

**SINGAPORE
POLYTECHNIC**

SP

School of Computing

DIPLOMA IN INFORMATION TECHNOLOGY

Assignment: CA1

Class: DIT/FT/3A/89

Lecturer: Mr. Ji Peng Xiang

By:

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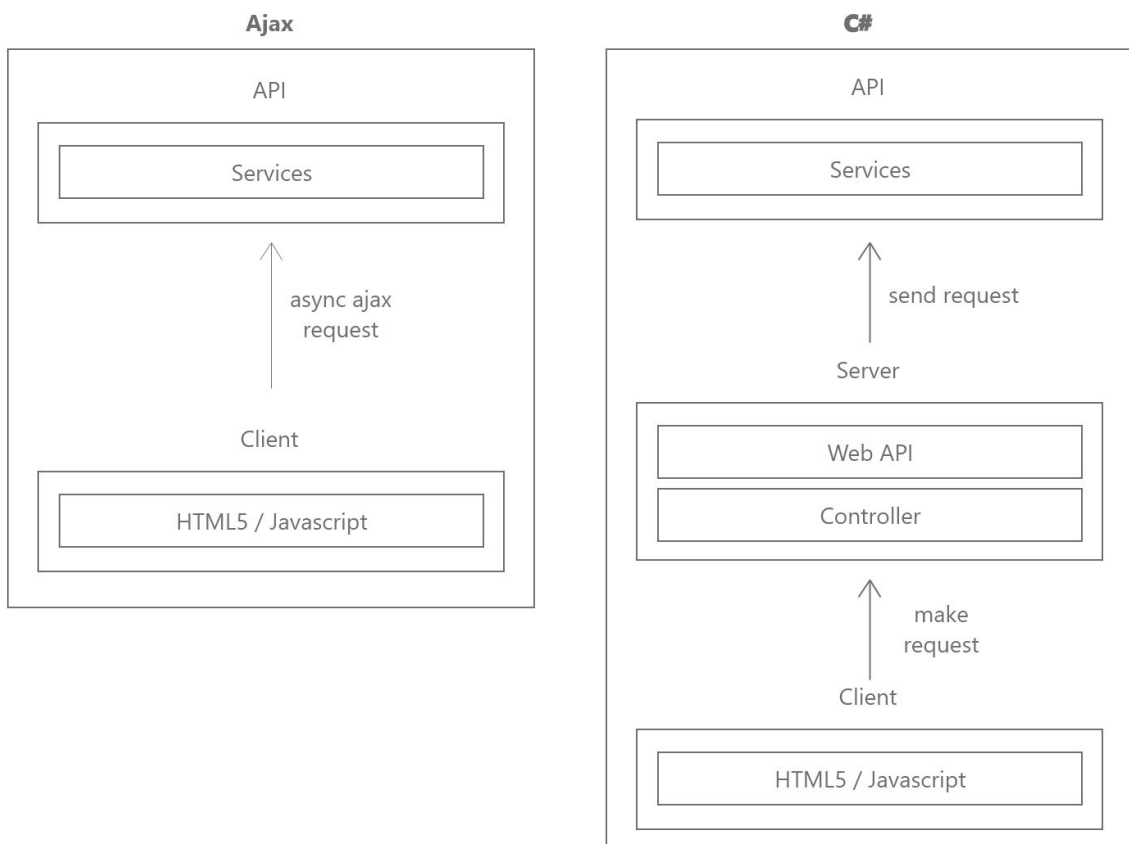
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Task 1

Practical 1 Part D

Diagram



Task 2

Practical 2 Part 2

API Documentation

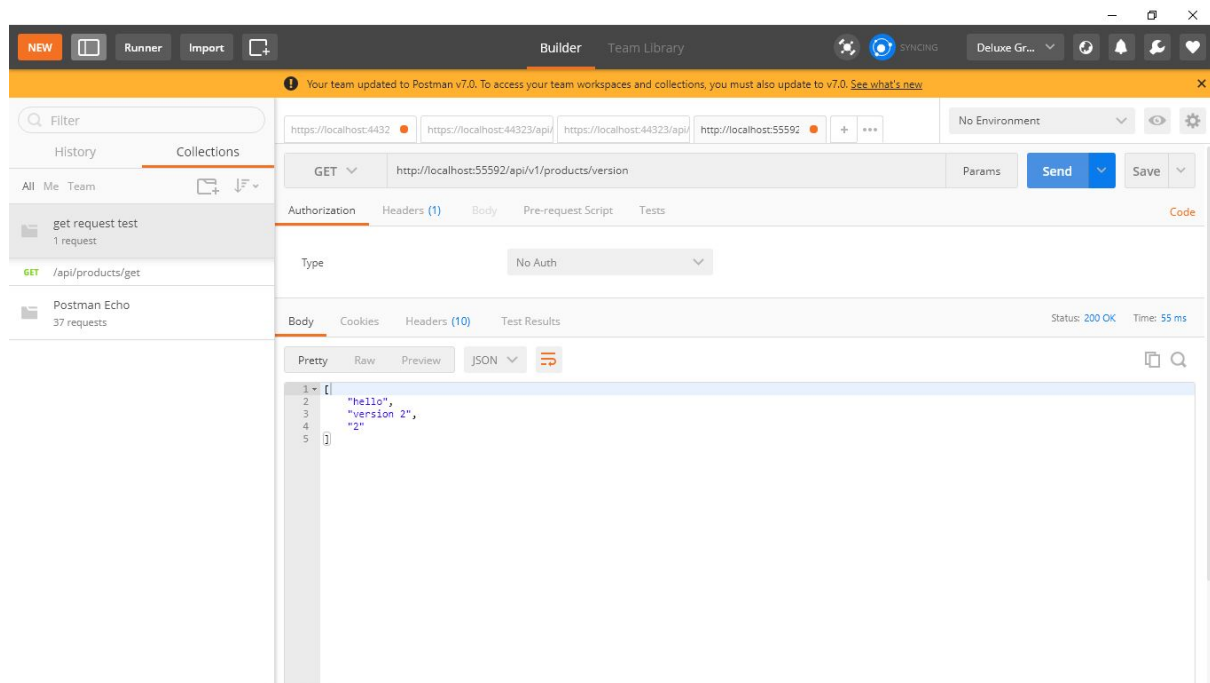
1. ProductsV1
 - a. Get Version
 - i. Returns the current API version
 - ii. Method: GET
 - iii. URL: `api/v1/products/version`
 - b. Get Multiple Names
 - i. Returns 3 names that were included in the query parameters
 - ii. Method: GET
 - iii. URL:
`api/v1/products/message?message1=message&message2=message
&message3=message`
 - iv. Params:
 1. string message1
 2. string message2
 3. string message3
 - c. Get All Products
 - i. Returns all products in the repository
 - ii. Method: GET
 - iii. URL: `api/v1/products`
 - d. Get Product
 - i. Returns a single product
 - ii. Method: GET
 - iii. URL: `api/v1/products/{id}`
 - iv. Params:
 1. Int id
 - a. Min value: 2
2. ProductsV2
 - a. Get Products by Category
 - i. Returns all products by category
 - ii. Method: GET
 - iii. URL: `api/v2/products?category=[category]`
 - iv. Params:
 1. string category
 - b. Add Product
 - i. Adds a product to the list
 - ii. Method: POST
 - iii. URL: `api/v2/products`
 - iv. Params:

1. Product product
- c. Edit Product
 - i. Updates an existing product in the list
 - ii. Method: PUT
 - iii. URL: api/v2/products
 - iv. Params:
 1. Product product
- d. Delete Product
 - i. Deletes a product from the product list
 - ii. Method: DELETE
 - iii. URL: api/v2/products/{id}
 - iv. Params:
 1. Int ID

Testing Screenshots

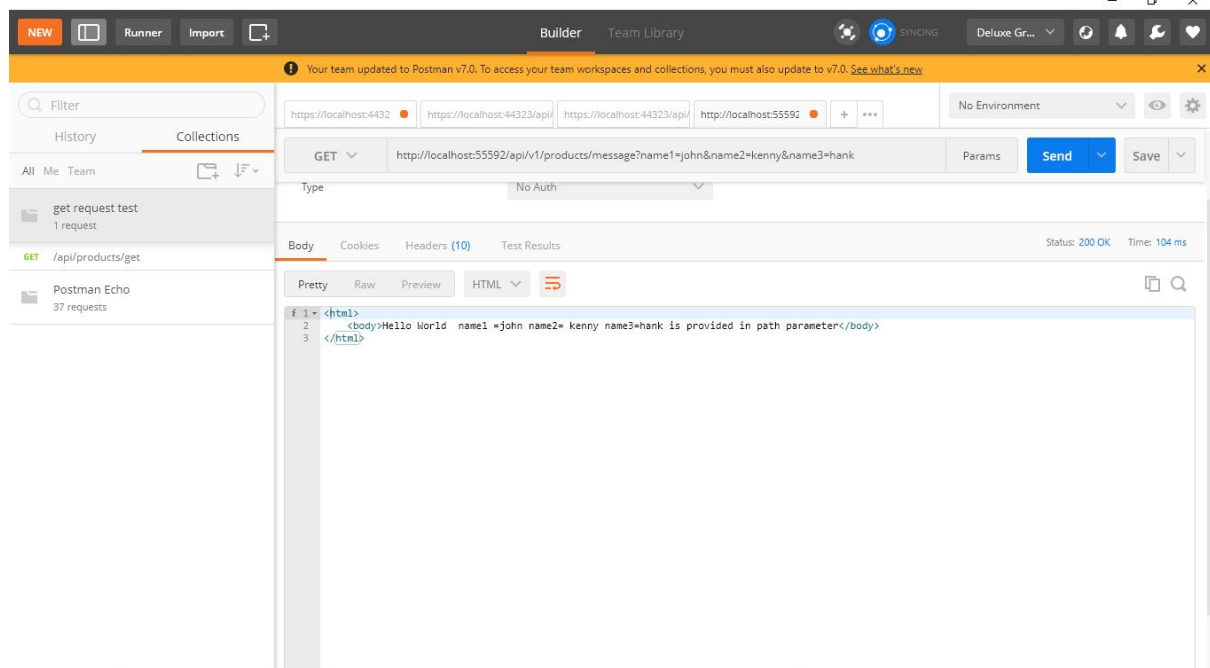
Get Version

Success

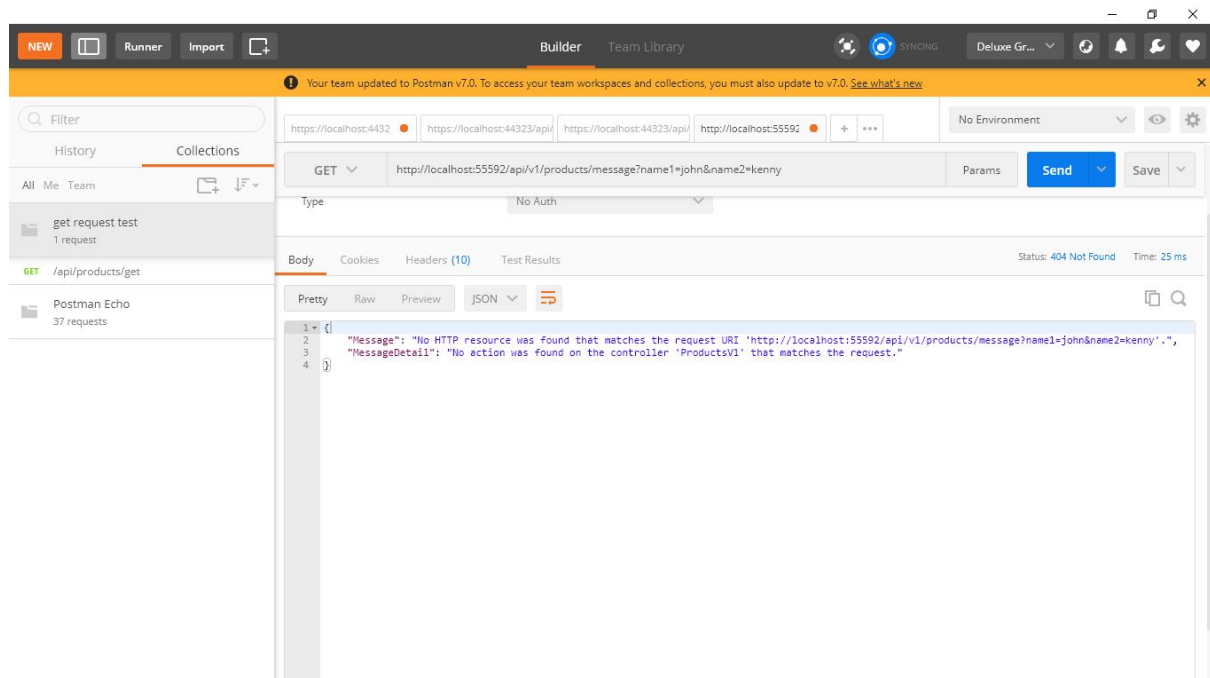


Get Multiple Names

Success:

