# **API Testings**

## **Authentication API's**

#### **Overview:**

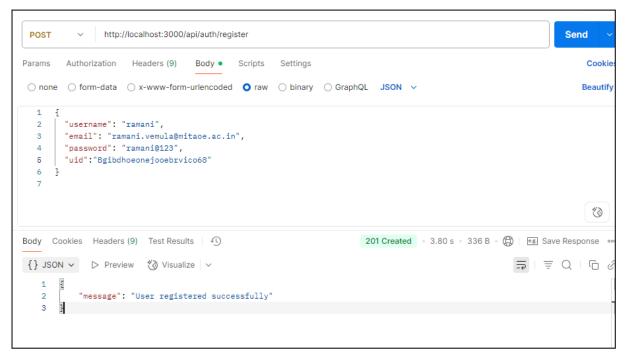
This API provides authentication features including user registration, login, OTP verification, password reset, and Google OAuth support.

Basic URL: http://localhost:3000/api/auth

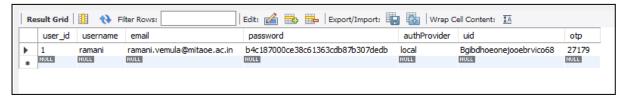
# 1. Register User through entering details

**URL**: POST <a href="http://localhost:3000/api/auth/register">http://localhost:3000/api/auth/register</a>

#### Postman:



### Database:



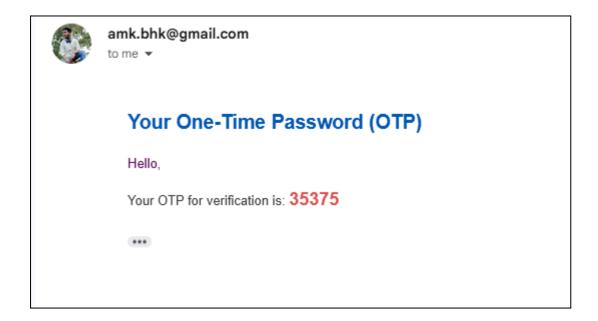
# 2. Login User through entering details

**URL**: POST http://localhost:3000/api/auth/login

Postman:



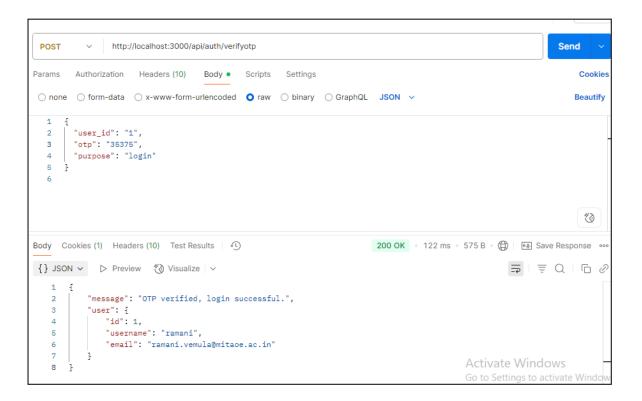
OTP will sent to email for verification:



# 3. Verifying account by entering the otp sent to mail:

**URL**: POST <a href="http://localhost:3000/api/auth/verifyotp">http://localhost:3000/api/auth/verifyotp</a>

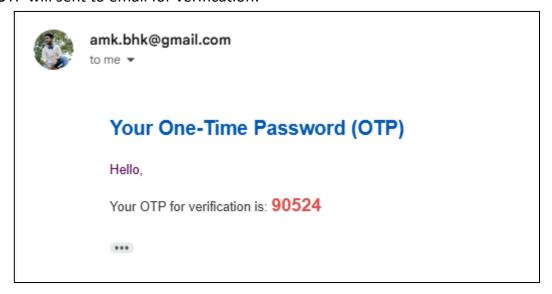
Postman:



