



Institute of Technology of Cambodia



**Department of Information and
Communication Engineering**

Assignment TP11

TP11: CRUD APIs, Mongoose

Group: I4 GIC(C)

Lecturers

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Subjects

TP Internet-Programming II(IP)

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GitHub's Repository: https://github.com/Dapravith/TP_Internet_Programming/tree/TP11

EX1: CRUD APIs

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

CRUD APIs for Category

Create Category

The screenshot shows the Postman interface for a POST request to `http://localhost:3001/category/create`. The request body is a JSON object with the following fields:

```
{  "name": "Computer",  "desc": "Computer",  "imageUrl": "https://wips.plugin.it/cips/paginegialle.it/magazine/cms/2018/12/computer-usati.jpg?w=744&h=418&a=c"}
```

The response is a 200 OK status with a response time of 25 ms and a body size of 776 B. The response body is displayed in the 'Pretty' view as a JSON object:

```
{  "name": "Computer",  "desc": "Computer",  "imageUrl": "https://wips.plugin.it/cips/paginegialle.it/magazine/cms/2018/12/computer-usati.jpg?w=744&h=418&a=c",  "_id": "64885dec3deb6321655a7432",  "createdAt": "2023-06-13T12:15:40.367Z",  "updatedAt": "2023-06-13T12:15:40.367Z",  "__v": 0}
```

Get Category

Postman interface showing a GET request to `http://localhost:3001/category/all` with a JSON body. The response is a JSON array of category objects.

Request:

- Method: GET
- URL: `http://localhost:3001/category/all`
- Body (JSON):

```
{  "name": "Monitor",  "desc": "Monitor",  "imageUrl": "https://cdn.thewirecutter.com/wp-content/media/2022/11/24inchmonitors-2048px-9977-2x1-1.jpg?auto=webp&quality=75&crop=2:1&width=1024&dpr=2"}
```

Response:

- Status: 200 OK
- Time: 20 ms
- Size: 1.99 KB
- Body (JSON):

```
[  {    "_id": "64885d993deb6321655a742c",    "name": "Computer",    "desc": "Computer",    "imageUrl": "https://wips.plugin.it/cips/paginegialle.it/magazine/cms/2018/12/computer-usati.jpg?w=744&h=418&a=c",    "items": []  },  {    "_id": "64885dea3deb6321655a742e",    "name": "Computer",    "desc": "Computer",    "imageUrl": "https://wips.plugin.it/cips/paginegialle.it/magazine/cms/2018/12/computer-usati.jpg?w=744&h=418&a=c",    "items": []  }]
```

Update Category

Before Update Category

The screenshot shows a Postman interface for a POST request to `http://localhost:3001/category/update`. The request body is in JSON format, containing the following data:

```
1 {
2   "id": "64885fc03deb6321655a743a",
3   "name": "Monitor",
4   "desc": "Monitor",
5   "imageUrl": "https://wips.plugin.it/cips/paginegialle.it/magazine/cms/2018/12/computer-usati.jpg?w=744&h=418&a=c"
6 }
```

After Update Category

The screenshot shows the response of the POST request. The status is 200 OK, and the response body is in JSON format, indicating a successful update:

```
1 {
2   "success": true,
3   "data": {
4     "_id": "64885fc03deb6321655a743a",
5     "name": "Tablet",
6     "desc": "Best Tablet",
7     "imageUrl": "https://wips.plugin.it/cips/paginegialle.it/magazine/cms/2018/12/computer-usati.jpg?w=744&h=418&a=c",
8     "createdAt": "2023-06-13T12:23:28.373Z",
9     "updatedAt": "2023-06-13T12:52:42.578Z",
10    "__v": 0
11  }
12 }
```

Delete Category

The screenshot shows a REST client interface with the following details:

- URL:** `http://localhost:3001/category/delete/64885fe73deb6321655a7440`
- Method:** `POST`
- Body:** `{ "id": "64885fe73deb6321655a7440" }`
- Response:** `{ "success": true, "data": { "acknowledged": true, "deletedCount": 1 } }`
- Status:** 200 OK, 22 ms, 569 B

The interface includes tabs for Params, Authorization, Headers (9), Body, Pre-request Script, Tests, and Settings. The Body tab is active, showing the request body. The response is displayed in the bottom section, formatted as JSON.

