

Spring Boot Project

Laptop Shop Management System

**Project Member:**

* Saraswathi L
* Andiappan R
* Keerthana R
* Shivani Mugu
* Avaneesh Kumar Pandey

## Guided By

* + **Prof. Indrakka Mali**

# Index

* Introduction
* Objective
* Technology to be Used
* Proposed System
* Snapshots
* Diagrams
* Advantages
* Conclusion

# Introduction

* **Laptop Shop management is a distributed application, developed to maintain the details of customers and laptops details.**
* **It maintains the information about the personal details of the customers, also the details about the laptop system which enables to generate the easy billing maintenance.**
* **The application is actually a suite of applications developed using java. It’s simple to understand even if you’re not smiler with this application.**
* **The application is reduced as much as possible to avoid errors while entering the data.**
* **It also provides error message while entering invalid data.**
* **No formal knowledge is needed for the user to use this system.**
* **Thus, by this all it proves it is user-friendly.**
* **Laptop shop Management System, it can assist the shop owners to concentrate on their other activities rather concentrate on the record-keeping and manual billing.**

# Objective

* **The purpose of the Laptop Shop Management System is to automate the existing manual system with the help of computerized equipment and full-fledged computer software, fulfilling their requirements so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easy to work with.**
* **Laptop Shop Management systems, as described above, can lead to error-free, secure, reliable and fast management systems.**
* **It can assist the user to concentrate on their activities rather to concentrate on the record keeping.**
* **Thus, it will help the shop owners in better utilization of resources.**
* **The shop owners can maintain computerized records without redundant entries.**
* **That means that one need not be distracted by information that is not relevant while being able to reach the information.**

# Software & hardware used

## Software Requirements

* Operating System: Windows 7 or Windows 10
* Language : Java
* IDE : Spring Boot, Postman
* Backend : Microsoft MySQL server

## Hardware Requirements

* + - CPU : Intel Pentium IV processor
    - RAM : 512 MB or above

- Hard Disk : 2 GB hard disk space or minimum

* Back-End
* Core Java
* Spring Boot
* Spring Data JPA
* Hibernate
* Spring Boot Web
* MySQL Database
* Thyme leaf
* JUnit

# Proposed System

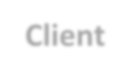
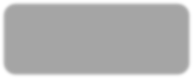
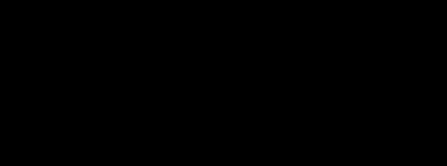
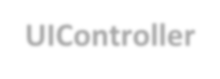
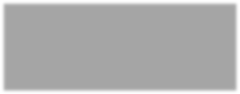
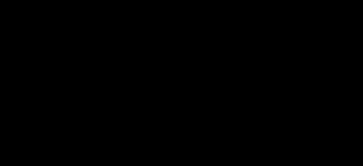
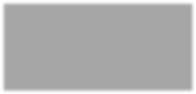
* **First, we have to run the Application on the browser, the index page will be shown after that if the user is registered then he/she can login the page and he/she can entering in the application.**
* **If the user is not registered then he/she needs to register themselves and then he/she can continue to login and he/she can access any time.**
* **After that related pages will be there like if user is admin so he/she can access all the operations like insert, delete, update and search the details.**
* **If the user is customer, then he/she can view the related record and he/she can update the record.**
* **And after that he/she can logged out by themselves.**

**About Back-end:**

* **There are mainly four operations will be performed by the user and admin Ex. Insert, update, retrieve/fetch, delete.**
* **This operation will be performed using the spring boot framework, core java and spring boot web, spring data Jpa, and hibernate.**
* **And thyme leaf is the design pattern for the user interface.**
* **For connectivity purpose we are using MySQL database. It is connected to the java and database.**

Working Of Back-End

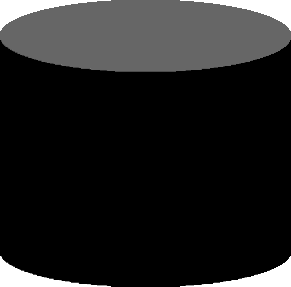
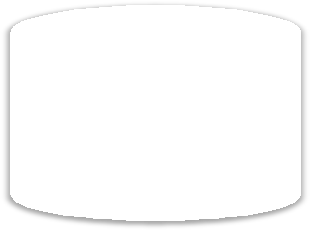
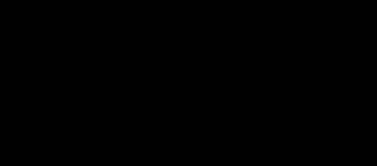
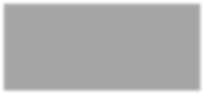
* **There are mainly three stages –**



**Client**

**Service**

**UIController**



**Database**

**Repository**

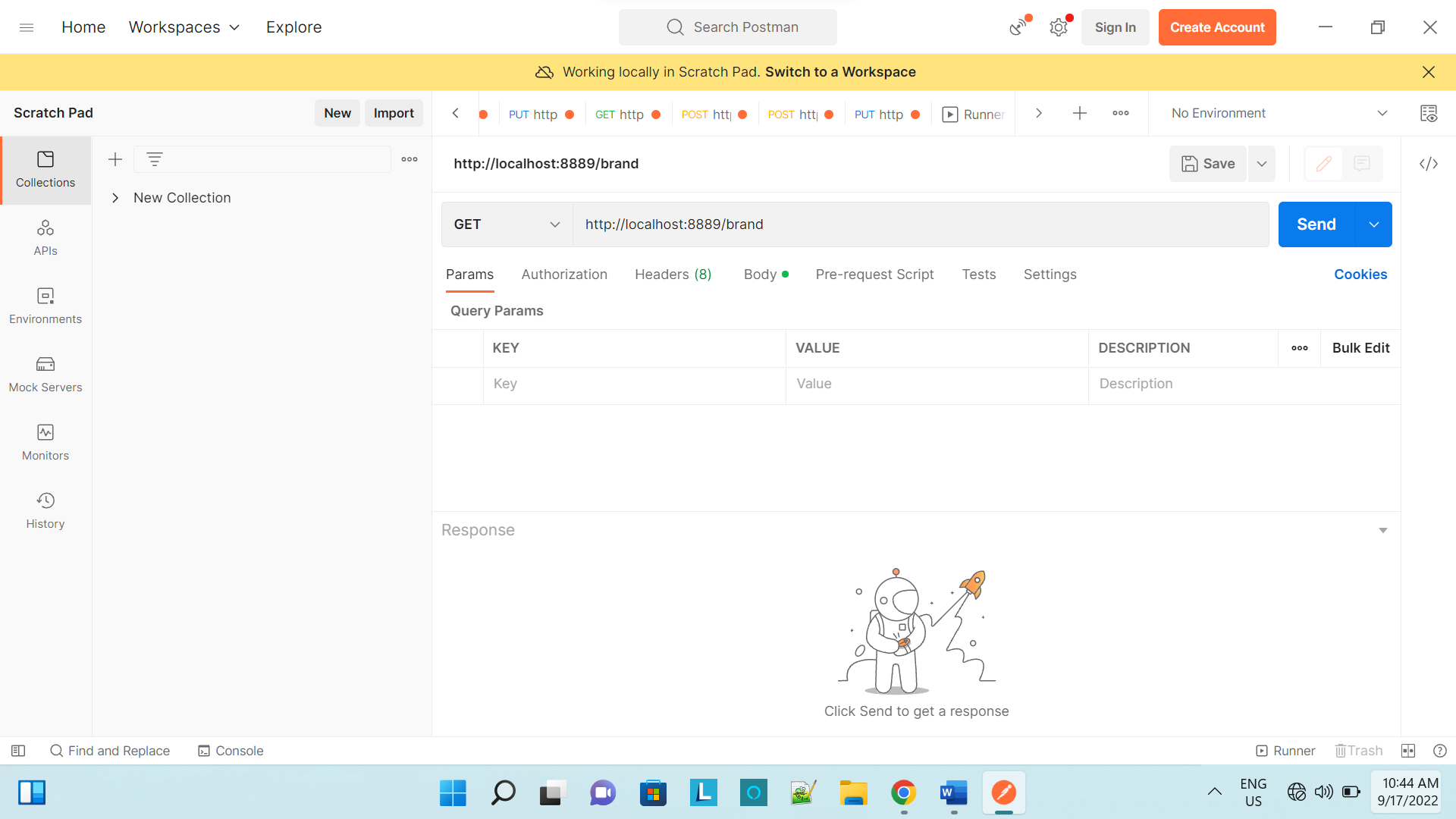
* **UIController - In Spring Boot, the UIController class**

is responsible for processing incoming requests, preparing a model, and returning the view to be rendered as a response.