# 4. Forget Password

**URL**: POST http://localhost:3000/api/auth/forgetpassword

#### OTP will sent to email for verification:



# 5. Reset the password by entering OTP & New password

URL: POST <a href="http://localhost:3000/api/auth/resetpassword">http://localhost:3000/api/auth/resetpassword</a>

```
Send
 POST
          http://localhost:3000/api/auth/resetpassword
Params Authorization Headers (10) Body • Scripts Settings
                                                                                                                Cookies
○ none ○ form-data ○ x-www-form-urlencoded ○ raw ○ binary ○ GraphQL JSON ∨
                                                                                                                Beautify
        "user_id": "1",
       "otp": "90524",
"new_password": "ramani",
  3
  4
       "purpose": "forgot_password"
                                                                                                                  Ö
                                                                      200 OK | 16 ms | 361 B | (2) | Save Response | 000
Body Cookies (1) Headers (9) Test Results |
{} JSON ✓ ▷ Preview 🍪 Visualize ✓
                                                                                                  = Q 1 G 0
           "message": "Password reset successful. Please login with new password."
                                                                                         Activate Windows
```

# 6. Login with previous and new password

**URL**: POST http://localhost:3000/api/auth/login

### Postman:

#### Old Password

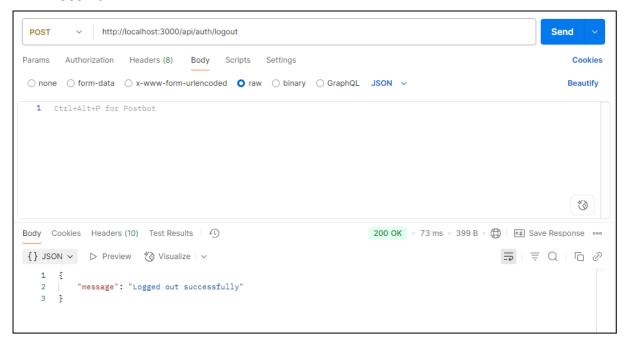
#### New password

```
POST v http://localhost:3000/api/auth/login
                                                                                                                      Send
Params Authorization Headers (10) Body • Scripts Settings
                                                                                                                           Cookies
\bigcirc none \bigcirc form-data \bigcirc x-www-form-urlencoded \bigcirc raw \bigcirc binary \bigcirc GraphQL JSON \lor
                                                                                                                          Beautify
      "email": "ramani.vem
"password": "ramani"
        "email": "ramani.vemula@mitaoe.ac.in",
  3
                                                                                                                            63
Body Cookies (1) Headers (9) Test Results |
                                                                             200 OK 2.95 s 338 B 😭 es Save Response 👓
{} JSON ✓ ▷ Preview 🍪 Visualize ✓
                                                                                                           = | = Q | © 0
            "message": "OTP sent to your email.",
         "user_id": 1
```

# 7. Logout

## URL: POST http://localhost:3000/api/auth/logout

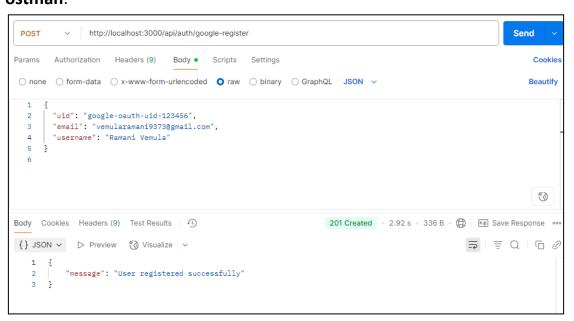
#### Postman:



# 8. Registering with the google

URL: POST <a href="http://localhost:3000/api/auth/google-register">http://localhost:3000/api/auth/google-register</a>

