



Institute of Technology of Cambodia

Departments of Information and Communication

Engineering



TP-11: JavaScript (NodeJS, VueJS, CRUD, APIs, Mongoose)

TP: Internet Programming

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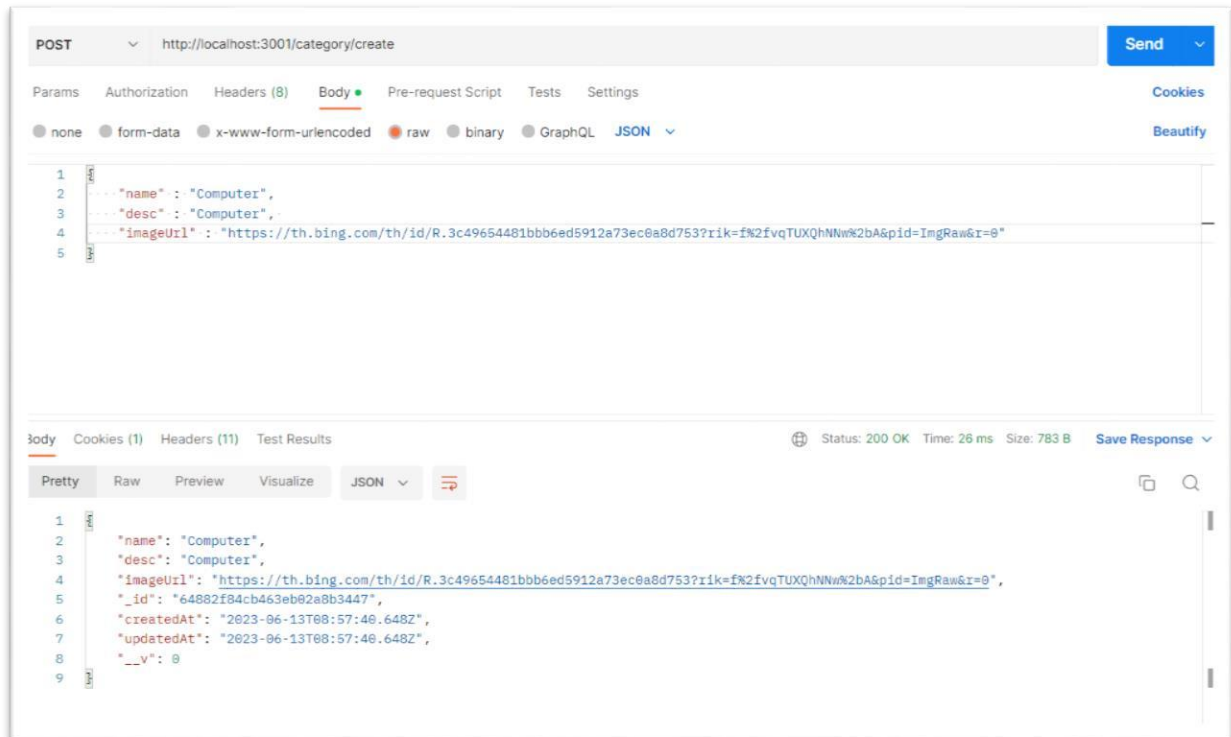
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Exercise 1: CRUD Apis