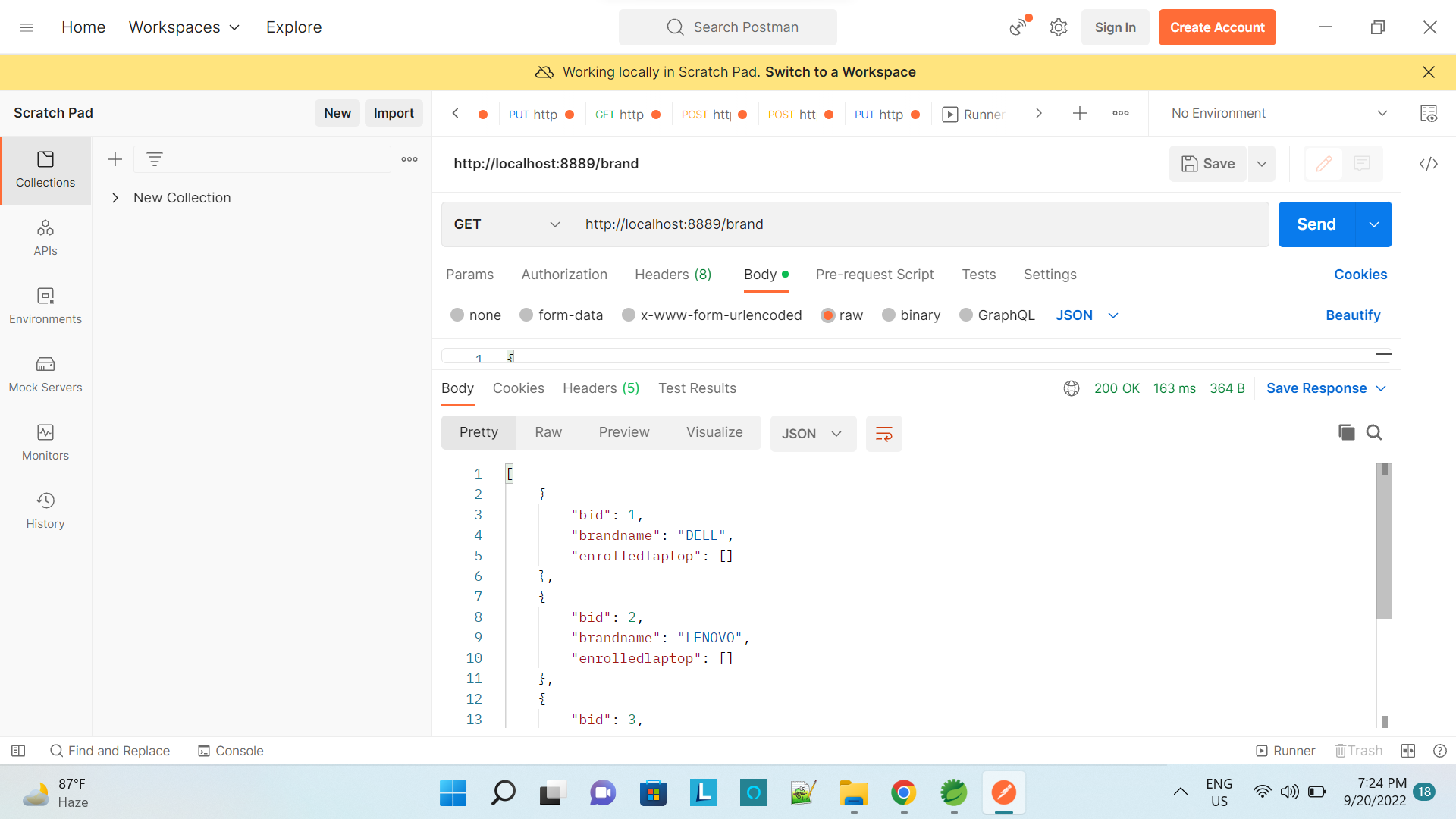
* **Service - Components are the class file which contains @Service annotation. These class files are used to write business logic in a different layer.**
* **Repository - Repository is a specialization of @Component annotation which is used to indicate that the class provides the mechanism for storage, retrieval, update, delete and search operation on objects.**
* **Repository is directly connected with the database and then it can return to the repository and response to the service and it can return to the controller and then response send to the client.**