## Postman:

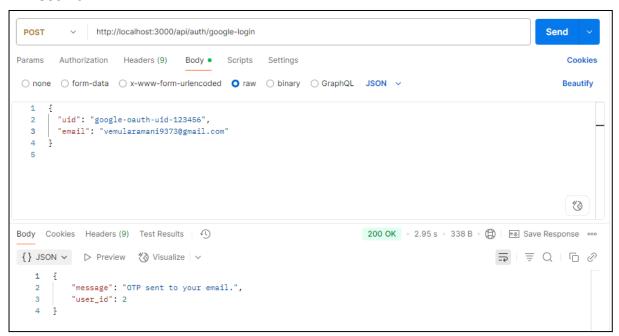


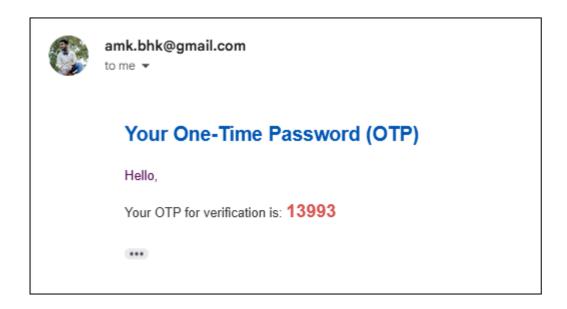
#### Database Schema:

	user	id username	email	password	authProvider	uid	оф
•	1	ramani	ramani.vemula@mitaoe.ac.in	6b4995a929e2936ae07a4c0792385a93	local	Bgibdhoeonejooebrvico68	96958
	2	Ramani Vemu	la vemularamani9373@gmail.com		google	google-oauth-uid-123456	NULL
	NULL	NULL	NULL	NULL	NULL	HULL	NULL

# 9. Logging with the google

**URL**: POST <a href="http://localhost:3000/api/auth/google-login">http://localhost:3000/api/auth/google-login</a>

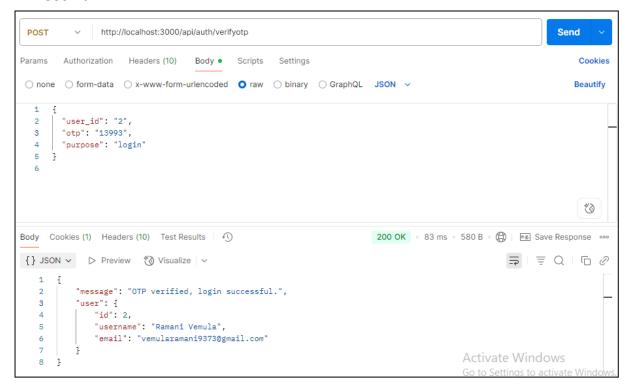




## 10.OTP Verification

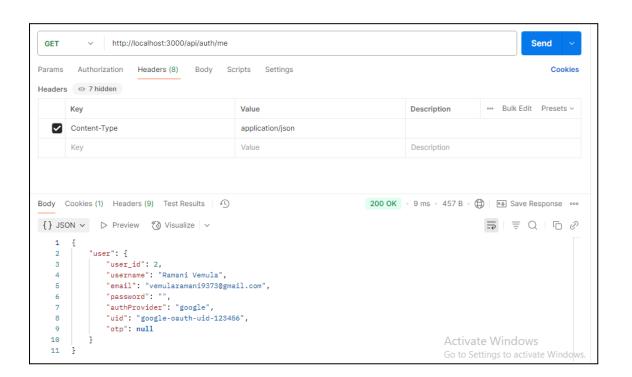
**URL**: POST http://localhost:3000/api/auth/verifyotp

#### Postman:



# 11. Getting User Details

URL: GET <a href="http://localhost:3000/api/auth/me">http://localhost:3000/api/auth/me</a>



## Model API's

#### **Overview:**

Models allow users to define and manage custom database structures by specifying a name and fields. The API supports creating, updating, viewing, and deleting models, and it automatically generates Sequelize code and stores metadata for each model.