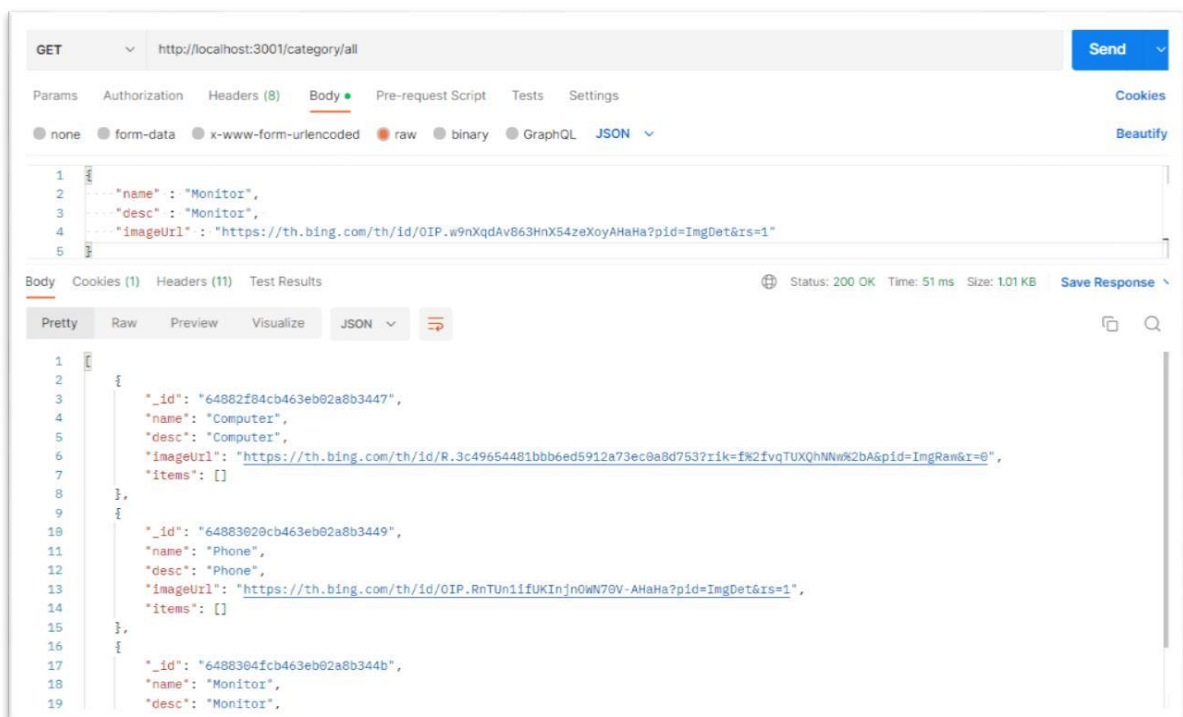
Create APIs to manage products by categorizing/sub-categorizing.

⇒ CRUD APIs for Category

- Create Category



- Get Category



Update Category

+ Before Update

```
{
  "_id": "6488304fcb463eb02a8b344b",
  "name": "Monitor",
  "desc": "Monitor",
  "imageUrl": "https://th.bing.com/th/id/OIP.w9nXqdAv863HnX54zeXoyAHaHa?pid=ImgDet&rs=1",
  "items": []
}
```

+ After Update

The screenshot shows a REST client interface with a POST request to `http://localhost:3001/category/update`. The request body is a JSON object representing a category to be updated. The response status is 200 OK, and the response body is a JSON object indicating success and providing updated details for the category.