Snapshots

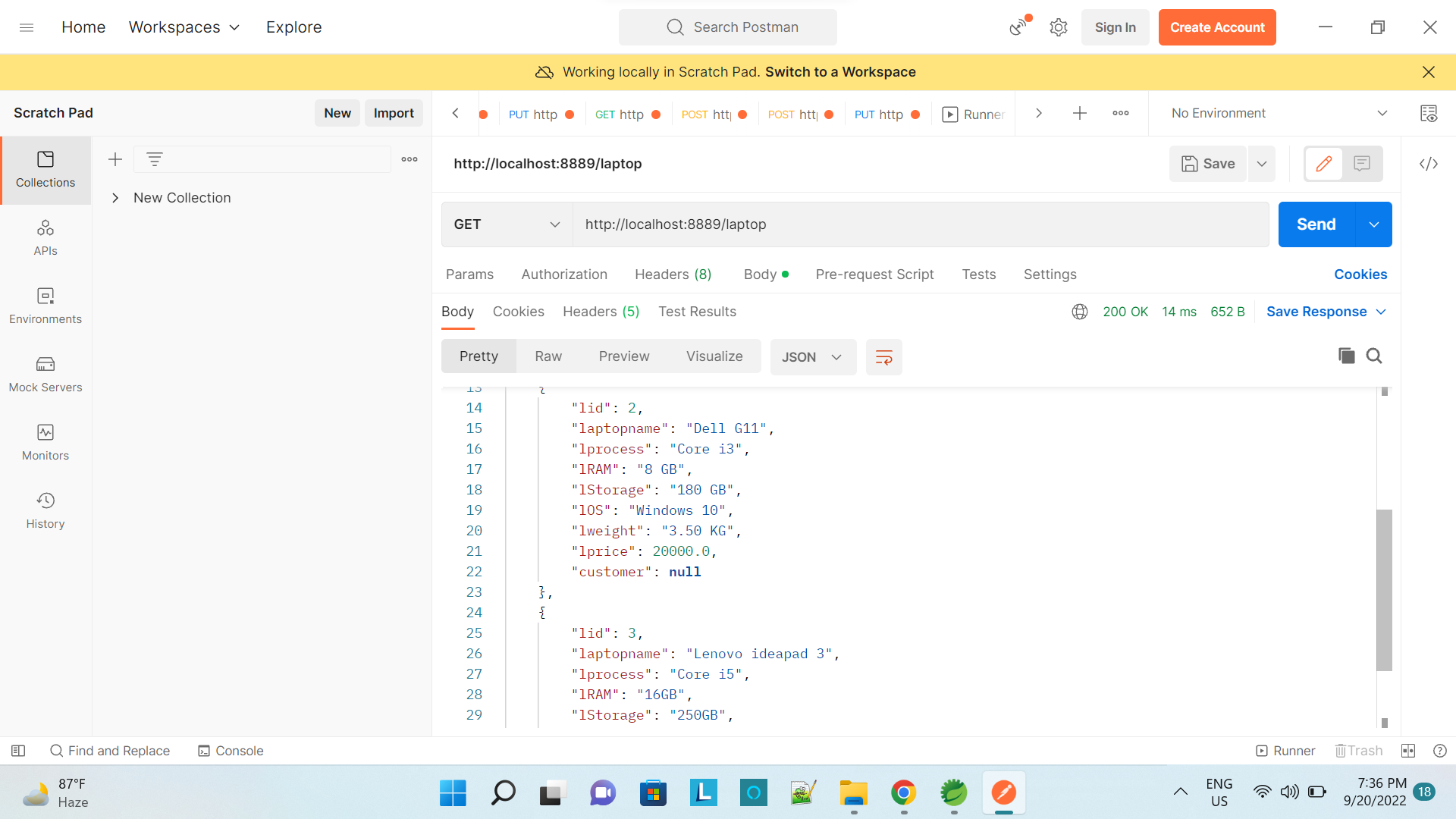
1. **LOG IN PAGE**



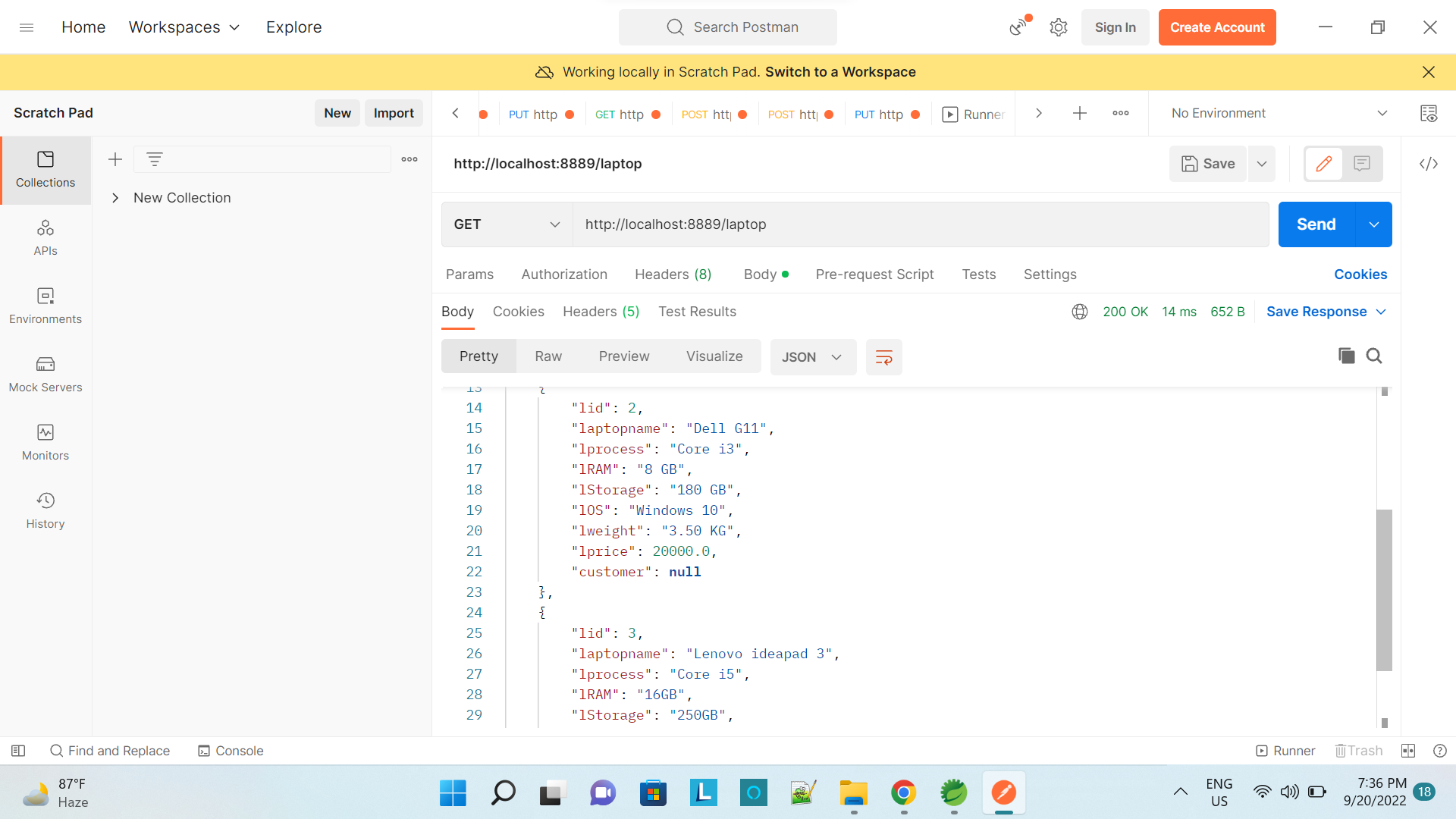
1. **Get All Brands: /brand**



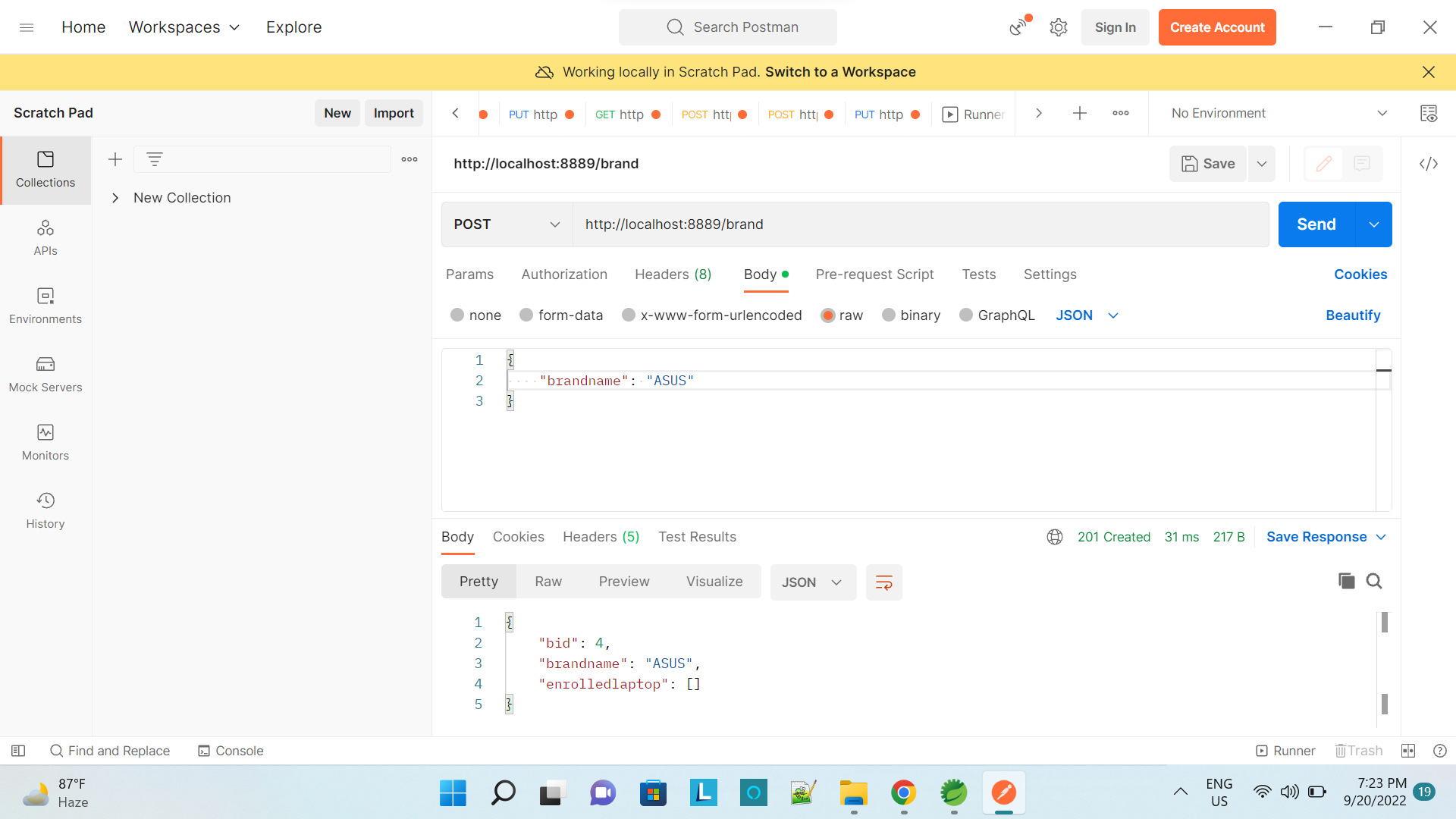
1. **Get All Laptops:/laptop**



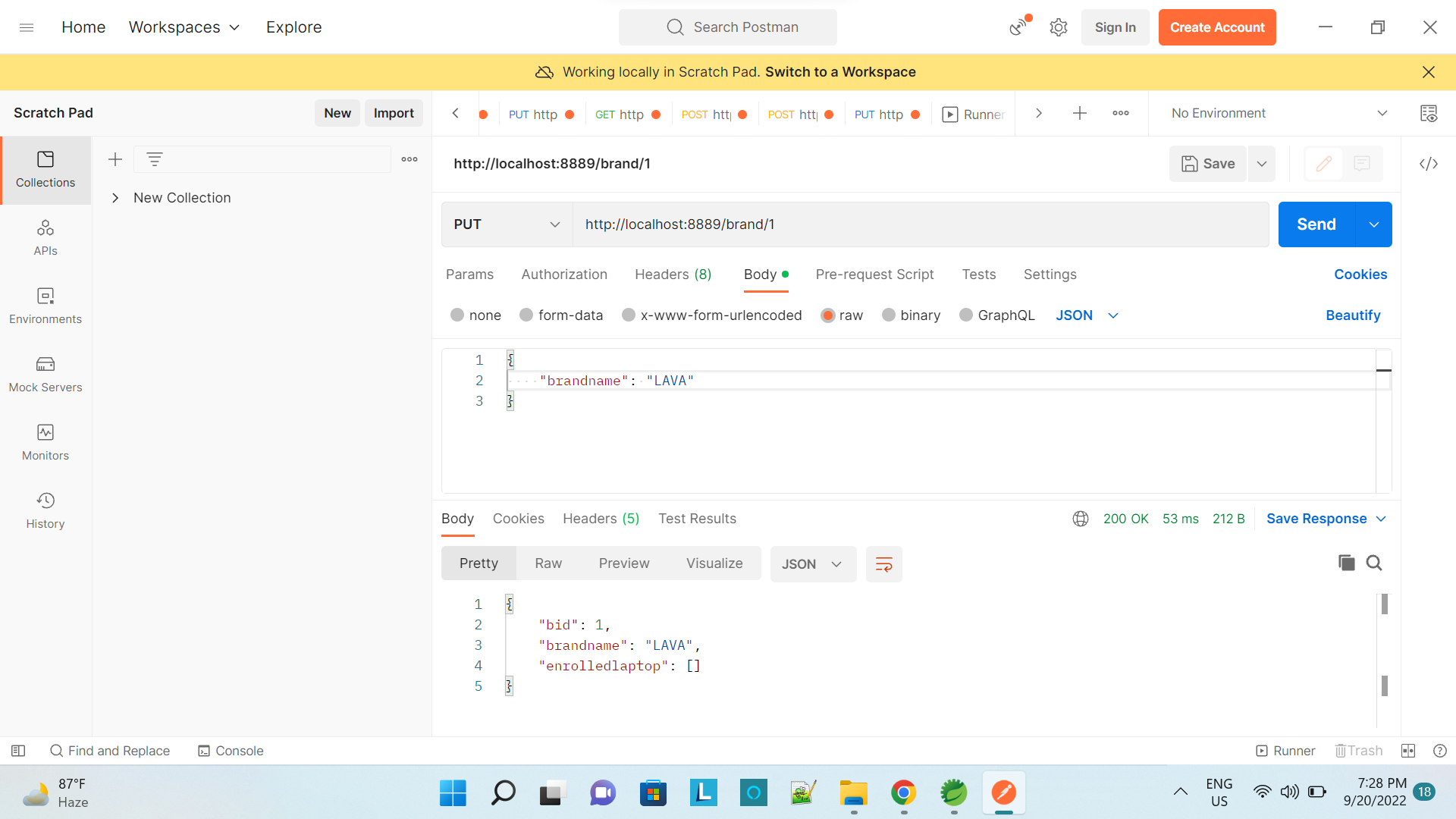
1. **Get All Customers:/customer**



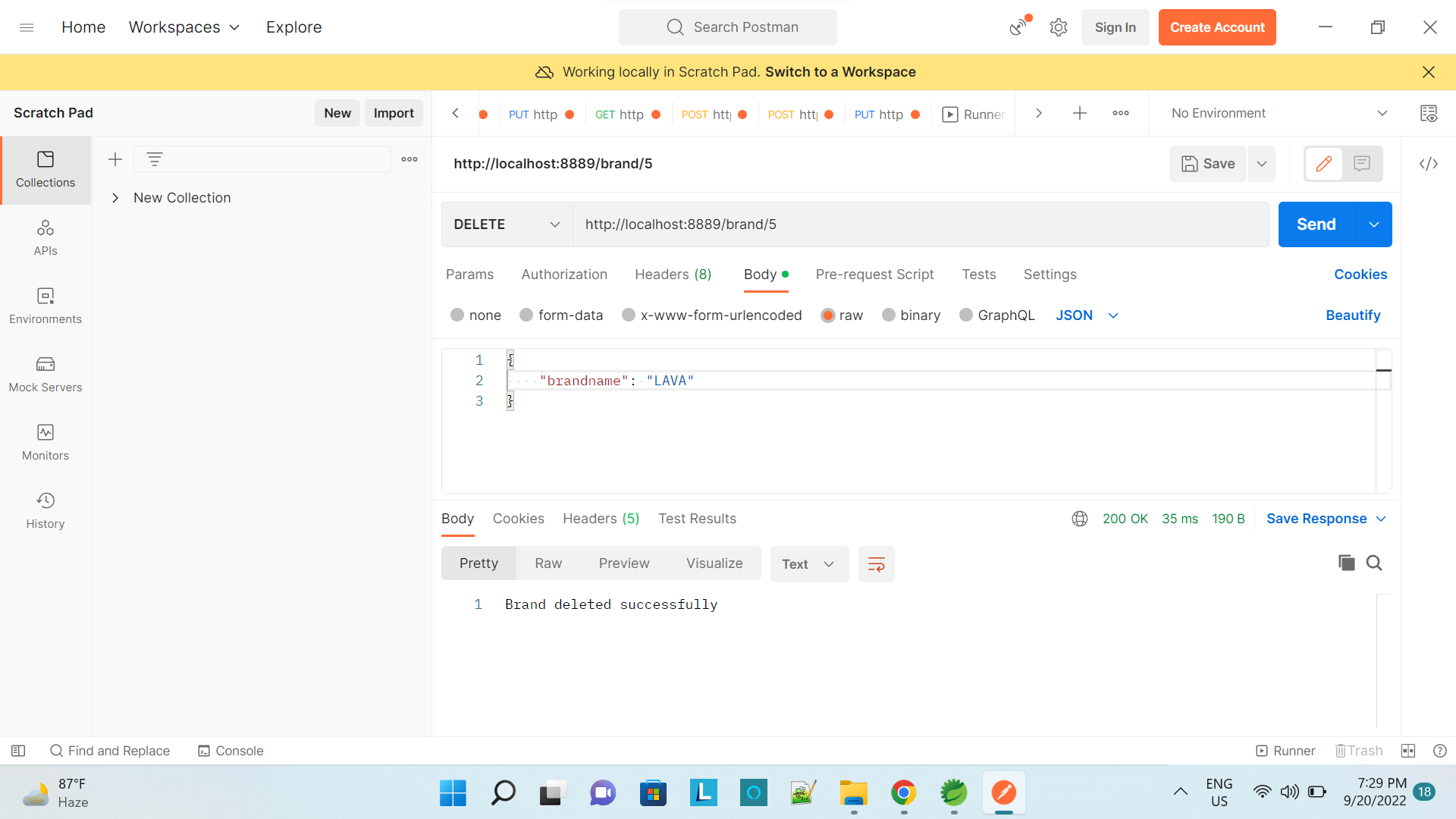