CRUD APIs for Sub-CategoryCreate new Sub-Category

The screenshot displays a REST client interface for a POST request to `http://localhost:3001/item/create`. The request body is a JSON object with the following fields: `name` (Apple), `desc` (Apple), and `category` (64885d993deb6321655a742c). The response is a 200 OK status with a 21 ms response time and 696 B of data. The response body is shown in a pretty-printed JSON format.

TP11_IP / Create New Sub-Category

POST `http://localhost:3001/item/create` Send

Params Authorization Headers (9) Body Pre-request Script Tests Settings Cookies

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

```
1 {
2   "name": "Apple",
3   "desc": "Apple",
4   "category": "64885d993deb6321655a742c"
5 }
```

Body Cookies (1) Headers (11) Test Results 200 OK 21 ms 696 B Save as Example

Pretty Raw Preview Visualize JSON

```
1 {
2   "name": "Apple",
3   "category": "64885d993deb6321655a742c",
4   "desc": "Apple",
5   "_id": "648868593deb6321655a7454",
6   "createdAt": "2023-06-13T13:00:09.735Z",
7   "updatedAt": "2023-06-13T13:00:09.735Z",
8   "__v": 0
9 }
```

Get sub-Category

TP11_IP / Get Sub-Category

GET http://localhost:3001/item/all

Params Authorization Headers (9) **Body** Pre-request Script Tests Settings Cookies Beautify

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

```
1 {
2   "name": "Apple",
3   "desc": "Apple",
4   "category": "64885d993deb6321655a742c"
5 }
```

Body Cookies (1) Headers (11) Test Results Status: 200 OK Time: 15 ms Size: 3.57 KB Save as Example

Pretty Raw Preview Visualize JSON

```
1 {
2   {
3     "_id": "648868593deb6321655a7454",
4     "name": "Apple",
5     "category": "64885d993deb6321655a742c",
6     "desc": "Apple",
7     "createdAt": "2023-06-13T13:00:09.735Z",
8     "updatedAt": "2023-06-13T13:00:09.735Z",
9     "__v": 0,
10    "items": []
11  },
12  {
13    "_id": "648869773deb6321655a7458",
14    "name": "MSI",
15    "category": "64885d993deb6321655a742c",
16    "desc": "MSI",
17    "createdAt": "2023-06-13T13:04:55.958Z",
18    "updatedAt": "2023-06-13T13:04:55.958Z",
19    "__v": 0,
20    "items": []
21  },
22  {
23    "_id": "648869783deb6321655a745a",
```

Update Sub-Category

Before Update Sub-Category

```
{
  "_id": "64885fca3deb6321655a743c",
  "name": "Laptop",
  "desc": "Laptop",
  "imageUrl": "https://wips.plugin.it/cips/paginegialle.it/magazine/cms/2018/12/computer-usati.jpg?w=744&h=418&a=c",
  "items": []
}
```


After Update Sub-Category

TP11_IP / Update Sub-Category

POST http://localhost:3001/item/update

Params Authorization Headers (9) Body Pre-request Script Tests Settings

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

```
1 {
2   "id": "64886ceb3deb6321655a748e",
3   "name": "Laptop",
4   "desc": "ASUS Best Laptop for you!!",
5   "category": "64885d993deb6321655a742c"
6 }
7
```

Body Cookies (1) Headers (11) Test Results

Status: 200 OK Time: 14 ms Size: 742 B Save as Example

Pretty Raw Preview Visualize JSON

```
1 {
2   "success": true,
3   "data": {
4     "_id": "64886ceb3deb6321655a748e",
5     "name": "Laptop",
6     "category": "64885d993deb6321655a742c",
7     "desc": "ASUS Best Laptop for you!!",
8     "createdAt": "2023-06-13T13:19:39.470Z",
9     "updatedAt": "2023-06-13T13:20:18.161Z",
10    "_v": 0
11  }
12 }
```

Delete Sub-Category

TP11_IP / Delete Sub-Category

POST http://localhost:3001/item/delete/64886ceb3deb6321655a748e

Params Authorization Headers (9) Body Pre-request Script Tests Settings Cookies Beautify

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

```
1 {
2   ...."id": "64886ceb3deb6321655a748e",
3   ...."name": "Laptop",
4   ...."desc": "ASUS Best Laptop for you!!",
5   ...."category": "64885d993deb6321655a742c"
6 }
```

Body Cookies (1) Headers (11) Test Results Status: 200 OK Time: 18 ms Size: 569 B Save as Example

