1. Postman Tutorial

Postman is one of the most popular software testing tools which is used for API testing. With the help of this tool, developers can **easily create, test, share, and document APIs.**

Introduction to Postman

- Postman is a standalone software testing API (Application Programming Interface) platform to build, test, design, modify, and document APIs. It is a simple Graphic User Interface for sending and viewing HTTP requests and responses.
- While using Postman, for testing purposes, one doesn't need to write any HTTP client network code. Instead, we build test suites called collections and let Postman interact with the API.
- In this tool, nearly any functionality that any developer may need is embedded. This tool has the ability to make various types of HTTP requests like GET, POST, PUT, PATCH, and convert the API to code for languages like JavaScript and Python.

Terminologies Related to Postman

API

Application Programming Interface (API) is software that acts as an intermediary for two apps to communicate with each other. We use APIs whenever we use an application like Twitter, Facebook, sending text messages, or checking the weather over the phone.

HTTP

HTTP (Hypertext Transfer Protocol) is the collection of rules for the transmission of data on the World Wide Web, like graphic images, text, video, sound, and other multimedia data. The Web users implicitly make use of HTTP as soon as they open their Web browser.

2. What is REST

REST (Representational State Transfer) paradigm and how rest architecture streamlines communication between web components. Making it easier for systems to communicate with each other.

3. What RESTful API and RESTful web services?

API developers can design APIs using several different architectures. APIs that follow the REST architectural style are called REST APIs. Web services that implement REST architecture are called RESTful web services. The term RESTful API generally refers to RESTful web APIs. However, you can use the terms REST API and RESTful API interchangeably.

4. What does the RESTful API server response contain?

REST principles require the server response to contain the following main components:

Response Codes

Responses from the server contain status codes to alert the client to information about the success of the operation. As a developer, you do not need to know every status code (there are many of them), but you should know the most common ones and how they are used:

Status code	Meaning
200 (OK)	This is the standard response for successful HTTP requests.
201 (CREATED)	This is the standard response for an HTTP request that resulted in an item being successfully created.
204 (NO CONTENT)	This is the standard response for successful HTTP requests, where nothing is being returned in the response body.
400 (BAD REQUEST)	The request cannot be processed because of bad request syntax, excessive size, or another client error.
403 (FORBIDDEN)	The client does not have permission to access this resource.
404 (NOT FOUND)	The resource could not be found at this time. It is possible it was deleted, or does not exist yet.
500 (INTERNAL SERVER ERROR)	The generic answer for an unexpected failure if there is no more specific information available.

5.REST API-CRUD Operations

Operation	HTTP Methods	Description
Create	POST	Creating/Posting/Inserting Data
Read	GET	Reading/Getting/Retrieving Data
Update	PUT, PATCH	Updating Data Complete Update - PUT Partial Update - PATCH
Delete	DELETE	Deleting Data