API Testing and Postman Basics

What is an API?

An **API (Application Programming Interface)** is a set of rules that allows software systems to communicate and exchange data with each other.

What is API Testing?

API testing is a type of software testing that focuses on verifying that API endpoints return correct responses, follow the correct behavior, and handle errors properly.

Why Postman for API Testing?

Postman is a powerful and user-friendly tool for building, testing, documenting, and automating APIs without writing code.

Types of APIs (REST, SOAP, GraphQL)

- **REST** – Uses HTTP methods and JSON; simplest and most common.

- **SOAP** – Uses XML and strict rules; often used in enterprise apps.

- **GraphQL** – Allows clients to request exactly the data they need.

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Postman Basics

1. Installing Postman

The process of downloading and setting up Postman on your computer.

2. Collections

A collection is a group of API requests saved and organized within Postman.

3. Requests & Responses

A **request** is what you send to an API, and a **response** is the data returned by the server.

4. Environment & Global Variables

Variables used to store values (URLs, tokens) that may change across environments.

5. Pre-request Scripts

JavaScript code that runs **before** the request is sent (e.g., generate tokens).

6. Tests Tab & Assertions

Scripts written to validate API responses (e.g., status code is 200).