Pretty Raw Preview Visualize JSON

```
1 {
2   "success": true,
3   "data": {
4     "acknowledged": true,
5     "deletedCount": 1
6   }
7 }
```

Create new Product

TP11_IP / Create new Product Save 🔗 💬

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

Params Authorization Headers (9) **Body** ● Pre-request Script Tests Settings Cookies

● none ● form-data ● x-www-form-urlencoded ● raw ● binary ● GraphQL **JSON** ▼ Beautify

```
1 {
2   "title": "MacBook Air M2 2023",
3   "category": "64885d993deb6321655a742c",
4   "item": "648868593deb6321655a7454",
5   "user": "64885d783deb6321655a7428",
6   "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
7   "desc": "Best Mac for you !!"
8 }
```

Body Cookies (1) Headers (11) Test Results 🌐 Status: 200 OK Time: 17 ms Size: 864 B 💾 Save as Example ⋮

Pretty Raw Preview Visualize **JSON** ▼ 🔗 🔍

```
1 {
2   "title": "MacBook Air M2 2023",
3   "category": "64885d993deb6321655a742c",
4   "item": "648868593deb6321655a7454",
5   "user": "64885d783deb6321655a7428",
6   "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
7   "desc": "Best Mac for you !!",
8   "_id": "64886fb63deb6321655a74a5",
9   "createdAt": "2023-06-13T13:31:34.417Z",
10  "updatedAt": "2023-06-13T13:31:34.417Z",
11  "__v": 0
12 }
```

Get Product

TP11_IP / Get Product

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

Params Authorization Headers (9) Body Pre-request Script Tests Settings

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

Body

```
1 {
2   "title": "MacbookAir M2 2023",
3   "category": "64885d993deb6321655a742c",
4   "item": "648868593deb6321655a7454",
5   "user": "64885d783deb6321655a7428",
6   "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
7   "desc": "Best Mac for you !!"
8 }
```

Body Cookies (1) Headers (11) Test Results

Status: 200 OK Time: 14 ms Size: 1.19 KB Save as Example

Pretty Raw Preview Visualize JSON

```
1 {
2   "_id": "64886faa3deb6321655a74a3",
3   "title": "MacBookAir 2023",
4   "category": "64885d993deb6321655a742c",
5   "item": "648868593deb6321655a7454",
6   "user": "64885d783deb6321655a7428",
7   "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
8   "desc": "Best Mac for you !!",
9   "createdAt": "2023-06-13T13:31:22.655Z",
10  "updatedAt": "2023-06-13T13:31:22.655Z",
11  "__v": 0
12 },
13 {
14   "_id": "64886fb63deb6321655a74a5",
15   "title": "MacBook Air M2 2023",
16   "category": "64885d993deb6321655a742c",
17   "item": "648868593deb6321655a7454",
18   "user": "64885d783deb6321655a7428",
19   "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
20   "desc": "Best Mac for you !!",
21   "createdAt": "2023-06-13T13:31:34.417Z",
22   "updatedAt": "2023-06-13T13:31:34.417Z",
23   "__v": 0
24 }
25 ]
26 }
```

Update Product

Before Update

```
{
  "_id": "64886faa3deb6321655a74a3",
  "title": "MacBookAir 2023",
  "category": "64885d993deb6321655a742c",
  "item": "648868593deb6321655a7454",
  "user": "64885d783deb6321655a7428",
  "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
  "desc": "Best Mac for you !!",
  "createdAt": "2023-06-13T13:31:22.655Z",
  "updatedAt": "2023-06-13T13:31:22.655Z",
  "__v": 0
}
```

After Update

TP11_IP / Update Product

POST http://localhost:3001/product/update

Params Authorization Headers (9) Body Pre-request Script Tests Settings

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

```
1 {
2   "id": "64886fb63deb6321655a74a5",
3   "title": "MacbookPro M2 2023",
4   "category": "64885d993deb6321655a742c",
5   "item": "648868593deb6321655a7454",
6   "user": "64885d783deb6321655a7428",
7   "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
8   "desc": "Best MacbookPro for you !!"
9 }
```

Body Cookies (1) Headers (11) Test Results

Status: 200 OK Time: 27 ms Size: 894 B Save as Example

Pretty Raw Preview Visualize JSON

```
1 {
2   "success": true,
3   "data": {
4     "_id": "64886fb63deb6321655a74a5",
5     "title": "MacbookPro M2 2023",
6     "category": "64885d993deb6321655a742c",
7     "item": "648868593deb6321655a7454",
8     "user": "64885d783deb6321655a7428",
9     "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
10    "desc": "Best MacbookPro for you !!",
11    "createdAt": "2023-06-13T13:31:34.417Z",
12    "updatedAt": "2023-06-13T13:58:37.651Z",
13    "__v": 0
14  }
15 }
```