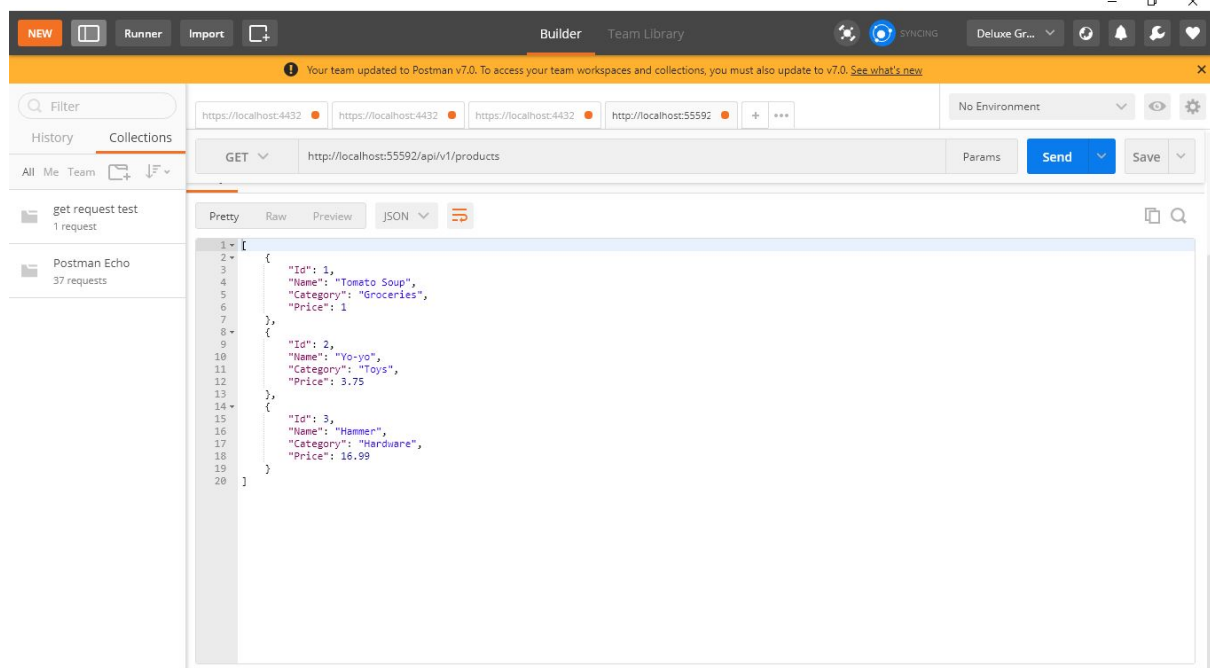


Missing parameters:



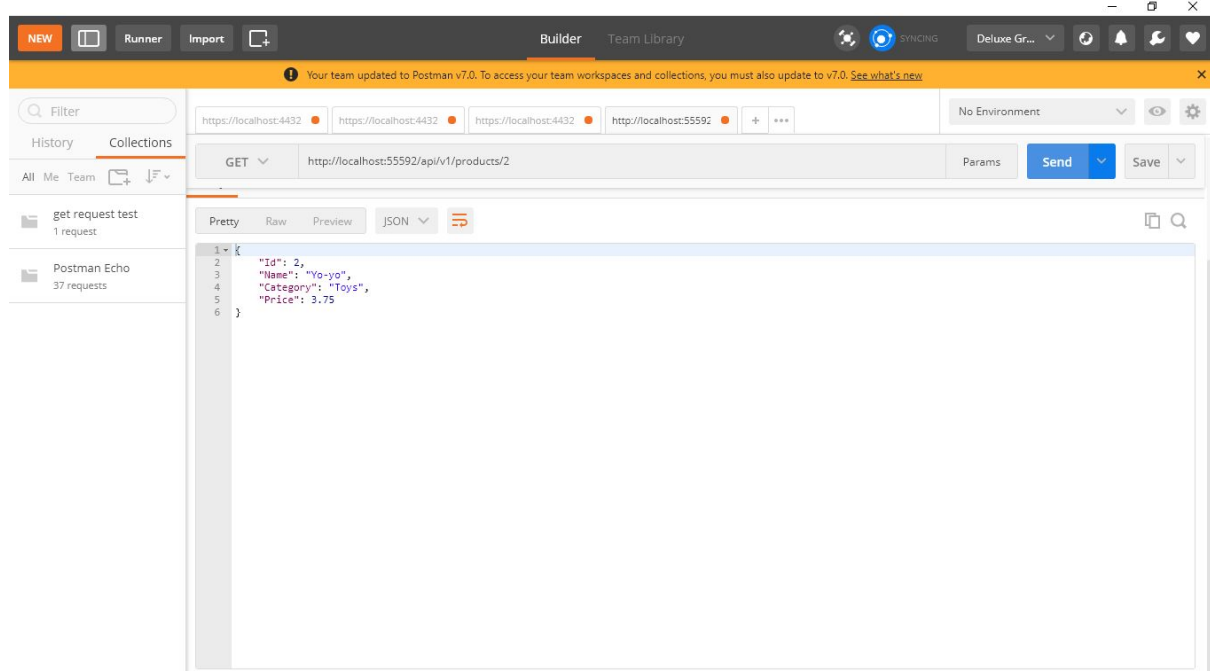
Get All Products

Success:

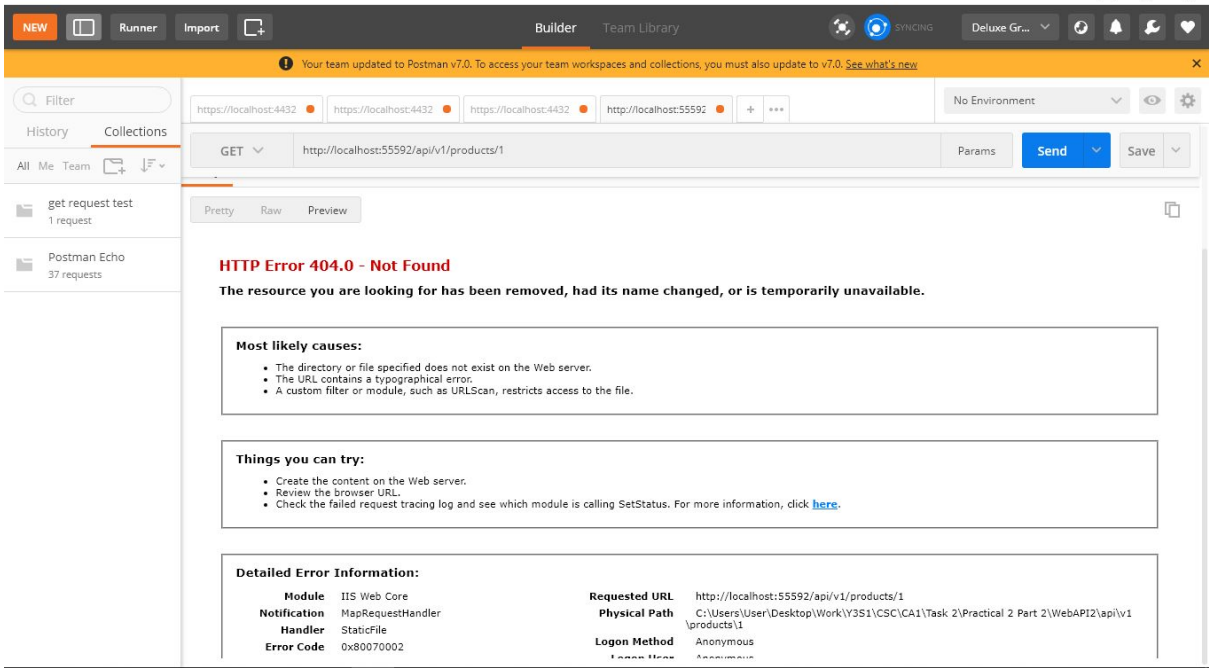


Get Product

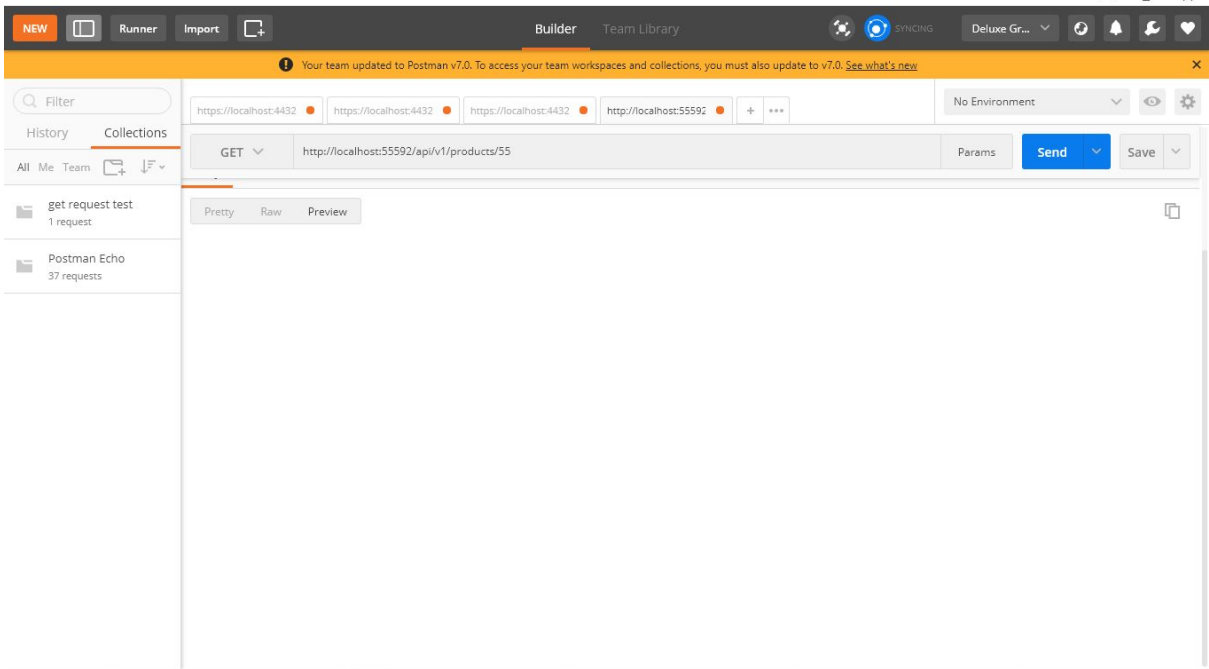
Success:



ID < 2

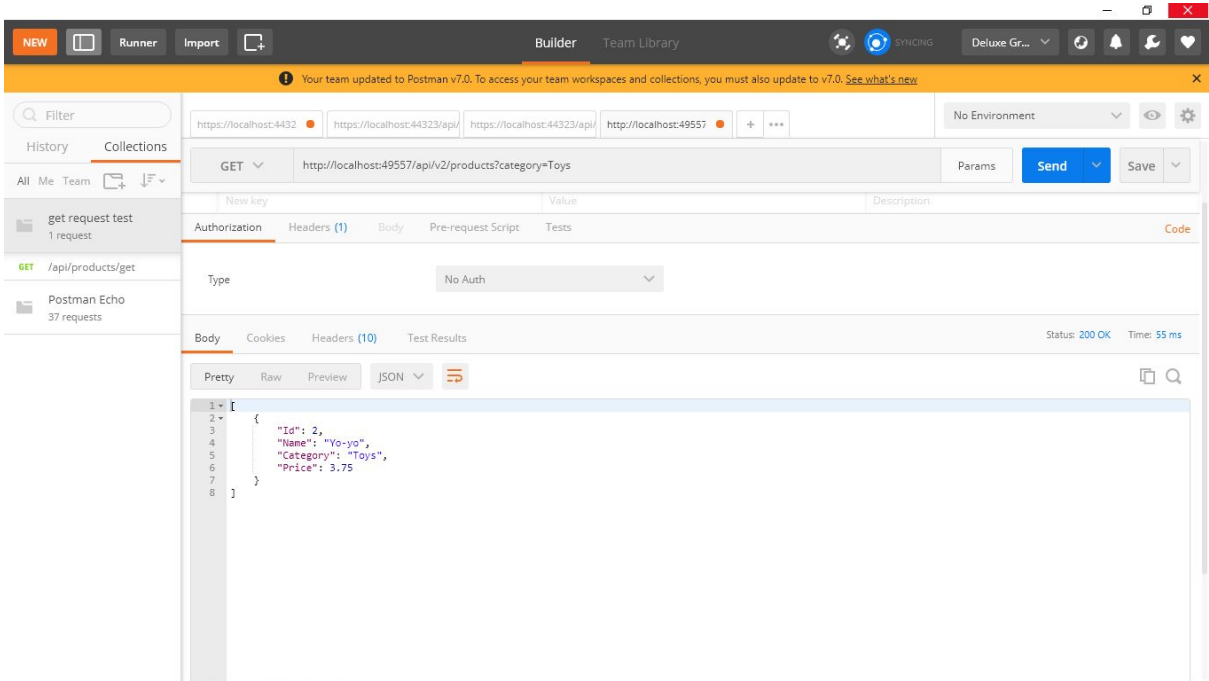


ID does not exist in list



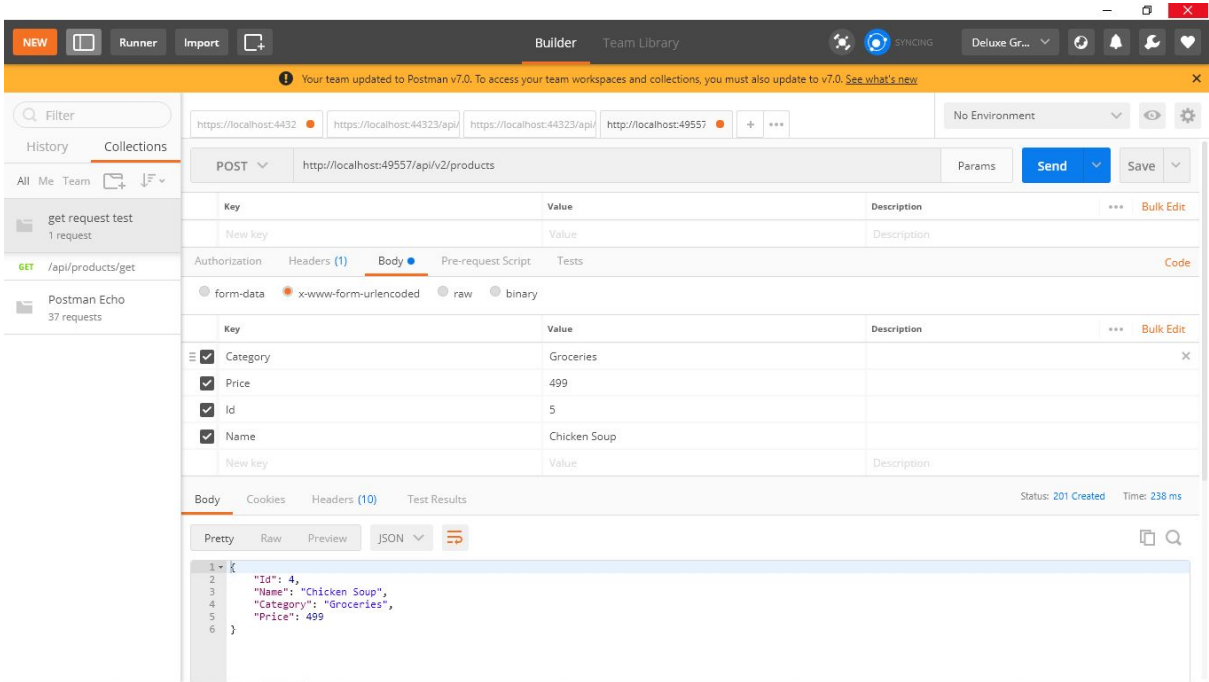
Get Products by Category

Success



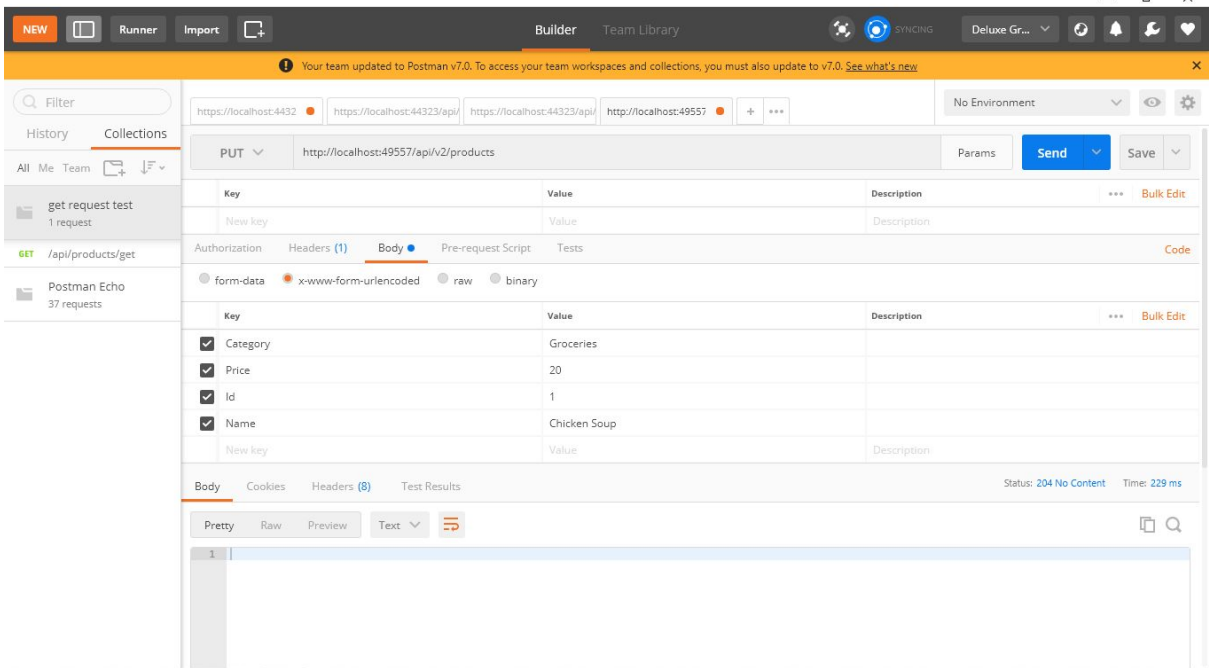
Add Product

Success:

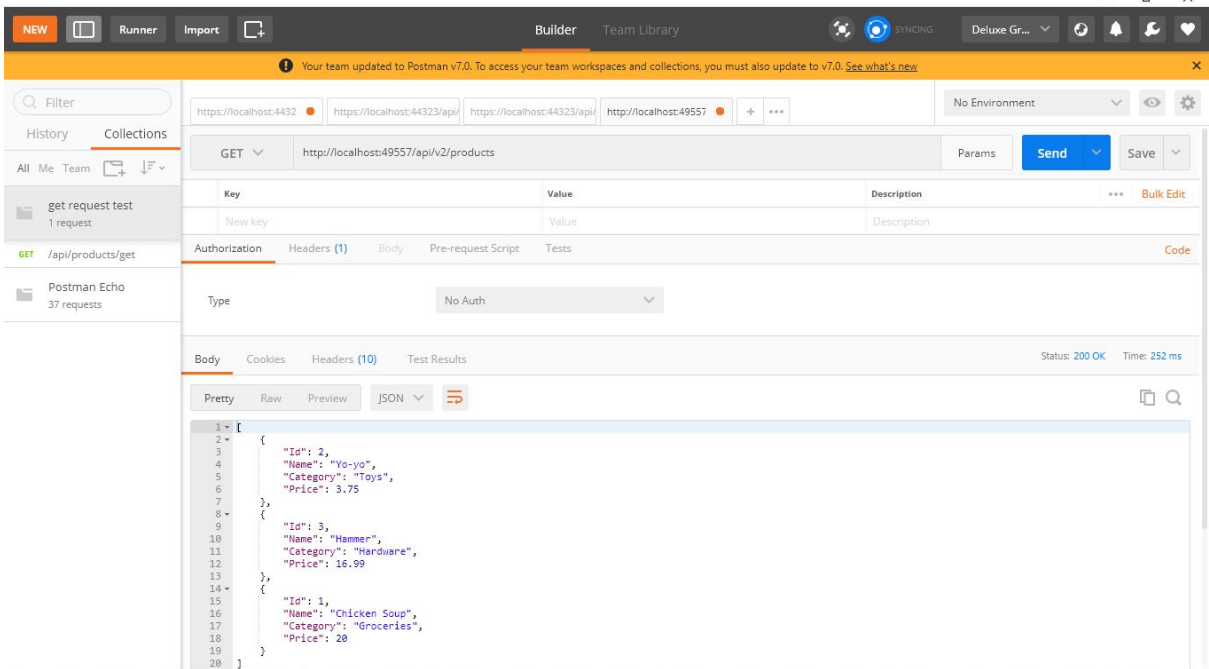


Edit Product

Success

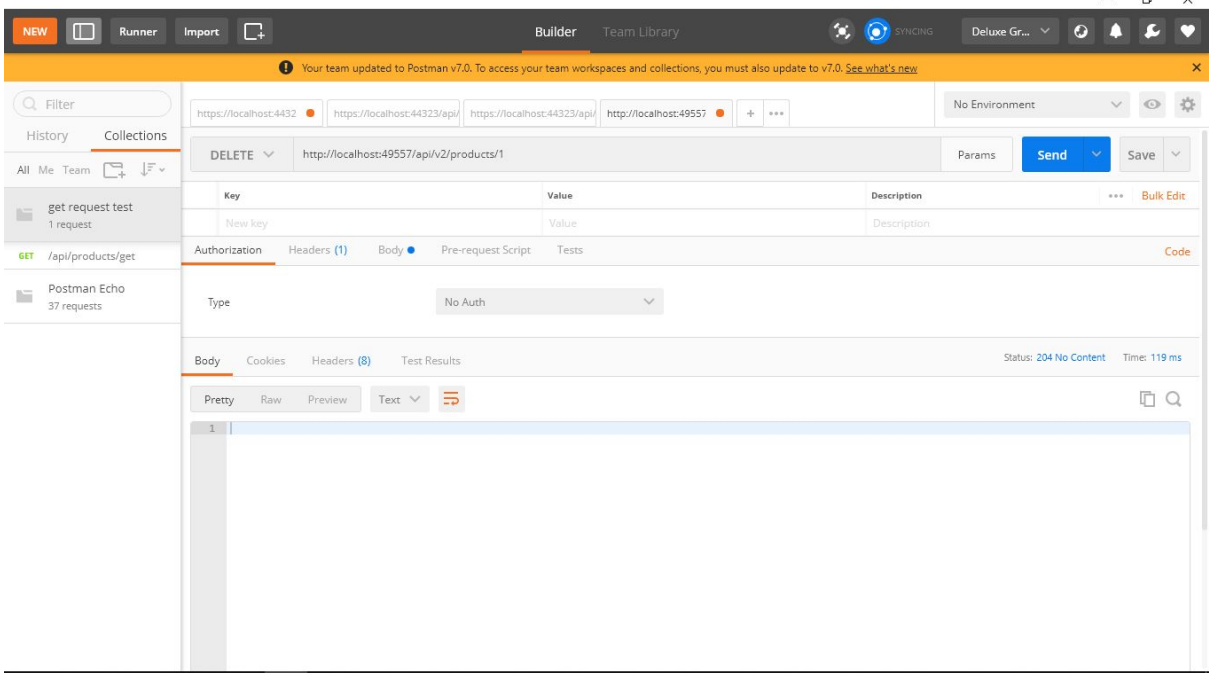


Get all products result

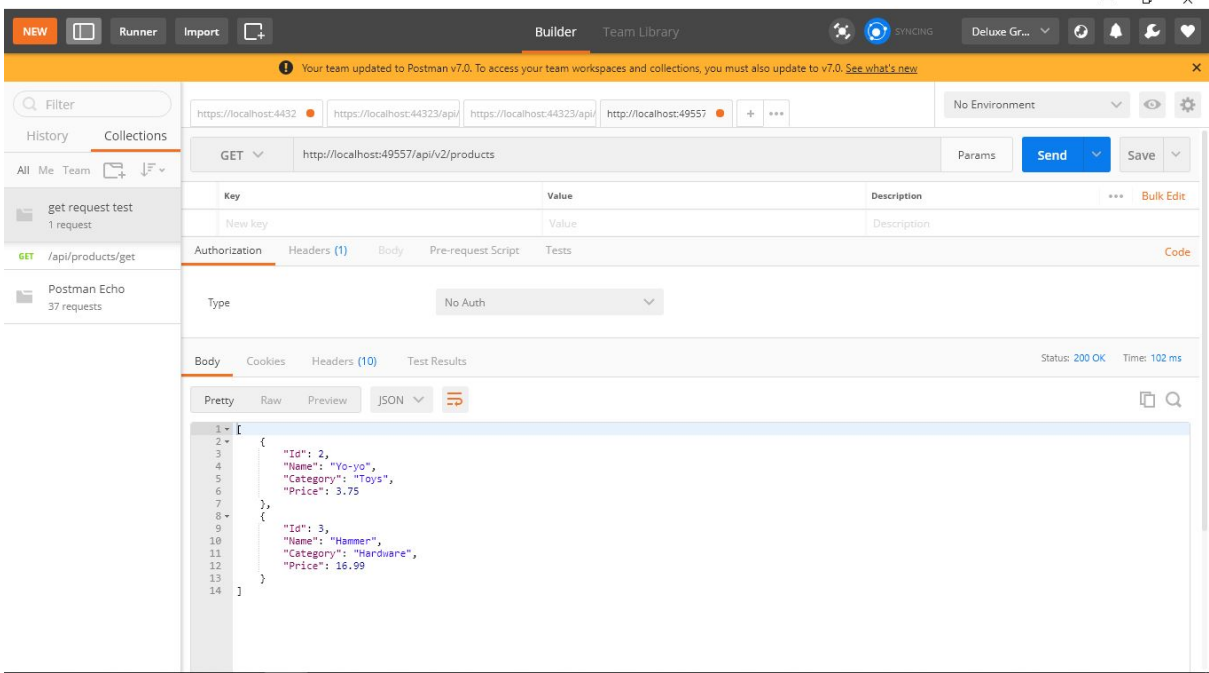


Delete Product

Success



Get all products result



Practical 3 Part 1

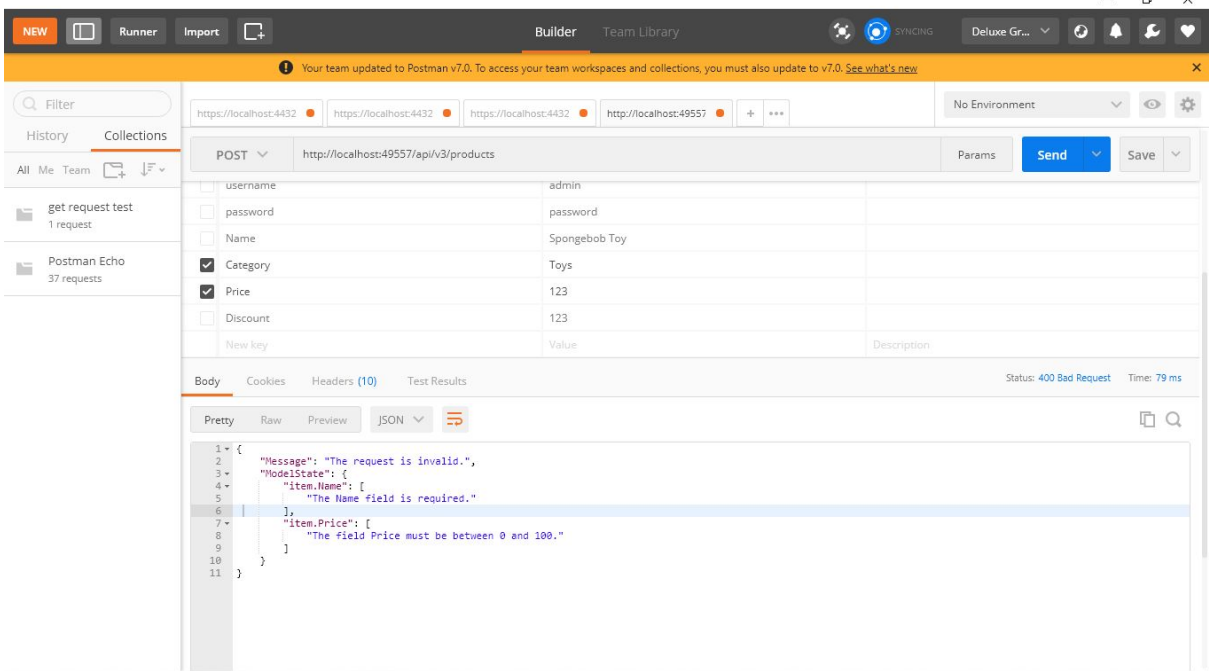
API Documentation

1. Get all Products
 - a. Returns all products
 - b. Method: GET
 - c. URL: api/v3/products
2. Get product
 - a. Returns a single product by ID
 - b. Method: GET
 - c. URL: api/v3/products/id
 - d. Params:
 - i. Int id
 1. Min value: 2
3. Get Products by Category
 - a. Returns products by category
 - b. Method: GET
 - c. URL: api/v3/products?category=[category]
 - d. Params:
 - i. String category
4. Add Product
 - a. Adds a product
 - b. Method: POST
 - c. URL: api/v3/products
 - d. Params:
 - i. Product product
5. Edit Product
 - a. Edits an existing product
 - b. Method: PUT
 - c. URL: api/v3/products
 - d. Params:
 - i. Product product
6. Delete Product
 - a. Deletes a product
 - b. Method: DELETE
 - c. URL: api/v3/products
 - d. Params:
 - i. Int id

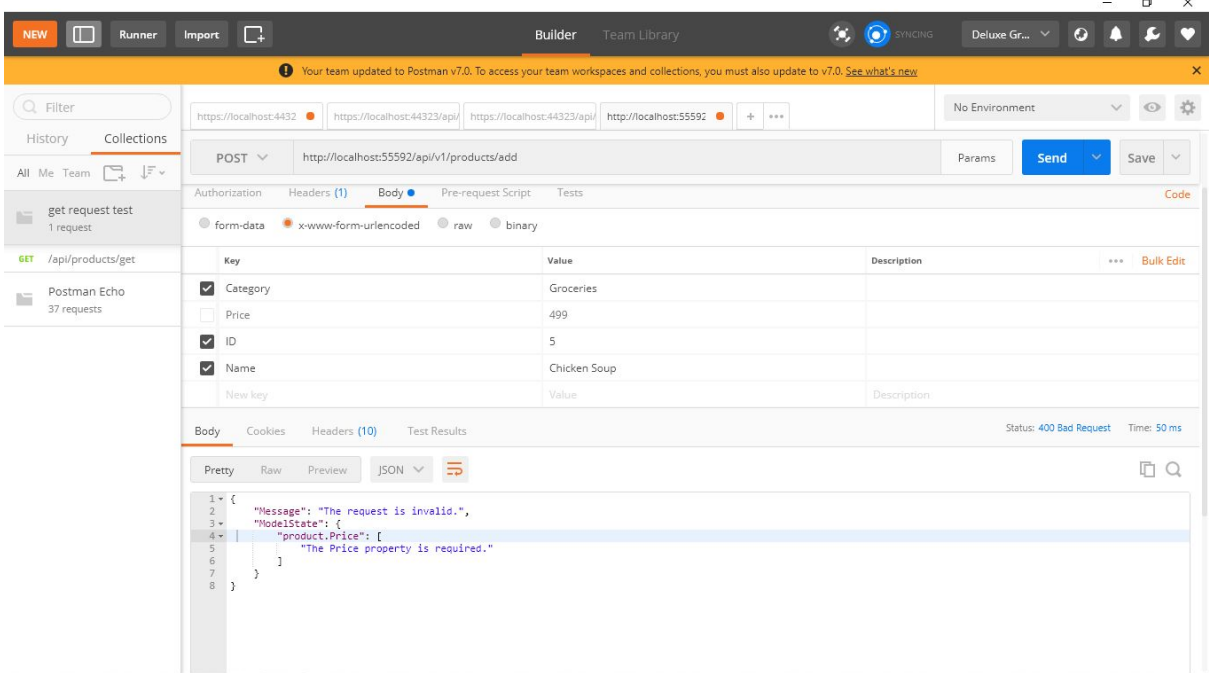
Postman Screenshots

Add Product

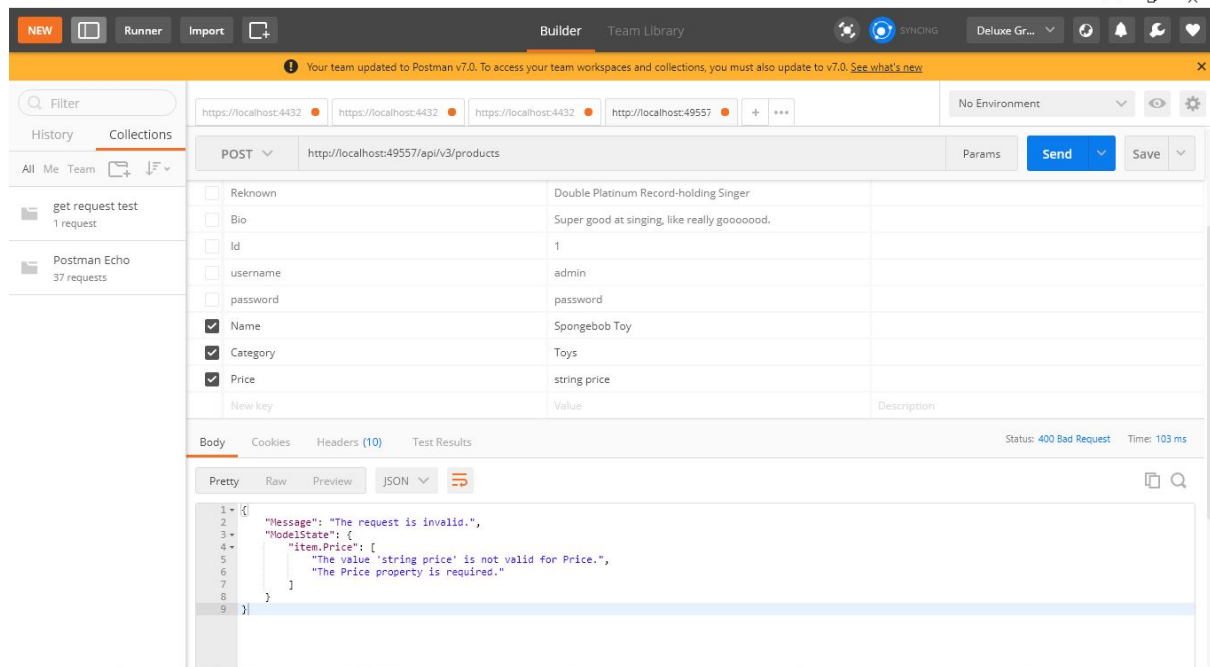
Name is null and price exceeds range



Price is missing



Price is not a number



Task 3

Web API Security Authentication & Authorisation with Bearer Token

API Documentation

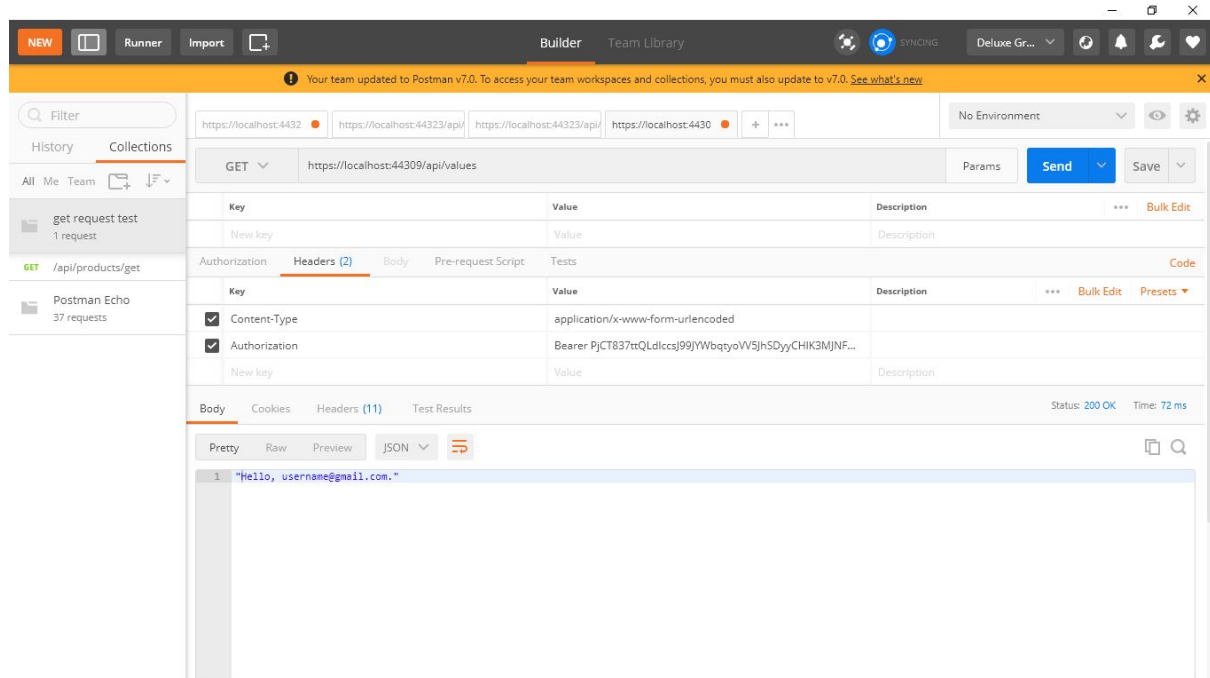
1. Get Values
 - a. Gets a string that greets the logged in user
 - b. Method: GET
 - c. URL: api/values
2. Login
 - a. Gets a token which will be used to authorize the user into using the API
 - b. Method: POST
 - c. URL: /Token
 - d. Params:
 - i. String grant_type (usually password)
 - ii. String username
 - iii. String password
3. Register
 - a. Registers an account
 - b. Method: POST