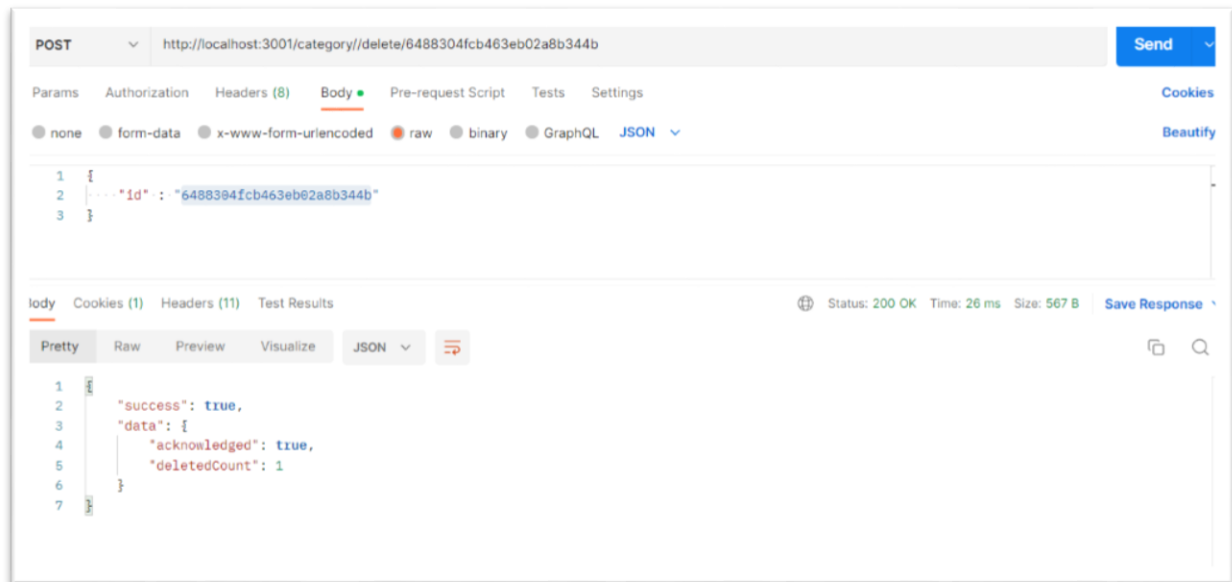
Request:

```
POST http://localhost:3001/category/update
{
  "_id": "6488304fcb463eb02a8b344b",
  "name": "Monitor",
  "desc": "Best Monitor",
  "imageUrl": "https://th.bing.com/th/id/OIP.w9nXqdAv863HnX54zeXoyAHaHa?pid=ImgDet&rs=1"
}
```

Response:

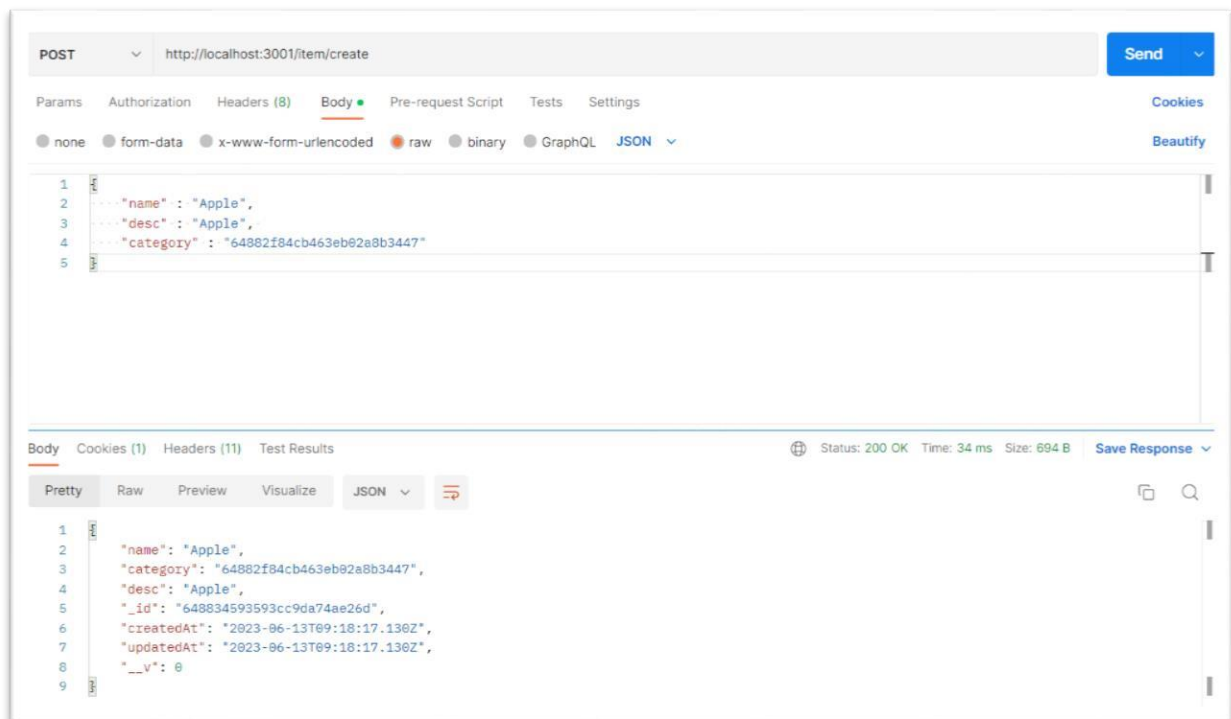
```
{
  "success": true,
  "data": {
    "_id": "6488304fcb463eb02a8b344b",
    "name": "Monitor",
    "desc": "Best Monitor",
    "imageUrl": "https://th.bing.com/th/id/OIP.w9nXqdAv863HnX54zeXoyAHaHa?pid=ImgDet&rs=1",
    "createdAt": "2023-06-13T09:01:03.447Z",
    "updatedAt": "2023-06-13T09:10:23.173Z",
    "__v": 0
  }
}
```