Delete Product

TP11_IP / Delete Product

POST http://localhost:3001/product/delete/64886fb63deb6321655a74a5

Params Authorization Headers (9) Body Pre-request Script Tests Settings

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

```
1 {
2   "id": "64886fb63deb6321655a74a5",
3   "title": "MacbookPro M2 2023",
4   "category": "64885d993deb6321655a742c",
5   "item": "648868593deb6321655a7454",
6   "user": "64885d783deb6321655a7428",
7   "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
8   "desc": "Best MacbookPro for you !!"
9 }
```

Body Cookies (1) Headers (11) Test Results

Status: 200 OK Time: 20 ms Size: 569 B Save as Example

Pretty Raw Preview Visualize JSON

```
1 {
2   "success": true,
3   "data": {
4     "acknowledged": true,
5     "deletedCount": 1
6   }
7 }
```

When delete product 2nd times

The screenshot shows a REST client interface for a POST request to `http://localhost:3001/product/delete/64886fb6321655a74a5`. The request body is a JSON object with the following fields:

```
1 {
2   "id": "64886fb6321655a74a5",
3   "title": "MacbookPro M2 2023",
4   "category": "64885d993deb6321655a742c",
5   "item": "648868593deb6321655a7454",
6   "user": "64885d783deb6321655a7428",
7   "imageUrl": "https://www.ione.com.kh/wp-content/uploads/2022/07/9.jpg",
8   "desc": "Best MacbookPro for you !!"
9 }
```

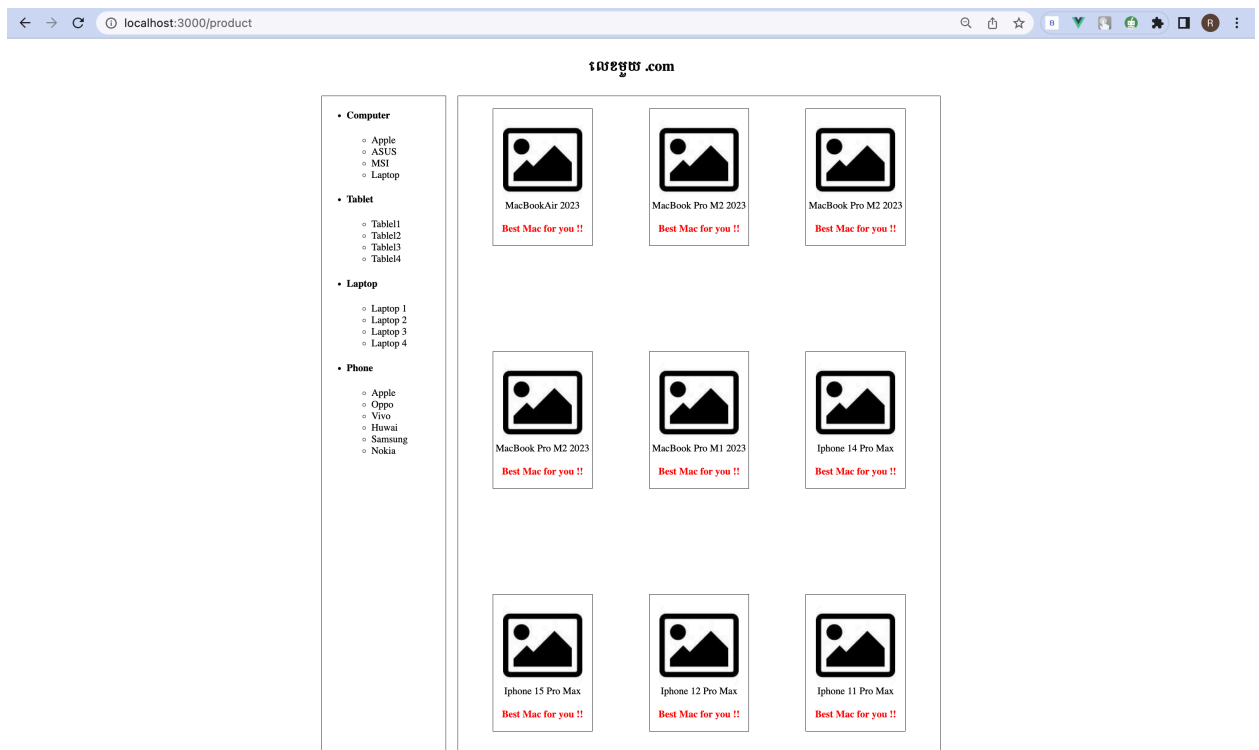
The response status is 200 OK, with a time of 14 ms and a size of 569 B. The response body is a JSON object:

```
1 {
2   "success": true,
3   "data": {
4     "acknowledged": true,
5     "deletedCount": 0
6   }
7 }
```