- c. URL: api/Account/Register
- d. Params
 - i. String email
 - 1. Must be of type email
 - ii. String password
 - iii. String confirmPassword
- 4. Logout
 - a. Logs out
 - b. Method: POST
 - c. URL: api/Account/Logout

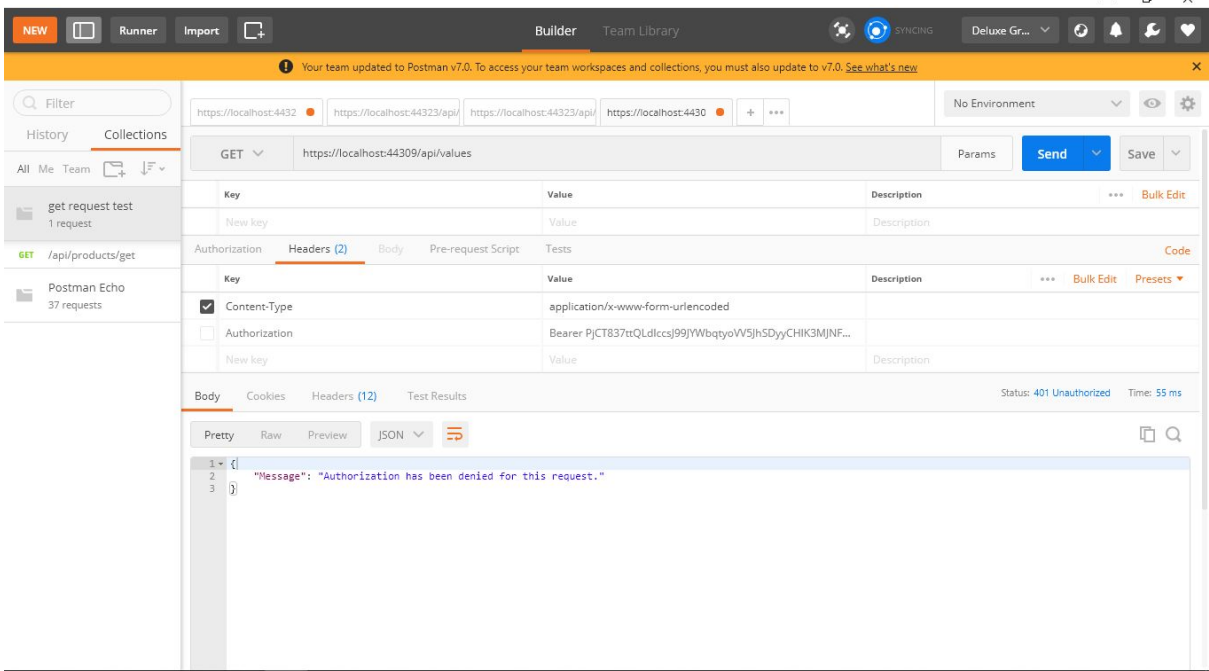
Testing Screenshots

Get Values

Success

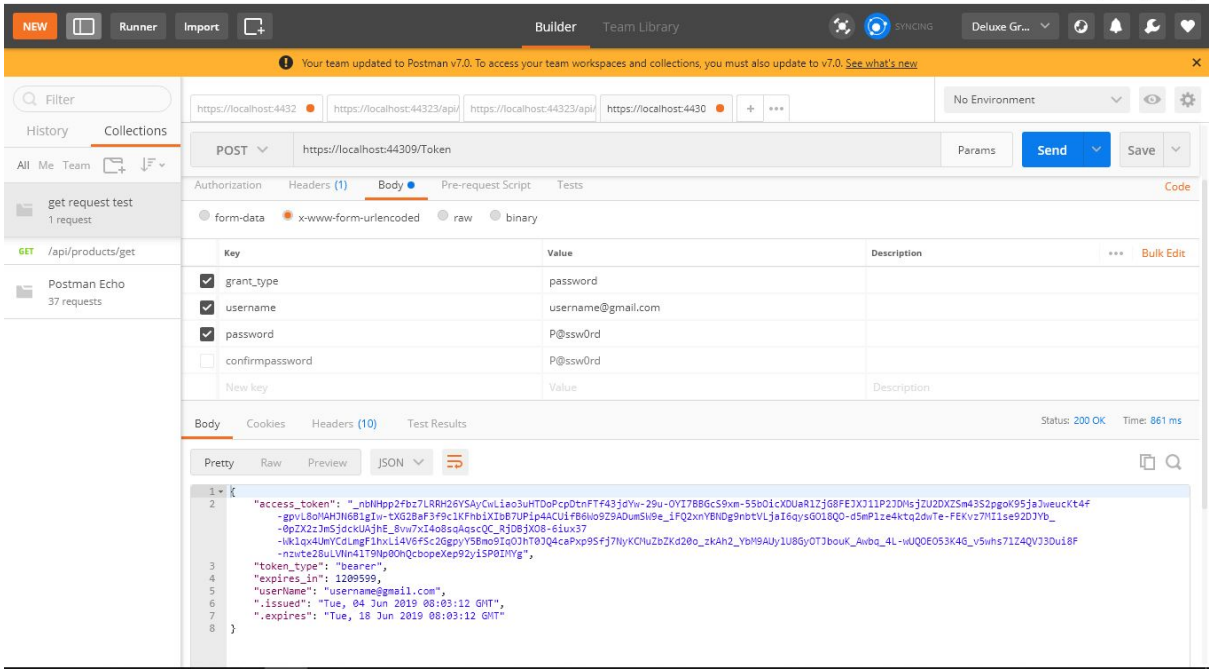


Unauthorized

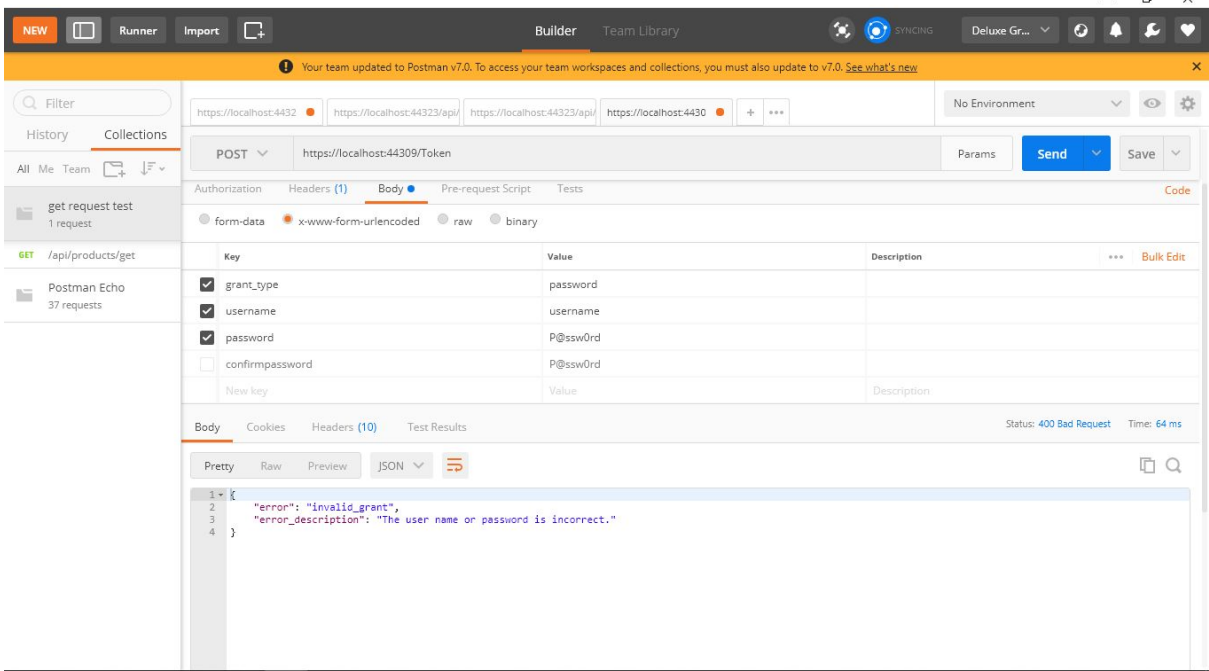


Login

Success

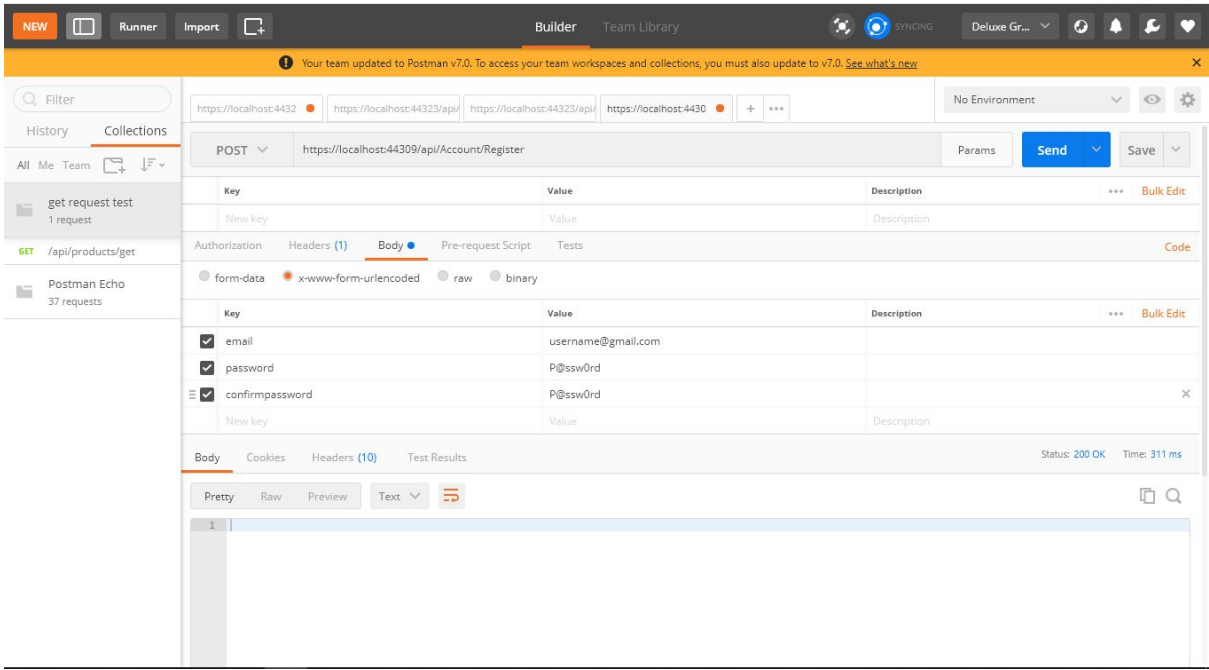


Invalid credentials



Register

Success



Password length < 6

The screenshot shows the Postman interface with a POST request to `https://localhost:44309/api/Account/Register`. The request body is `x-www-form-urlencoded` with the following data:

Key	Value
email	username
password	pass
confirmpassword	pass

The response status is **400 Bad Request** with a time of 18 ms. The response body in JSON format is:

```
1 {
2   "Message": "The request is invalid.",
3   "ModelState": {
4     "model.Password": [
5       "The Password must be at least 6 characters long."
6     ]
7   }
8 }
```

Password is missing a non-letter or digit character & uppercase character

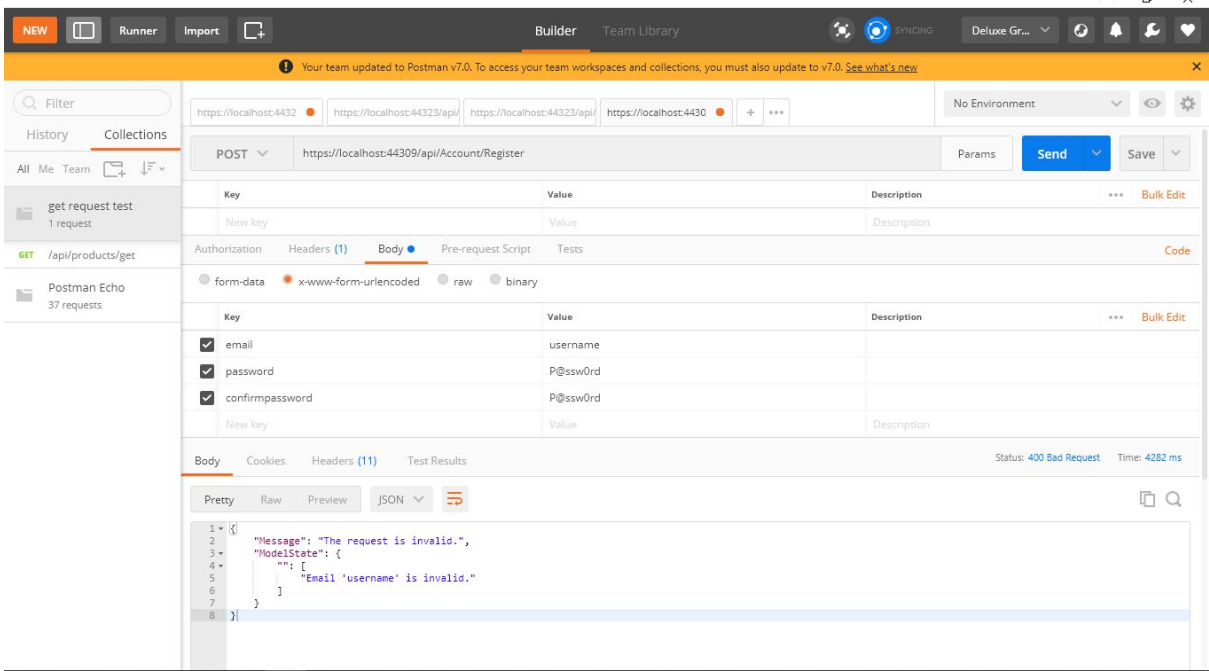
The screenshot shows the Postman interface with a POST request to `https://localhost:44309/api/Account/Register`. The request body is `x-www-form-urlencoded` with the following data:

Key	Value
email	username
password	password
confirmpassword	password

The response status is **400 Bad Request** with a time of 65 ms. The response body in JSON format is:

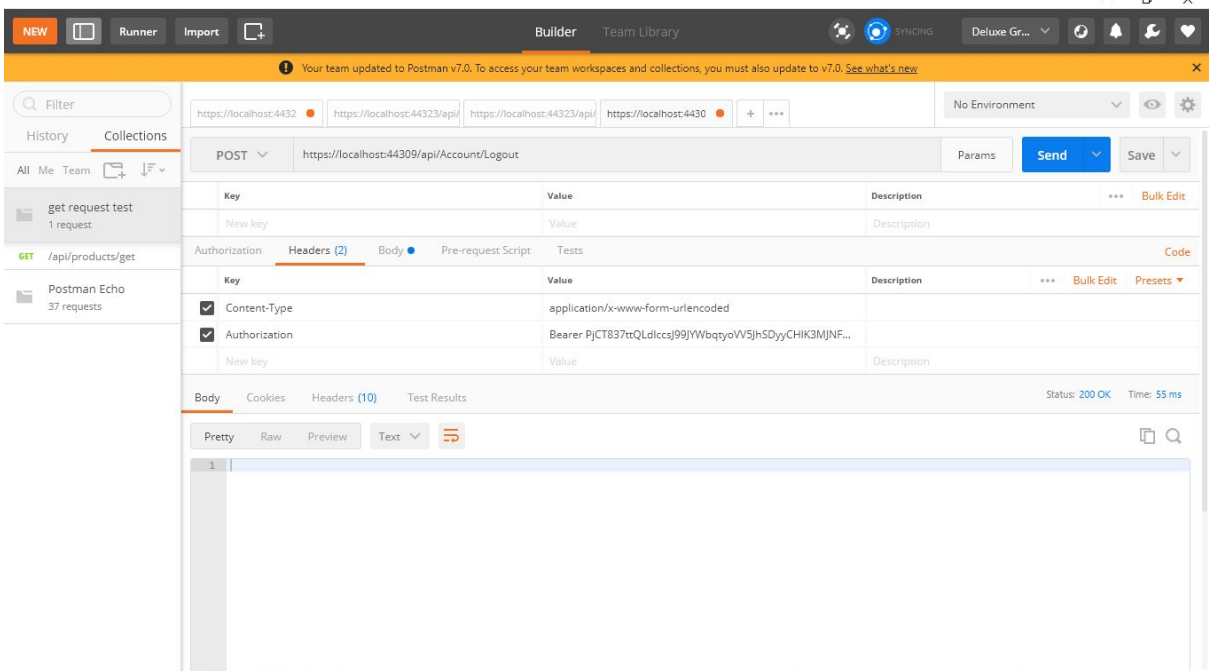
```
1 {
2   "Message": "The request is invalid.",
3   "ModelState": {
4     "model.Password": [
5       "Passwords must have at least one non letter or digit character. Passwords must have at least one digit ('0'-'9'). Passwords must have at least one uppercase ('A'-'Z')."
6     ]
7   }
8 }
```

Email is not valid

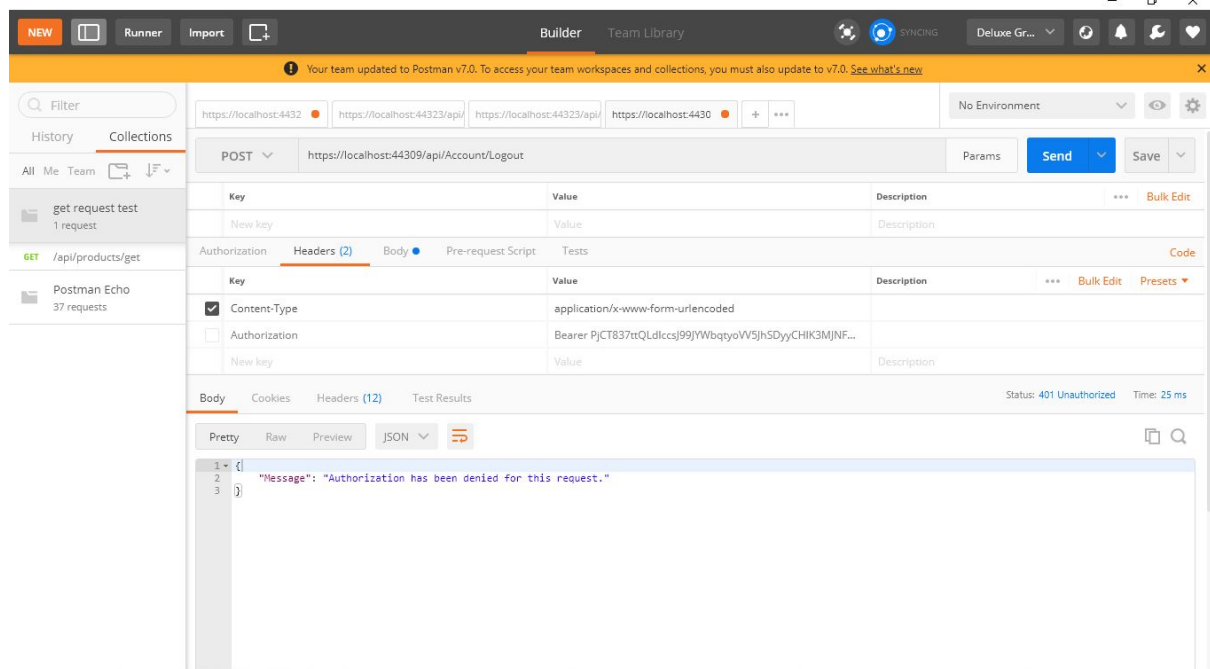


Logout

Success



Unauthorized



Task 4

Talents Search

Image URL used:

https://res.cloudinary.com/dgbrqt08w/image/upload/v1559278270/Map_DTTA_rmn5yt.jpg

API Documentation

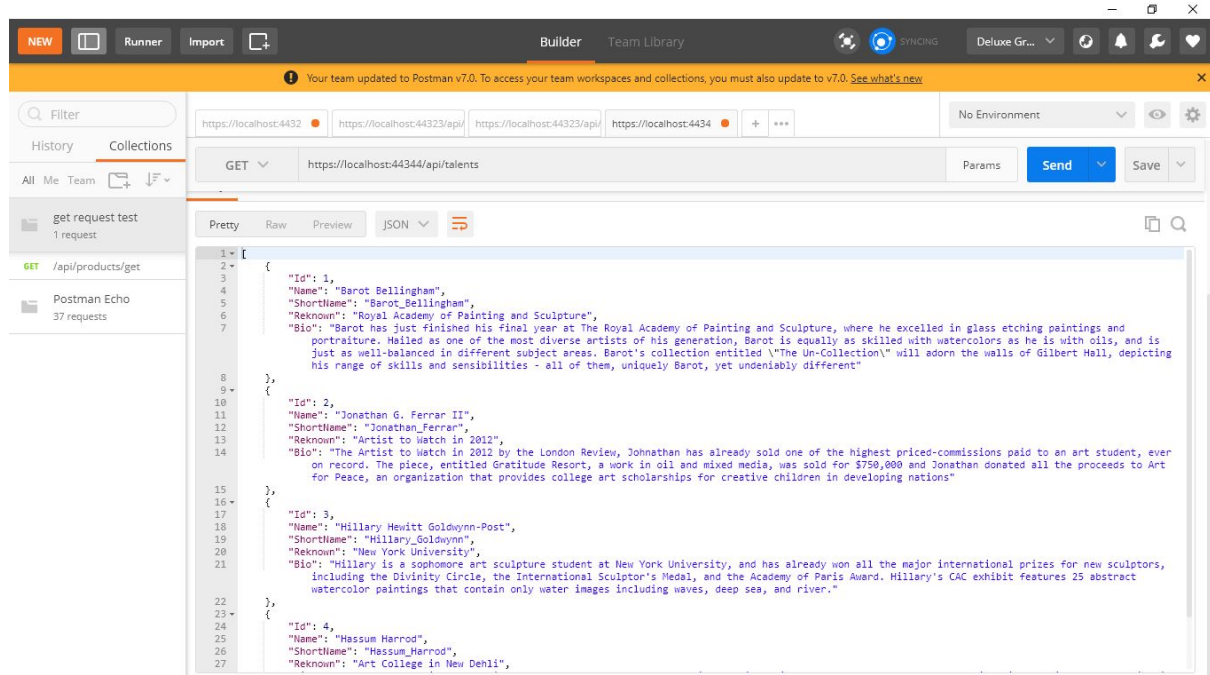
1. Get all Talents
 - a. Gets all talents
 - b. Method: GET
 - c. URL: api/talents
2. Get talent
 - a. Gets a single talent specified by ID
 - b. Method: GET
 - c. URL: api/talents/{id}
 - d. Params:
 - i. int id
3. Add talent
 - a. Adds a talent
 - b. Method: POST
 - c. URL: api/talents
 - d. Params:
 - i. Talent talent

4. Edit talent
 - a. Edits a talent existing in the repository
 - b. Method: PUT
 - c. URL: `api/talents/{id}`
 - d. Params
 - i. int id
 - ii. Talent talent
5. Delete talent
 - a. Deletes a talent
 - b. Method: DELETE
 - c. URL: `api/talents/{id}`
 - d. Params
 - i. Int id