- Delete Category

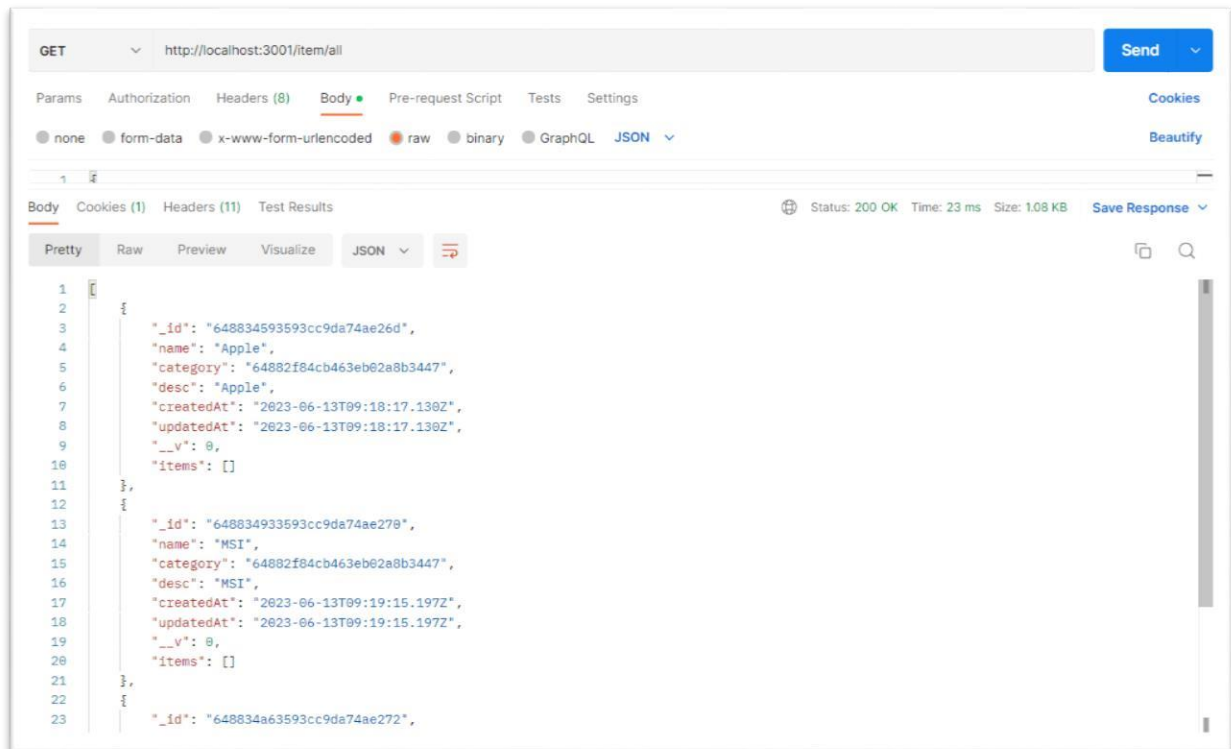


⇒ CRUD APIs for Sub-category

- Create Sub-category



- Get Sub-category

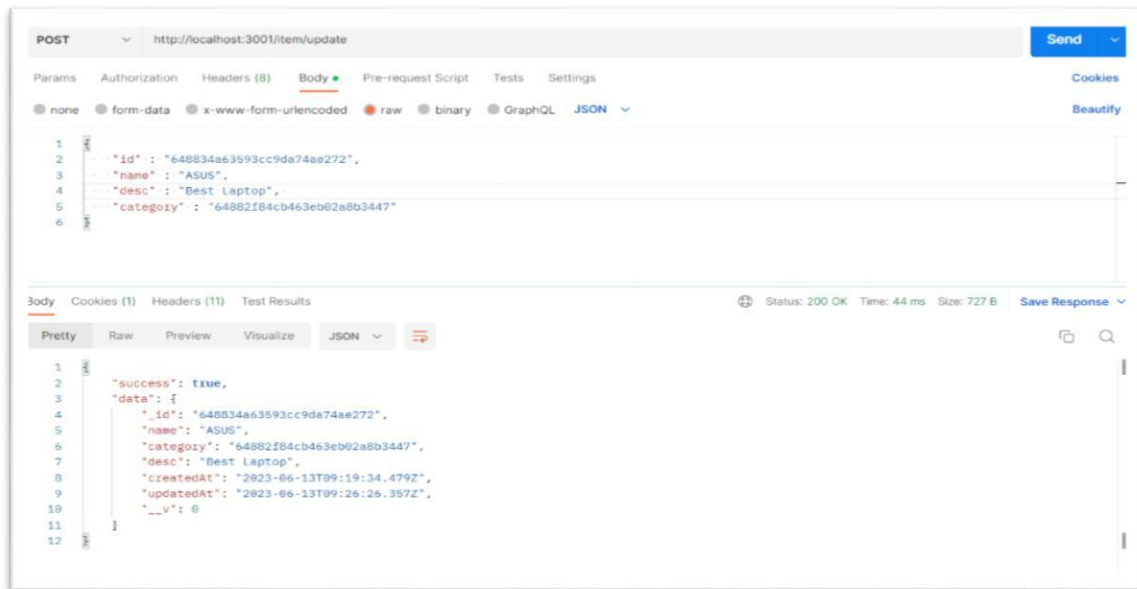


Update Sub-category

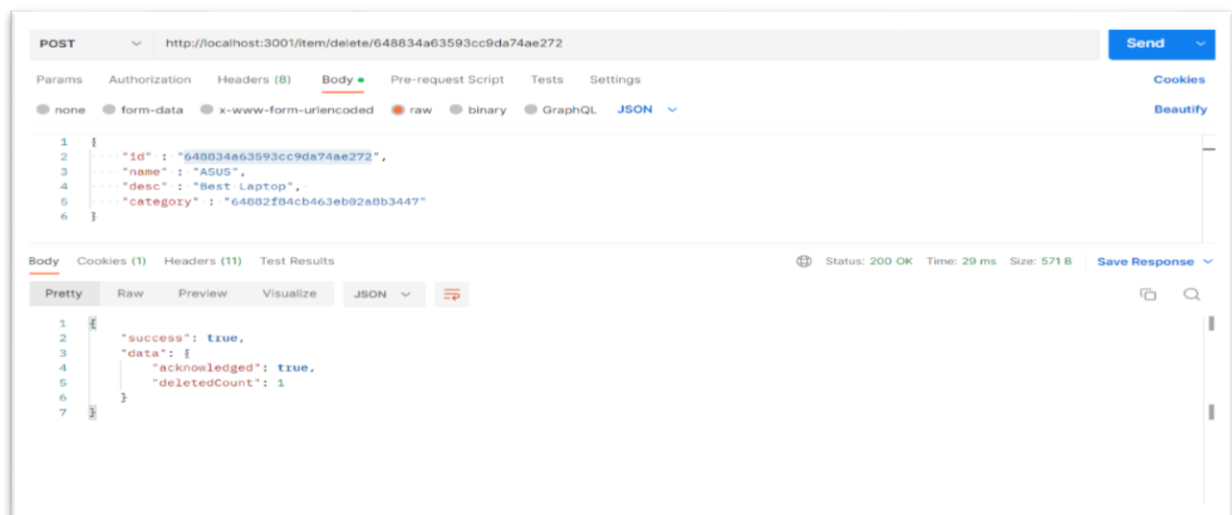
+ Before Update

```
{  "_id": "648834a63593cc9da74ae272",  "name": "ASUS",  "category": "64882f84cb463eb02a8b3447",  "desc": "ASUS",  "createdAt": "2023-06-13T09:19:34.479Z",  "updatedAt": "2023-06-13T09:19:34.479Z",  "__v": 0,  "items": []}
```