1. **Add Brand: /brand**



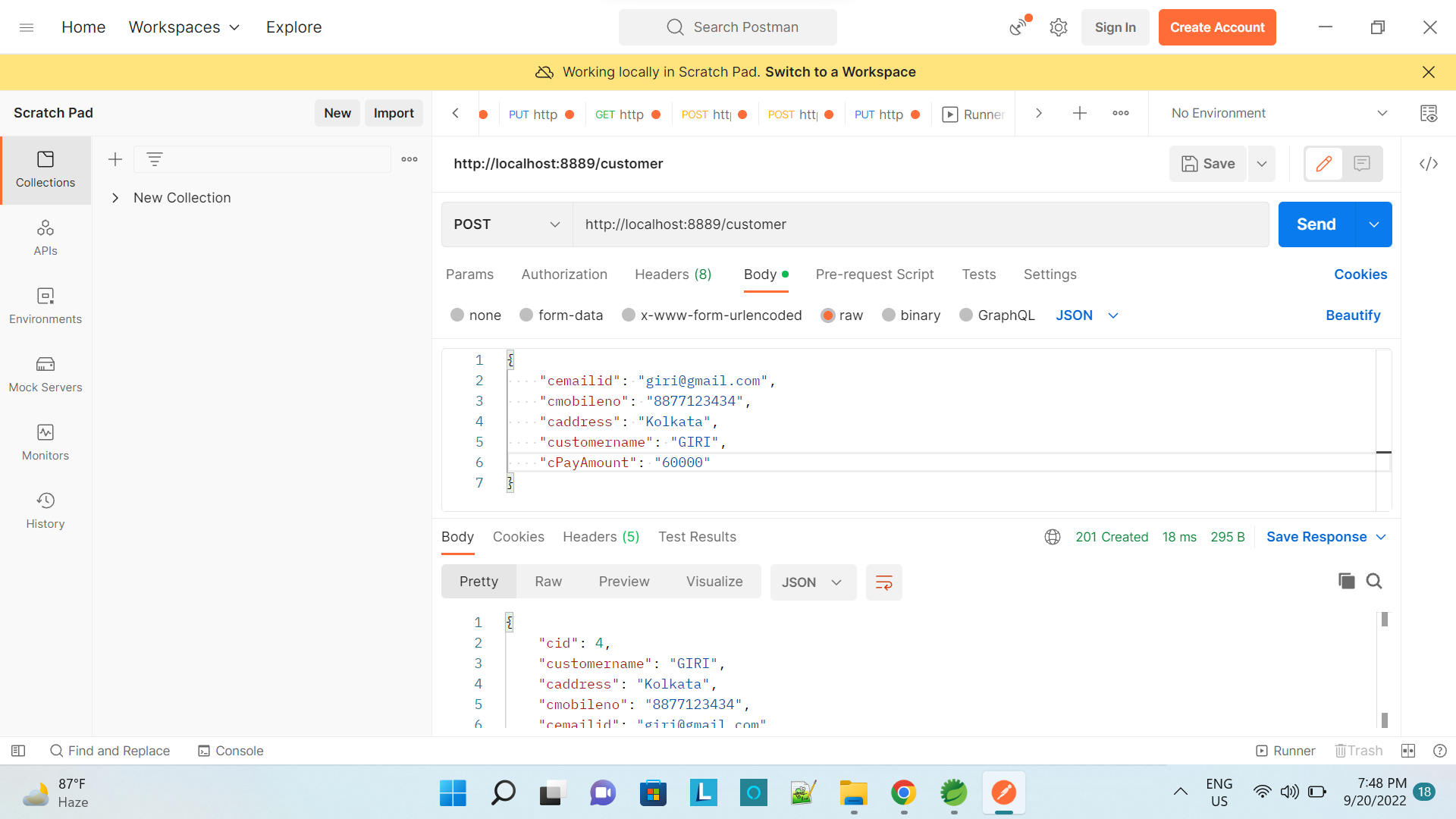
1. **Update Brand: /brand/{bid}**



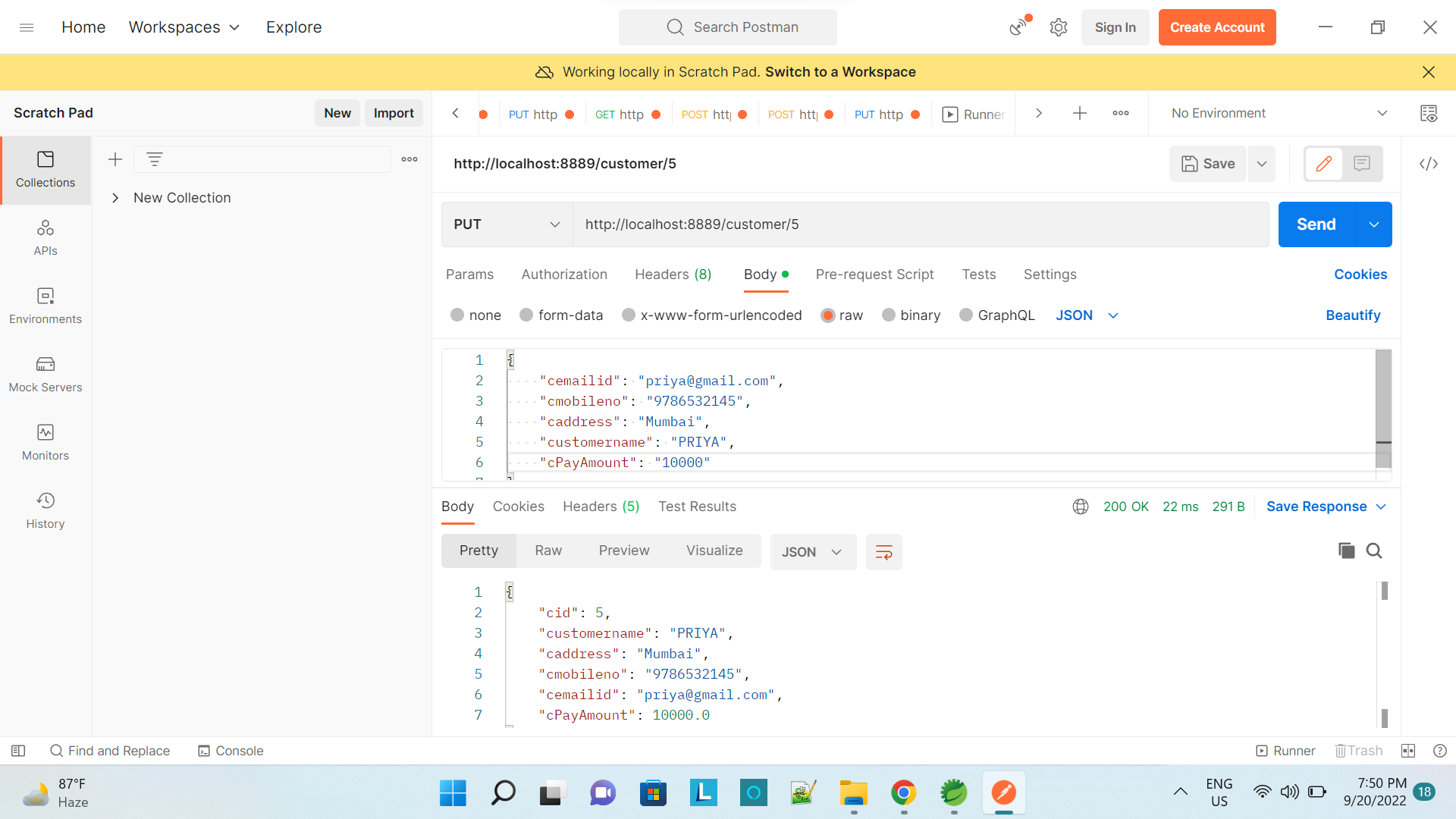
1. **Delete Brand :/brand/{bid}**



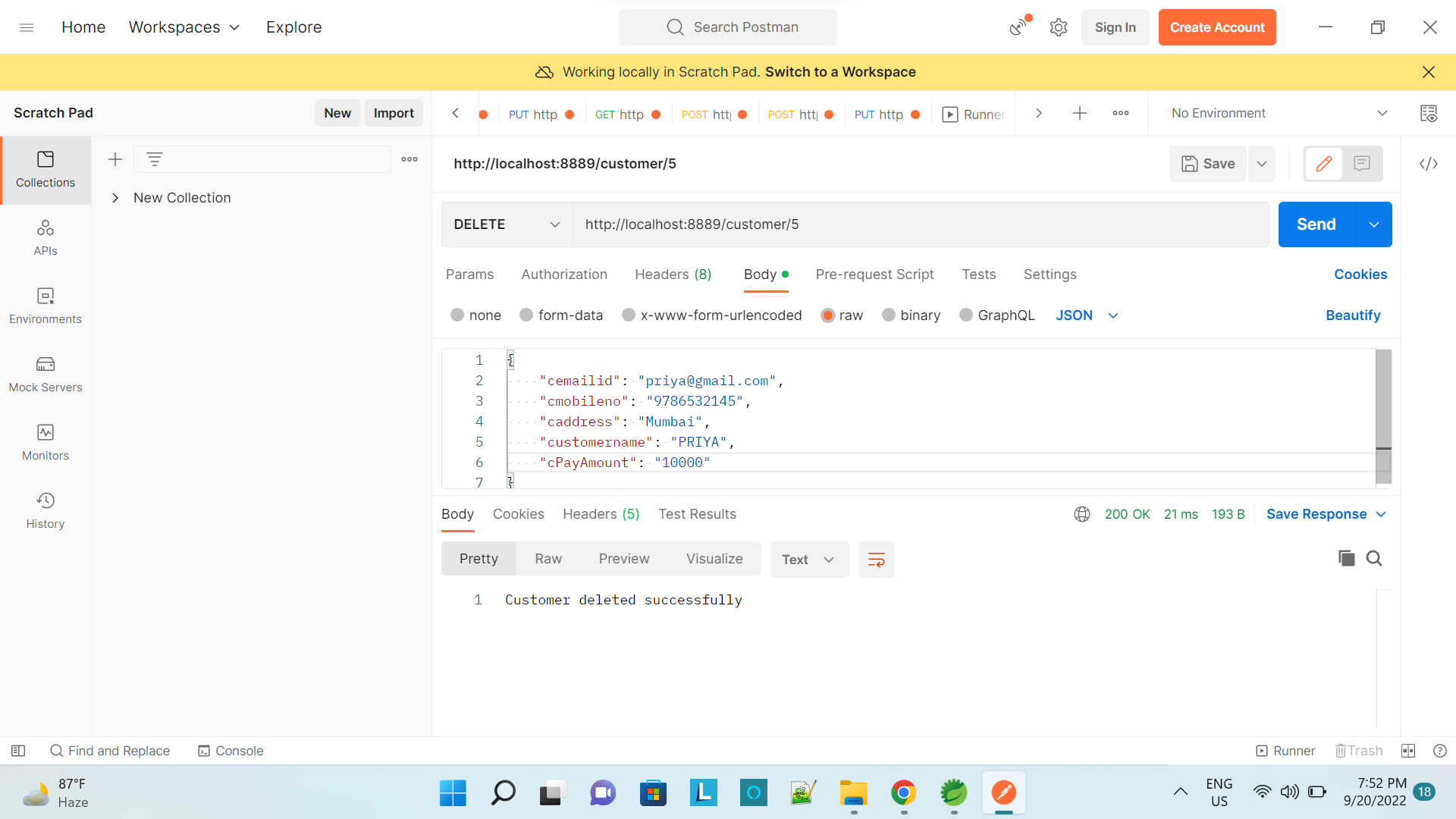
1. **Add Customer :/customer**



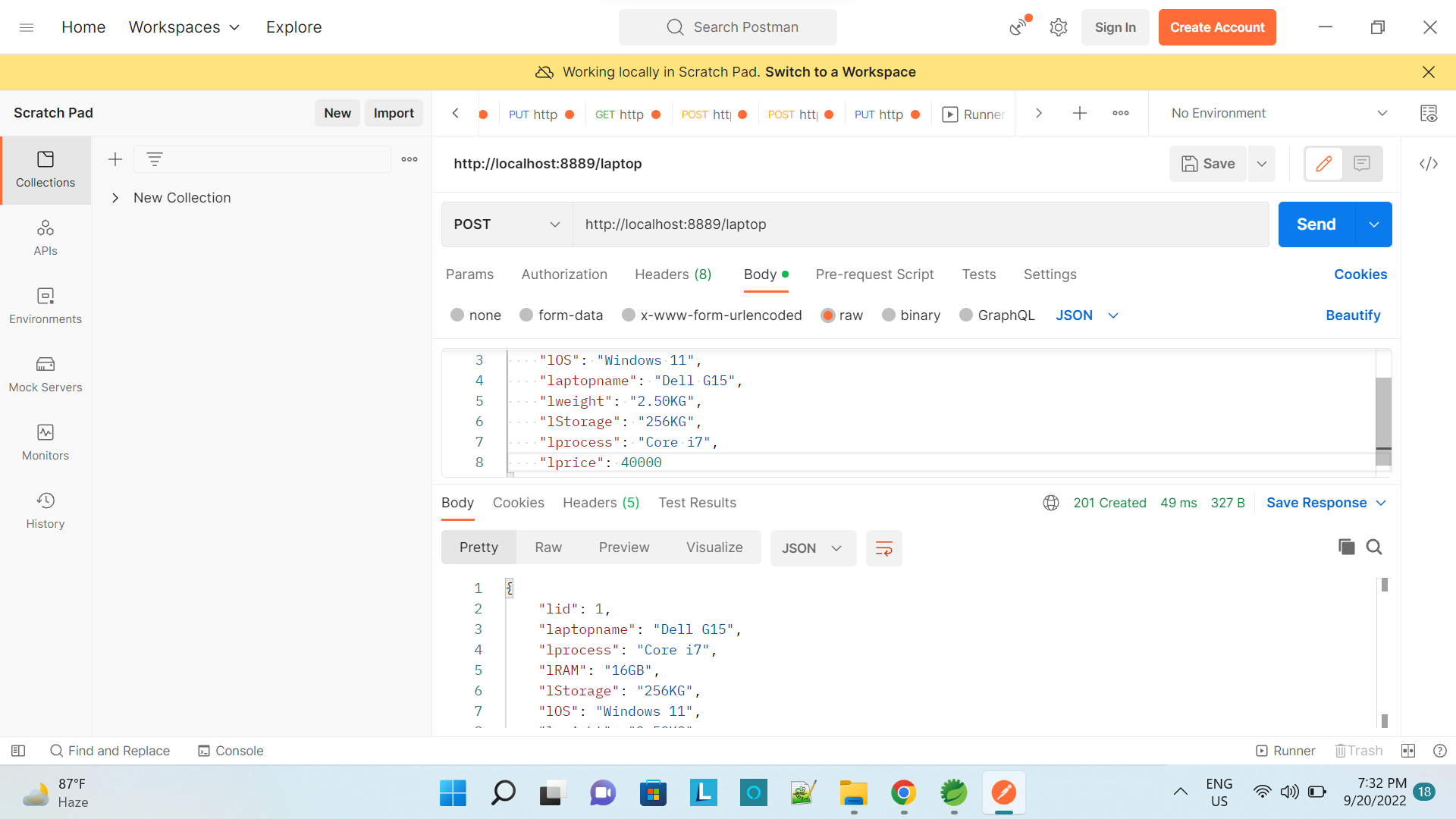
1. **Update Customer: customer/{cid}**



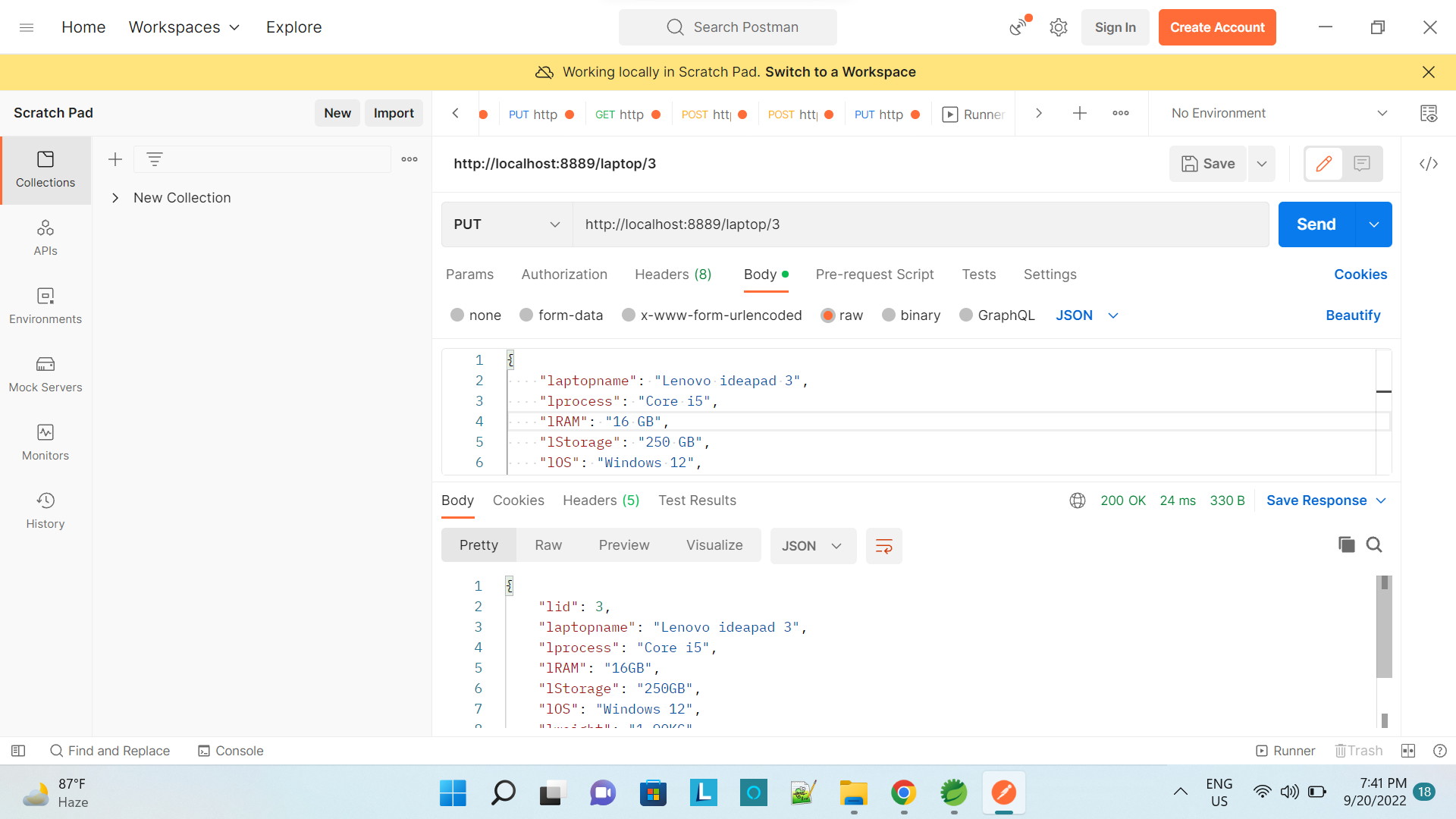