Testing Screenshots

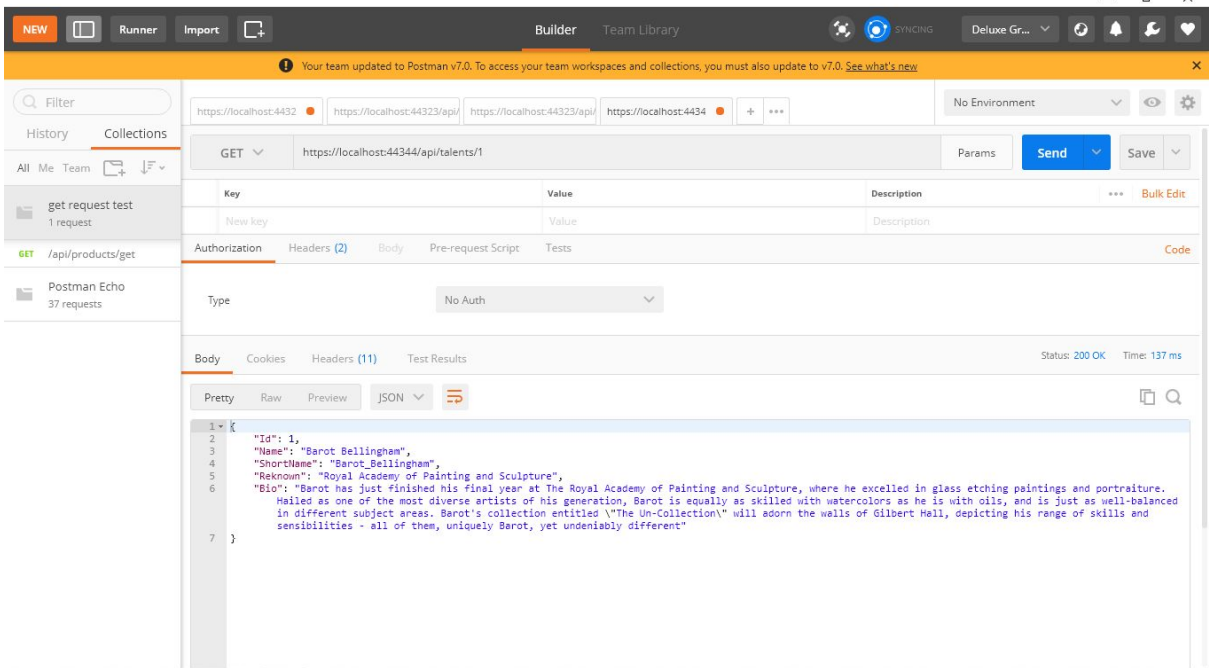
Get all Talents

Success

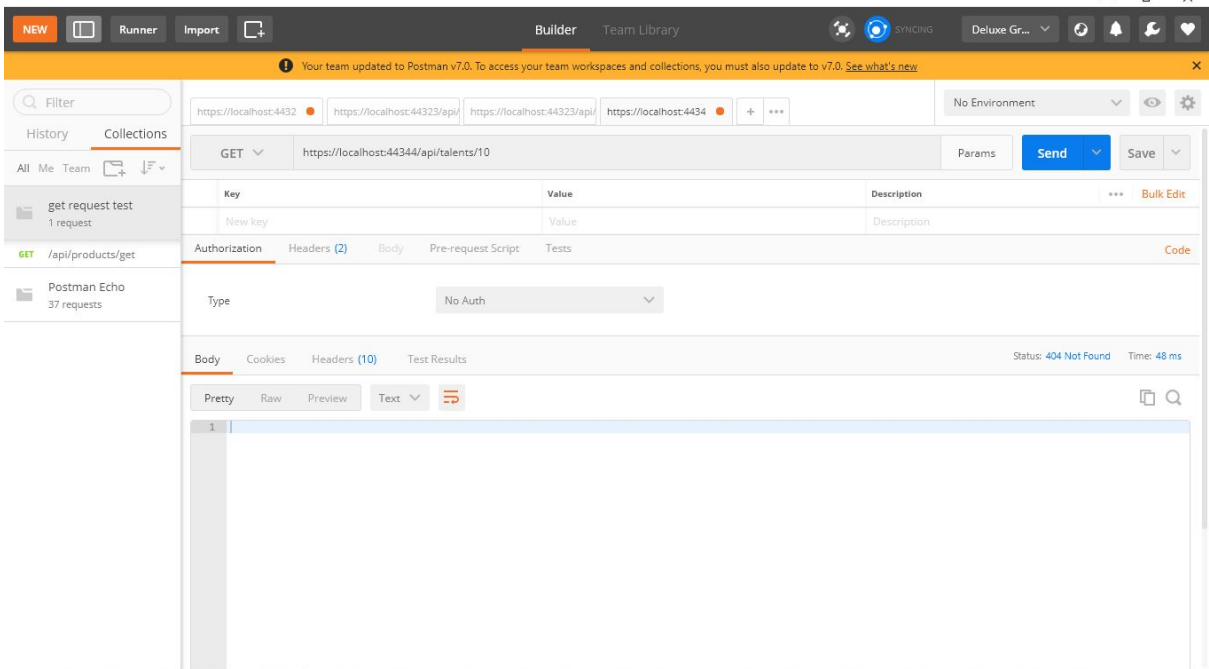


Get Talent

Success

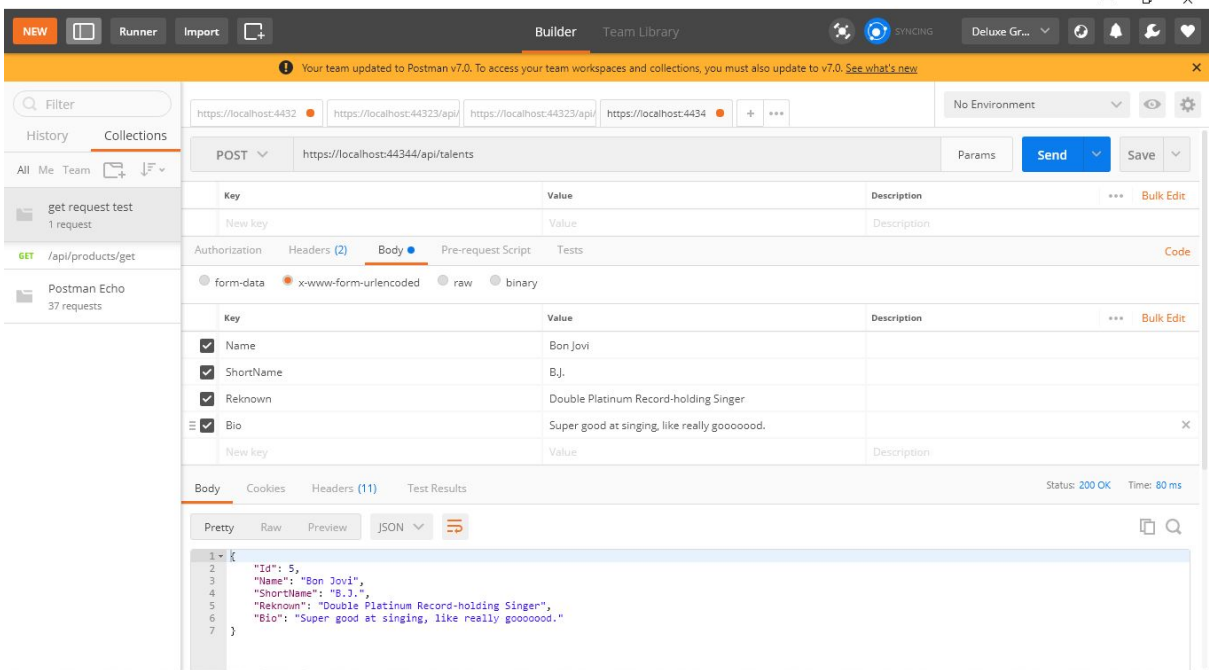


ID does not exist in list

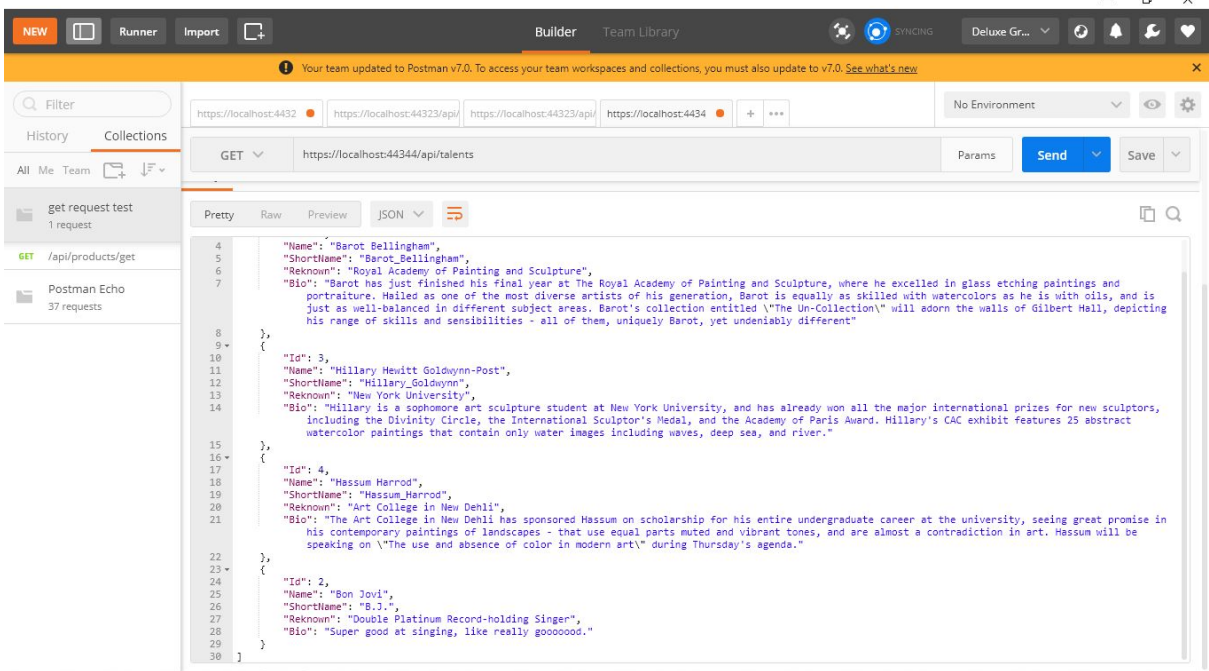


Add talent

Success

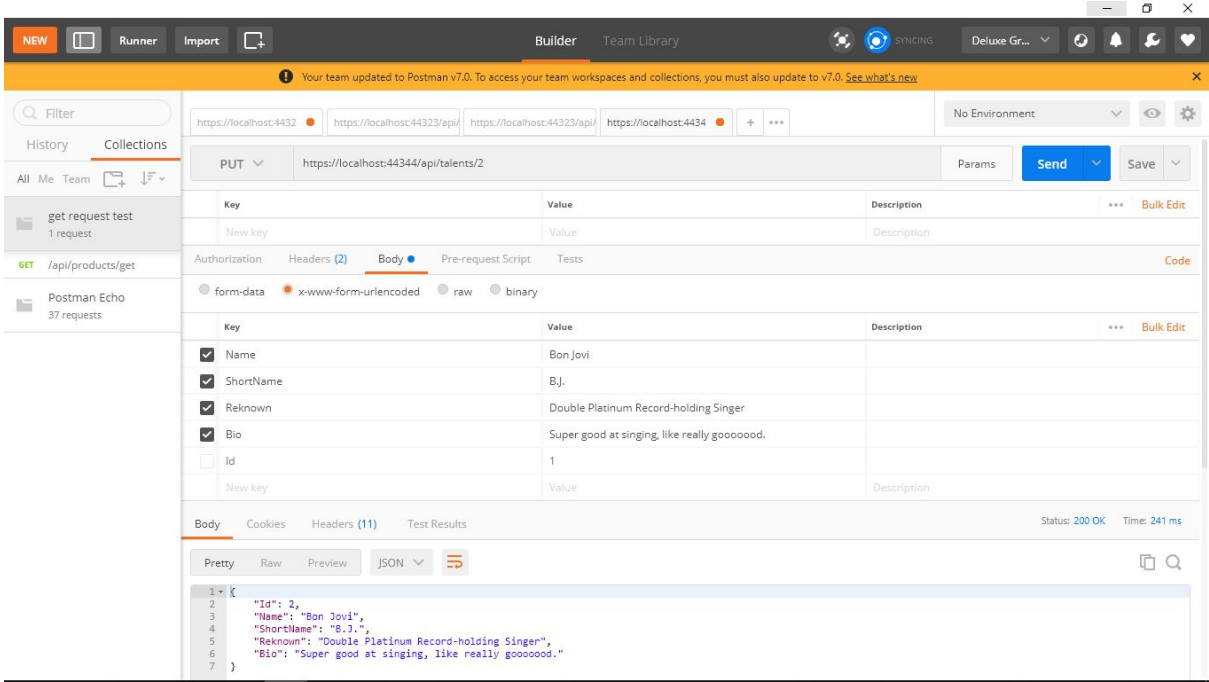


Result



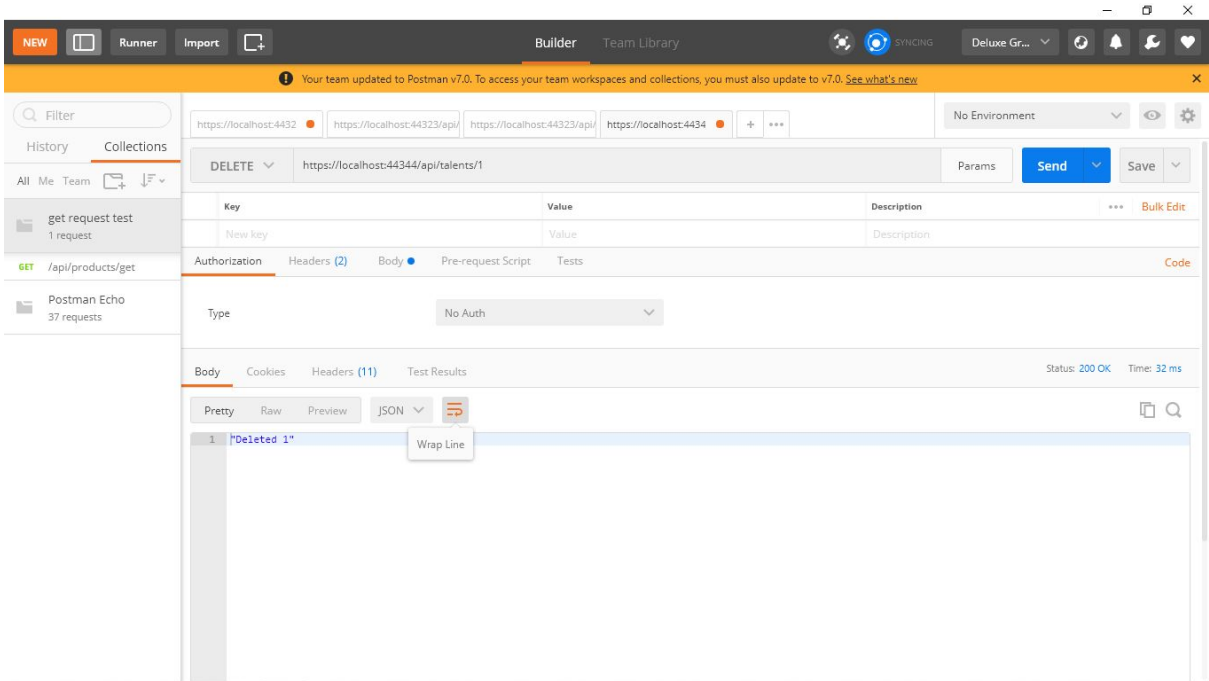
Edit talent

Success



Delete talent

Success



Task 5

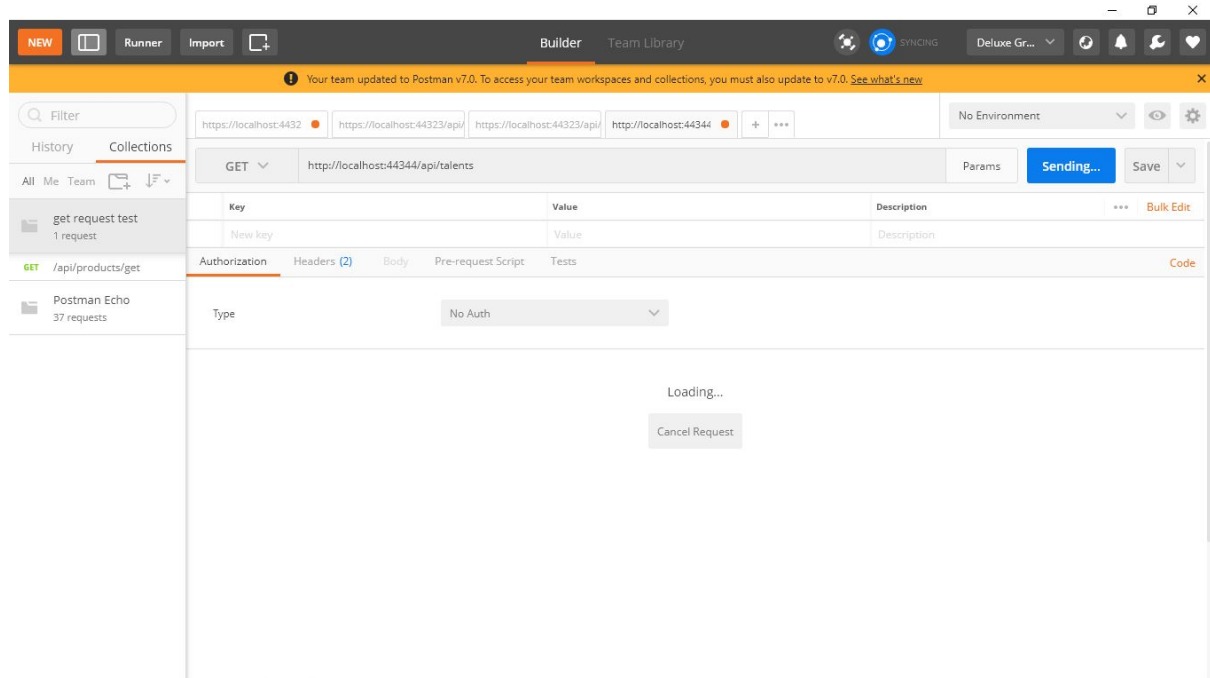
Secured Talents Search Web API

API Documentation

Same as Task 4

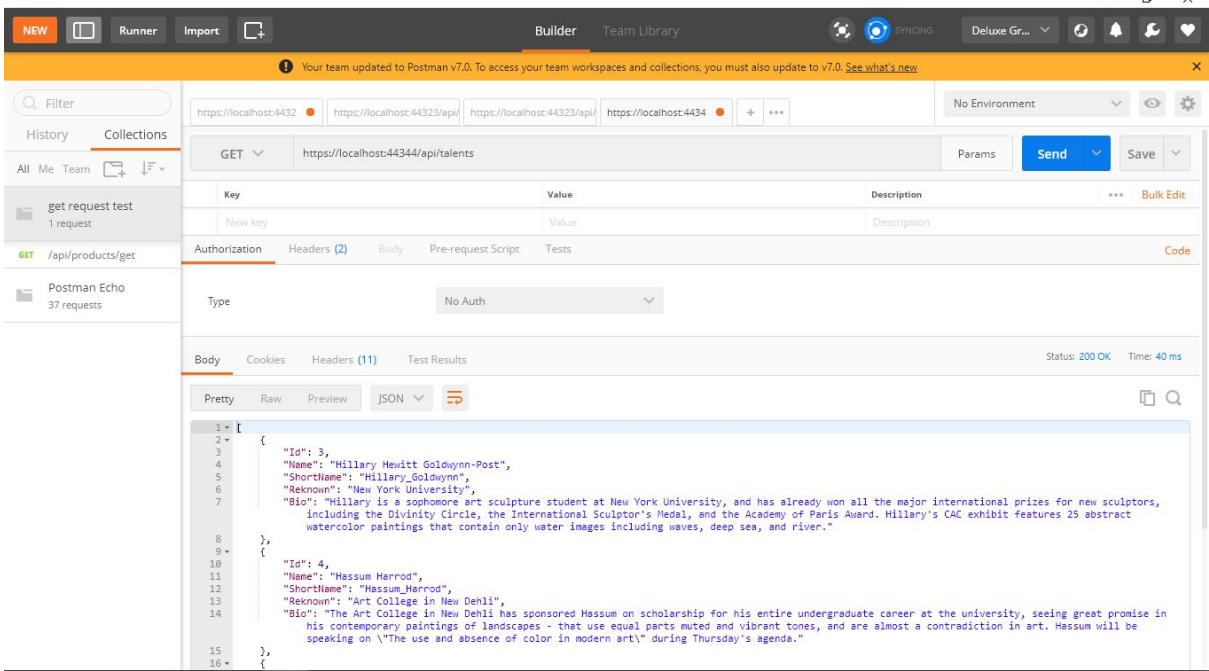
Testing Screenshots

Getting list of talents with HTTP



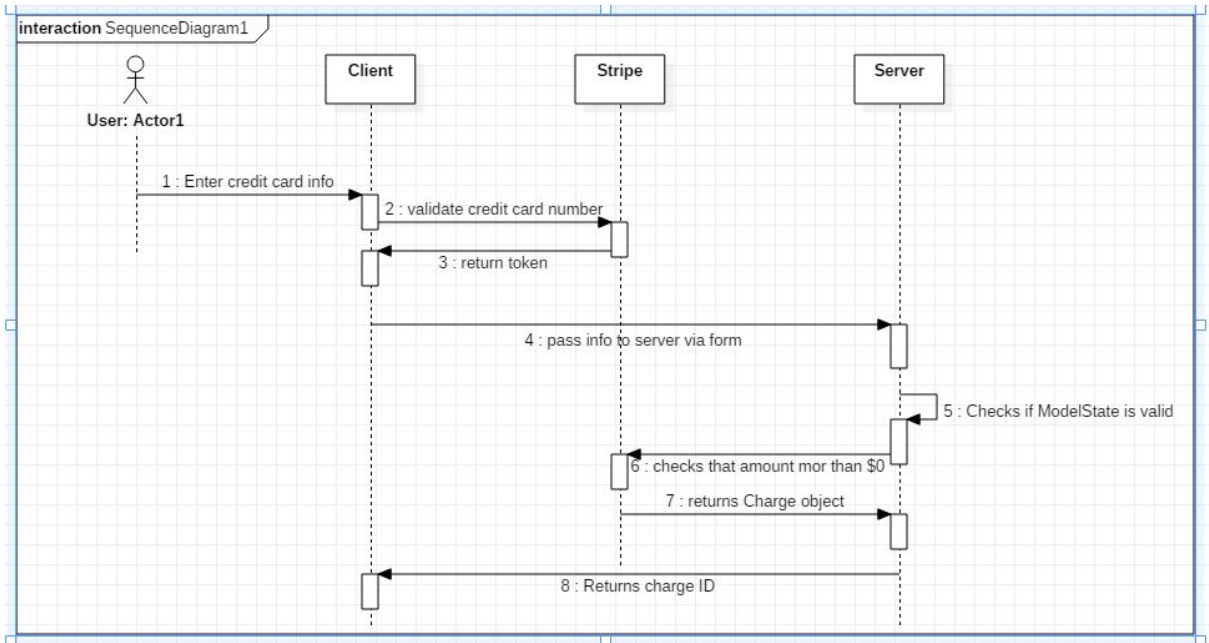
Postman is stuck at sending a request

Getting list of talents with HTTPS



Task 6

Payment Web API (Stripe)

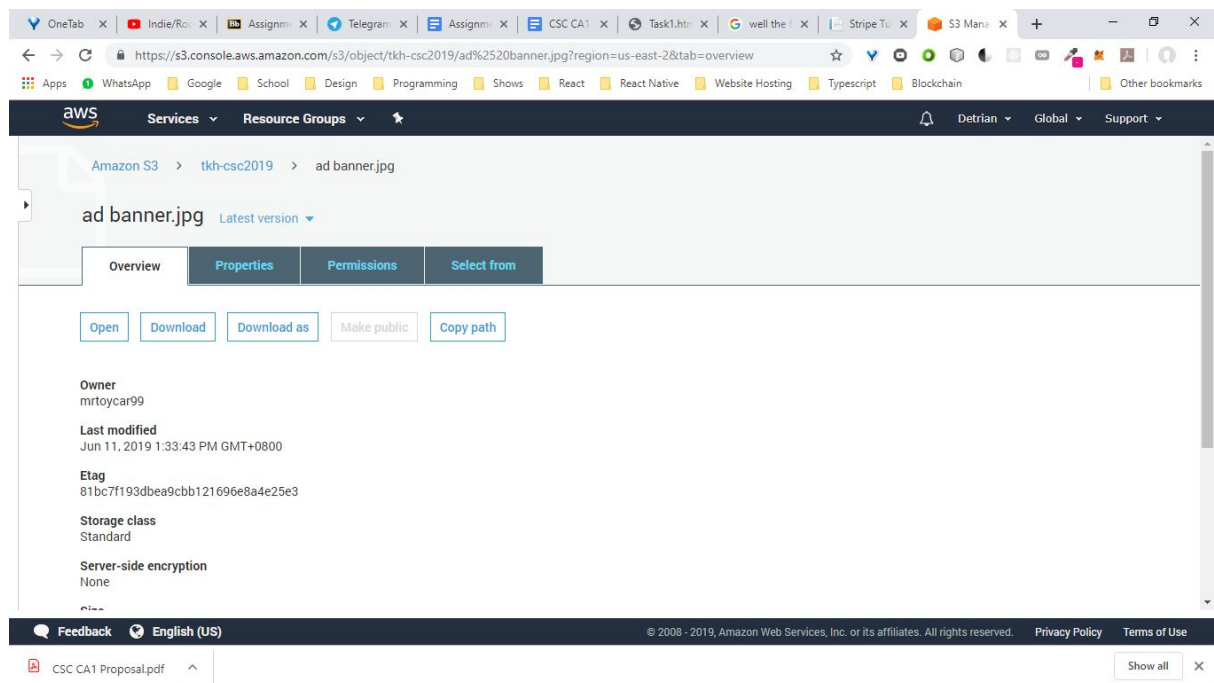


Store Talents Photo in AWS S3

The screenshot shows the AWS S3 console interface. The browser address bar displays the URL: `https://s3.console.aws.amazon.com/s3/buckets/tkh-csc2019/?region=us-east-2&tab=overview`. The console header includes the AWS logo, navigation tabs for Services, Resource Groups, and a user profile (Detrian). The main content area is titled 'Amazon S3 > tkh-csc2019' and features four tabs: Overview, Properties, Permissions, and Management. The Overview tab is active, showing a search bar with the placeholder text 'Type a prefix and press Enter to search. Press ESC to clear.' Below the search bar are buttons for Upload, Create folder, Download, and Actions. The region is set to Asia Pacific (Singapore). A table lists the objects in the bucket:

Name	Last modified	Size	Storage class
ad banner.jpg	Jun 11, 2019 1:33:43 PM GMT+0800	64.8 KB	Standard

The footer of the console shows the URL `https://s3.console.aws.amazon.com/s3/#`, copyright information '© 2008 - 2019, Amazon Web Services, Inc. or its affiliates. All rights reserved.', and links to Privacy Policy and Terms of Use. A taskbar at the bottom shows a file named 'CSC CA1 Proposal.pdf'.



Task 7 (optional)

Clarifai Client App

Source code is in Task 7 folder