+ After Update



- Delete Sub-category



⇒ CRUD APIs for Product

- Create Product

POST http://localhost:3001/product/create

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies Beautify

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```
1 {
2   "title": "MacBook 2020",
3   "category": "64882f84cb463eb02a8b3447",
4   "item": "648834593593cc9da74ae26d",
5   "user": "64882d19cb463eb02a8b3443",
6   "imageUrl": "https://th.bing.com/th/id/R.3c49654481bbb6ed5912a73ec0a8d753?rik=f%2fvqTUXQhNNw%2bA&pid=ImgRaw&r=0",
7   "desc": "Best Laptop"
8 }
```

Body Cookies (1) Headers (11) Test Results Status: 200 OK Time: 25 ms Size: 893 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "title": "MacBook 2020",
3   "category": "64882f84cb463eb02a8b3447",
4   "item": "648834593593cc9da74ae26d",
5   "user": "64882d19cb463eb02a8b3443",
6   "imageUrl": "https://th.bing.com/th/id/R.3c49654481bbb6ed5912a73ec0a8d753?rik=f%2fvqTUXQhNNw%2bA&pid=ImgRaw&r=0",
7   "desc": "Best Laptop",
8   "_id": "648838a3214af236a483d628",
9   "createdAt": "2023-06-13T09:36:35.277Z",
10  "updatedAt": "2023-06-13T09:36:35.277Z",
11  "__v": 0
12 }
```

- Get Product

GET http://localhost:3001/product/all

Params Authorization Headers (8) Body Pre-request Script Tests Settings Cookies Beautify

Body Cookies (1) Headers (11) Test Results Status: 200 OK Time: 26 ms Size: 3.49 KB Save Response

Pretty Raw Preview Visualize JSON

```
1 [
2   {
3     "_id": "648838a3214af236a483d628",
4     "title": "MacBook 2020",
5     "category": "64882f84cb463eb02a8b3447",
6     "item": "648834593593cc9da74ae26d",
7     "user": "64882d19cb463eb02a8b3443",
8     "imageUrl": "https://th.bing.com/th/id/R.3c49654481bbb6ed5912a73ec0a8d753?rik=f%2fvqTUXQhNNw%2bA&pid=ImgRaw&r=0",
9     "desc": "Best Laptop",
10    "createdAt": "2023-06-13T09:36:35.277Z",
11    "updatedAt": "2023-06-13T09:36:35.277Z",
12    "__v": 0
13  },
14  {
15    "_id": "648838cf214af236a483d62a",
16    "title": "MacBook 2021",
17    "category": "64882f84cb463eb02a8b3447",
18    "item": "648834593593cc9da74ae26d",
19    "user": "64882d19cb463eb02a8b3443",
20    "imageUrl": "https://th.bing.com/th/id/R.3c49654481bbb6ed5912a73ec0a8d753?rik=f%2fvqTUXQhNNw%2bA&pid=ImgRaw&r=0",
21    "desc": "Best Laptop",
22    "createdAt": "2023-06-13T09:37:19.815Z",
23    "updatedAt": "2023-06-13T09:37:19.815Z",
24    "__v": 0
25  },
26  {
27    "_id": "648838d4214af236a483d62c",
```