1. **Delete Customer: /customer/{cid}**



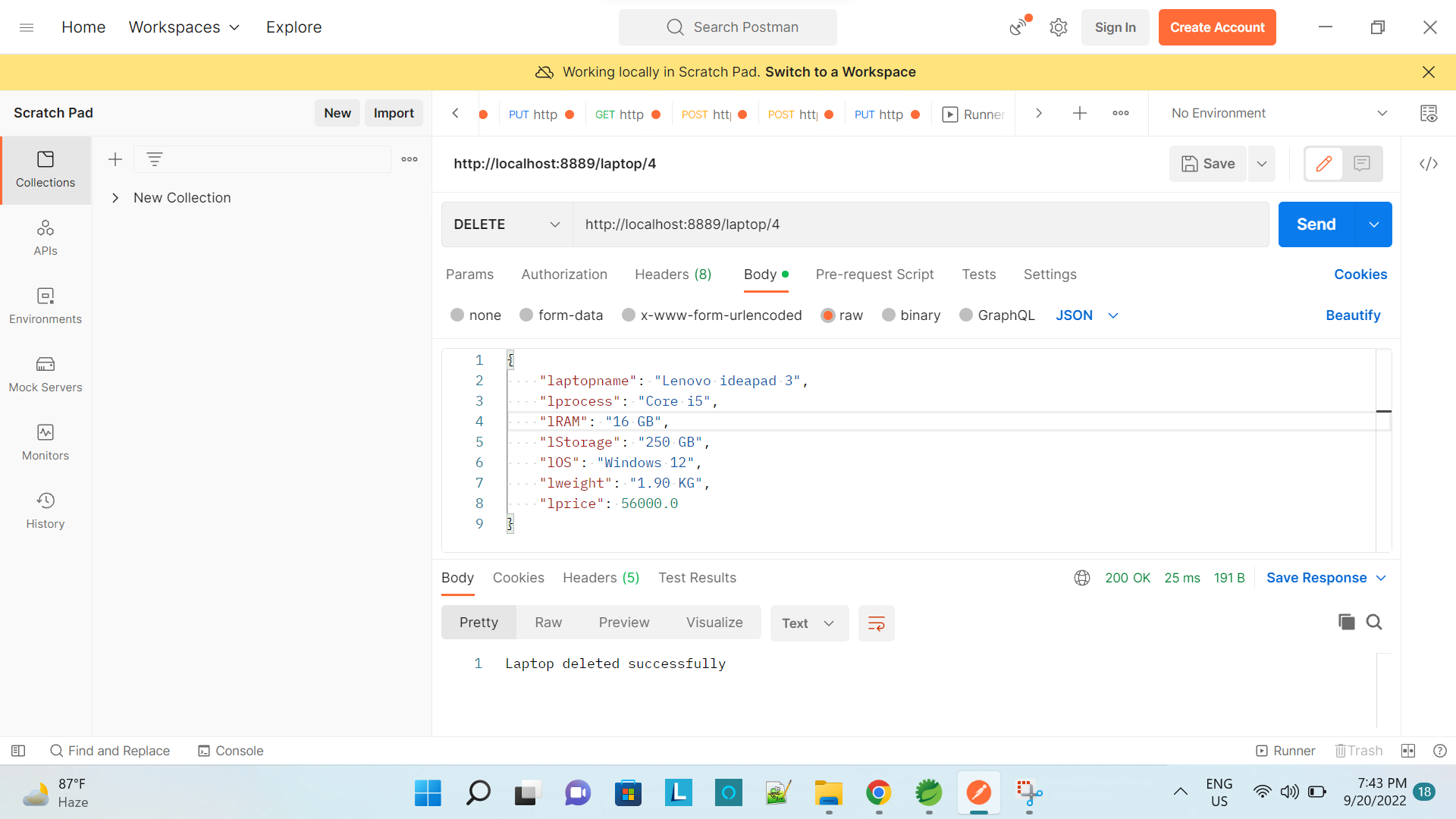
1. **Add Laptop :/laptop**



1. **Update Laptop: /laptop/{lid}**



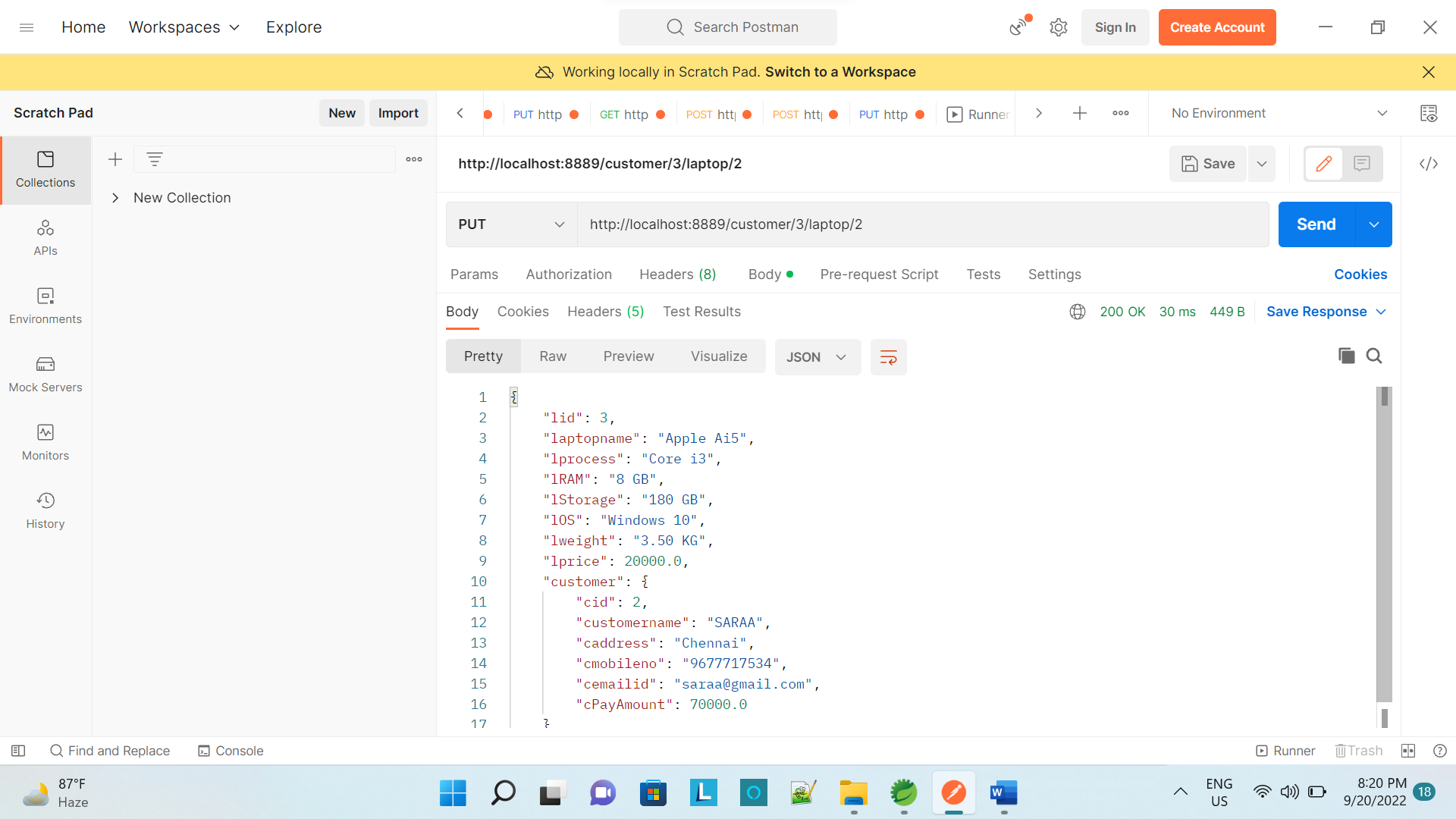
1. **Delete Laptop: /laptop/{lid}**



1. **Add Brand to Laptop :/brand/{bid}/laptop/{lid}**



1. **Add Laptop to Customer: /customer/{cid}/laptop/{lid}**



1. **Get All Recodes :/brand**

# 

1. **Find by laptop name: /laptopname/{lname}**

# 

1. **Find by brand name: /brandname/{bname}**

# 

1. **Find by customer name: /customername/{cname}**

# 

1. **Find by customer id: /customer/{cid}**

# 

1. **Find by laptop id: /laptop/{lid}**

# 

1. **Ge Find by brand id: /brandid/{bid}**

# 

1. **Get Customer Total Amount :/customertotalpayamount**

# 

1. **Get Laptop Total Amount :/laptoptotalprice**

# 

1. **Get Total Profit And Loss :/profitandloss**

# 

# Advantages And Disadvantages

* Advantages:
  + **Duplication of the Laptops data is avoided.**
  + **As laptop id is already stored in the master therefore human mistakes can be avoided Timely alerts ensure that penalties are avoided.**

# Conclusion

* **Effectiveness, efficiency, and reliability are the key aspects that make this web-based Laptop shop management system very useful for industrial and several other businesses.**
* **The proposed project is very flexible to handle new modules and features as per user requirements in future.**