Ex2: TopOne app

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

<http://localhost:3000/product>



List data for product in MongoDB

tp11.products

9 DOCUMENTS 2 INDEXES




















Documents Aggregations Schema Explain Plan Indexes Validation

Filter Type a query: { field: 'value' }

Reset Find More Options

ADD DATA EXPORT DATA

1 - 9 of 9

products						
	_id ObjectId	title String	category ObjectId	item ObjectId	user ObjectId	imageUrl Str
1	ObjectId('64886faa3deb63216...	"MacBookAir 2023"	ObjectId('64885d993deb63216...	ObjectId('648868593deb63216...	ObjectId('64885d783deb63216...	"https://www.   
2	ObjectId('64887fddc5e64c322...	"MacBook Pro M2 2023"	ObjectId('64885d993deb63216...	ObjectId('648868593deb63216...	ObjectId('64885d783deb63216...	"https://www.   
3	ObjectId('64887fddc5e64c322...	"MacBook Pro M2 2023"	ObjectId('64885d993deb63216...	ObjectId('648868593deb63216...	ObjectId('64885d783deb63216...	"https://www.   
4	ObjectId('64887fe0c5e64c322...	"MacBook Pro M2 2023"	ObjectId('64885d993deb63216...	ObjectId('648868593deb63216...	ObjectId('64885d783deb63216...	"https://www.   
5	ObjectId('64886eac5e64c322...	"MacBook Pro M1 2023"	ObjectId('64885d993deb63216...	ObjectId('648868593deb63216...	ObjectId('64885d783deb63216...	"https://www.   
6	ObjectId('64888af52fe33ce83...	"Iphone 14 Pro Max"	ObjectId('64888686c5e64c322...	ObjectId('64888686c5e64c322...	ObjectId('648872be3deb63216...	"https://www.   
7	ObjectId('64888bb82fe33ce83...	"Iphone 15 Pro Max"	ObjectId('64888686c5e64c322...	ObjectId('64888686c5e64c322...	ObjectId('648872be3deb63216...	"https://www.   
8	ObjectId('64888bc72fe33ce83...	"Iphone 12 Pro Max"	ObjectId('64888686c5e64c322...	ObjectId('64888686c5e64c322...	ObjectId('648872be3deb63216...	"https://www.   
9	ObjectId('64888be22fe33ce83...	"Iphone 11 Pro Max"	ObjectId('64888686c5e64c322...	ObjectId('64888686c5e64c322...	ObjectId('648872be3deb63216...	"https://www.   

List data for category product in MongoDB

tp11.categories

4 DOCUMENTS 1 INDEXES

Documents Aggregations Schema Explain Plan Indexes Validation

Filter Type a query: { field: 'value' }

Reset Find More Options

ADD DATA EXPORT DATA

1 - 4 of 4

categories						
	_id ObjectId	name String	desc String	imageUrl String	createdAt Date	updatedAt Date
1	ObjectId('64885d993deb63216...')	"Computer"	"Computer"	"https://wips.plugin.it/cips/..."	2023-06-13T12:14:17.905+00:00	2023-06-13T12:14:17.905+00:00
2	ObjectId('64885fca3deb63216...')	"Tablet"	"Best Tablet"	"https://wips.plugin.it/cips/..."	2023-06-13T12:23:28.373+00:00	2023-06-13T12:23:28.373+00:00
3	ObjectId('64885fca3deb63216...')	"Laptop"	"Laptop"	"https://wips.plugin.it/cips/..."	2023-06-13T12:23:38.632+00:00	2023-06-13T12:23:38.632+00:00
4	ObjectId('64886afe3deb63216...')	"Phone"	"Phone"	"https://wips.plugin.it/cips/..."	2023-06-13T13:11:26.143+00:00	2023-06-13T13:11:26.143+00:00