Update Product

+ Before Update

```
{
  "_id": "6488399a214af236a483d636",
  "title": "GT77 Titan",
  "category": "64882f84cb463eb02a8b3447",
  "item": "648834933593cc9da74ae270",
  "user": "64882d19cb463eb02a8b3443",
  "imageUrl": "https://th.bing.com/th/id/R.3c49654481bbb6ed5912a73ec0a8d753?rik=f%2fvqTUXQhNNw%2bA&pid=ImgRaw&r=0",
  "desc": "Best Laptop",
  "createdAt": "2023-06-13T09:40:42.521Z",
  "updatedAt": "2023-06-13T09:40:42.521Z",
  "__v": 0
}
```

+ After Update

The screenshot shows a REST client interface with a POST request to `http://localhost:3001/product/update`. The request body is a JSON object with the following fields: `_id`, `title`, `category`, `item`, `user`, `imageUrl`, `desc`, `createdAt`, `updatedAt`, and `__v`. The response status is 200 OK, and the response body is a JSON object with `success: true` and `data` containing the updated product details. The `desc` field has been updated to "Best gaming laptop that just release".

```
POST http://localhost:3001/product/update
{
  "_id": "6488399a214af236a483d636",
  "title": "GT77 Titan",
  "category": "64882f84cb463eb02a8b3447",
  "item": "648834933593cc9da74ae270",
  "user": "64882d19cb463eb02a8b3443",
  "imageUrl": "https://th.bing.com/th/id/R.3c49654481bbb6ed5912a73ec0a8d753?rik=f%2fvqTUXQhNNw%2bA&pid=ImgRaw&r=0",
  "desc": "Best gaming laptop that just release",
  "createdAt": "2023-06-13T09:40:42.521Z",
  "updatedAt": "2023-06-13T09:43:42.363Z",
  "__v": 0
}
```

```
{
  "success": true,
  "data": {
    "_id": "6488399a214af236a483d636",
    "title": "GT77 Titan",
    "category": "64882f84cb463eb02a8b3447",
    "item": "648834933593cc9da74ae270",
    "user": "64882d19cb463eb02a8b3443",
    "imageUrl": "https://th.bing.com/th/id/R.3c49654481bbb6ed5912a73ec0a8d753?rik=f%2fvqTUXQhNNw%2bA&pid=ImgRaw&r=0",
    "desc": "Best gaming laptop that just release",
    "createdAt": "2023-06-13T09:40:42.521Z",
    "updatedAt": "2023-06-13T09:43:42.363Z",
    "__v": 0
  }
}
```

- Delete Product

The screenshot shows a REST client interface with a POST request to `http://localhost:3001/product/delete/6488399a214af236a483d636`. The request body is a JSON object with the same fields as the update request. The response status is 200 OK, and the response body is a JSON object with `success: true` and `data` containing `acknowledged: true` and `deletedCount: 1`.

```
POST http://localhost:3001/product/delete/6488399a214af236a483d636
{
  "_id": "6488399a214af236a483d636",
  "title": "GT77 Titan",
  "category": "64882f84cb463eb02a8b3447",
  "item": "648834933593cc9da74ae270",
  "user": "64882d19cb463eb02a8b3443",
  "imageUrl": "https://th.bing.com/th/id/R.3c49654481bbb6ed5912a73ec0a8d753?rik=f%2fvqTUXQhNNw%2bA&pid=ImgRaw&r=0",
  "desc": "Best gaming laptop that just release"
}
```

```
{
  "success": true,
  "data": {
    "acknowledged": true,
    "deletedCount": 1
  }
}
```

Exercise 2: TopOne app

Design a basic website template to compare product price tags from different source

