You will need to choose a partner for this assignment. If you would like to work individually, you can do that too. If you work as a group, but both names on your assignment. Let me know your groups in Slack.

Part 1: Research on APIs and Integration Testing with PostMan

Research the following topics as part of the writeup that will be included in your deliverable.

- Describe the basic functionality of HTTP. Include details about:
 - Clients
 - Servers
 - Requests
 - Responses
 - Headers vs. Body
 - Status codes
 - HTTP Verbs: GET, POST, PUT, DELETE
 - A description of why HTTP is "stateless" and what that means.
- Describe the role of APIs in modern applications. What are Open APIs and why are they important. Find one application of a modern use of Open APIs and describe how they are used. Include your sources.
- Describe Cross-Origin Resource Sharing (CORS).
- List 5 Public Open APIs that you can use to get data.

Part 2: Postman Video Demo or Test document with Screen Shots

You are encouraged to create a video using video capture tool (PowerPoint, Camtasia, etc.) that will demo the following functionality in Postman. If you don't feel comfortable doing a video, you can submit a test document with screen shots.

You can use an API of your choice. You are encouraged to find a Public API with information that interests you. If you get stuck ask for help in Slack.

Perform the following in Postman

1. Create a collection
2. Create a test GET request to perform a listing of the items in a database (you can truncate this as

3. Create an Environment for your Collection.
4. Refactor your Request to include environment variables for the base url for the API, hint `{{url}}`
5. Create at 5 to 10 additional requests including GET requests and at least one POST request.

1. Explain if data is persisted in the API that you chose
2. Show examples of data returned for the requests (at least three).
3. Show the data that is returned for an error, hint, search for a user that does not exist.

- Use a Linux machine, a Mac, or Git Bash on a Windows PC to perform 3 Requests using the curl command. Does Curl have any advantages over Postman?

```

rgrn@HPPAVILION-1 MINGW64 /
$ which curl
/mingw64/bin/curl

rgrn@HPPAVILION-1 MINGW64 /
$ curl https://jsonmonk.com/api/v1/users?page=1
% Total    % Received % Xferd Average Speed Time Time Time Current
           Dload Upload Total Spent Left Speed
0   0     0      0 0 --:--:-- --:--:-- --:--:-- 0{ "status": "Success", "data": {
"current_page_no": 1, "records_per_page": 10, "total_records": 50, "total_pages": 5, "records": [
{"_id": "63022e3b69f6461aa96d674a", "first_name": "John", "last_name": "Doe", "email": "Sincere@april.biz", "mobile_no": "929983874", "avatar": "https://jsonmonk.c
om/avatar/placeholder.png", "created_at": "1661087291691", "auth_token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJlbWFnbnBvcC1lbnNpbmNmVWYybmF1bGVuYml6IiwicGFzc3dvcmQIOnIjZG1pbiIsImVhdC1GMTY2NDY2MDIyNn0wbT9VSbVG-Qbue1GR3IEYtQSuiLSMSc0qo-Jg0Pc9Q"}, {"_id": "630e86f8f1b3cb30e618af34", "first_name": "Halo", "last_name": "Hali", "email": "fake@fake.com", "mobile_no": "0123456789", "avatar": "https://jsonmonk.com/avatar/placeholder.png", "created_at": "1661896440043", "auth_token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJmaXJzdF9uYW1lIjo1SGFsbG8iLCJsc3dvcmQIOnIjZG1pbiIsImVhdC1GMTY2NDY2MDIyNn0wbT9VSbVG-Qbue1GR3IEYtQSuiLSMSc0qo-Jg0Pc9Q"}, {"_id": "630e8889f1b3cb30e618af35", "first_name": "Ngentot", "last_name": "Enak", "email": "fake123@fake.com", "mobile_no": "0123456789", "avatar": "https://jsonmonk.com/avatar/placeholder.png", "created_at": "1661896841670", "auth_token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJmaXJzdF9uYW1lIjo1SGFsbG8iLCJsc3dvcmQIOnIjZG1pbiIsImVhdC1GMTY2NDY2MDIyNn0wbT9VSbVG-Qbue1GR3IEYtQSuiLSMSc0qo-Jg0Pc9Q"}, {"_id": "630e8a98f1b3cb30e618af36", "first_name": "Ngentot", "last_name": "Enak", "email": "fake456@fake.com", "mobile_no": "0123456789", "avatar": "https://jsonmonk.com/avatar/placeholder.png", "created_at": "1661897368267", "auth_token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJmaXJzdF9uYW1lIjo1SGFsbG8iLCJsc3dvcmQIOnIjZG1pbiIsImVhdC1GMTY2NDY2MDIyNn0wbT9VSbVG-Qbue1GR3IEYtQSuiLSMSc0qo-Jg0Pc9Q"}], "page_info": { "current_page": 1, "total_pages": 5, "total_records": 50, "records_per_page": 10 } } }
```

CRITERIA	QUESTIONS TO ADDRESS
Introduction	Proved an overview of the project.
Cover the following points in Part 1	Functionality of HTTP, role of APIs, CORS, public APIs.
Video demo or paper screen shots of Part 2.	Demonstrate all of the points listed in Part 2.
Conclusion and Recommendations	Summary of what you learned about integration testing and APIs. What recommendations would you make to improve this assignment?

- If you worked as a team, include all team members on the paper.
- Please save in word format (.docx). Mac users can save as a PDF.
- Name your file with the following format: **LastnameFirstnameProject2.doc**