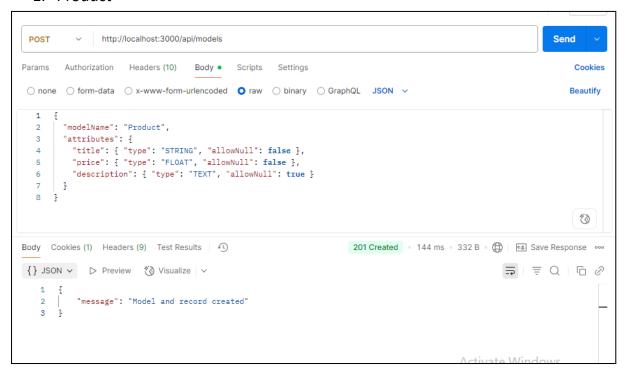
Basic URL: <a href="http://localhost:3000/api/models">http://localhost:3000/api/models</a>

# 1. Creating the model

URL: POST <a href="http://localhost:3000/api/models">http://localhost:3000/api/models</a>

#### Postman:

1. Product



#### **Database**

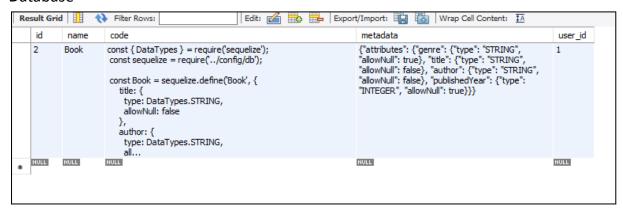
```
| Edit: 🚄 🖶 | Export/Import: 🏭 🐻 | Wrap Cell Content: 🖽
                                                                                                                                                                                                     name

▼ metadata
                                                                                                                                                                     user_id
                                                                                                        {"attributes": {"price": {"type": "FLOAT",
    "allowNull": false}, "title": {"type": "STRING",
    "allowNull": false}, "description": {"type": "TEXT",
    "allowNull": true}}}
                           const { DataTypes } = require('sequelize');
                            const sequelize = require('../config/db');
                            const Product = sequelize.define('Product', {
                               title: {
   type: DataTypes.STRING,
                                 allowNull: false
                                price: {
                                 type: DataTypes.FLOAT,
                                 allowNull: false
                                description: {
Users 2
```

#### 2. Book

```
http://localhost:3000/api/models
                                                                                                                              Send
 POST
                                                                                                                                   Cookies
Params Authorization Headers (10) Body • Scripts Settings
onone of form-data of x-www-form-urlencoded of raw of binary of GraphQL JSON v
                                                                                                                                  Reautify
  2
         "modelName": "Book",
         "attributes": {
  3
           "title": { "type": "STRING", "allowNull": false },
"author": { "type": "STRING", "allowNull": false },
  4
  5
           "publishedYear": { "type": "INTEGER", "allowNull": true },
"genre": { "type": "STRING", "allowNull": true }
  6
        3
  8
  9
                                                                                                                                    *3
 10
Body Cookies (1) Headers (9) Test Results |
                                                                             201 Created • 16 ms • 332 B • 🖨 | 🙉 Save Response •••
{} JSON ✓ ▷ Preview 🍪 Visualize ✓
                                                                                                                  = Q 1 G Ø
            "message": "Model and record created"
```

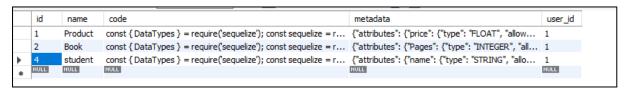
#### Database



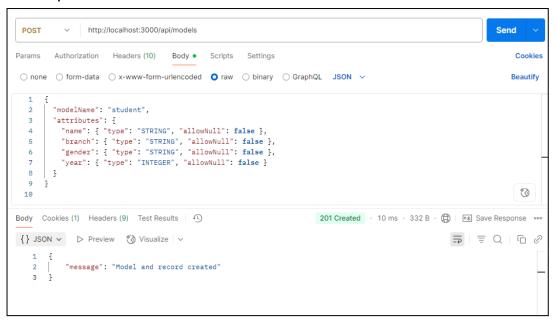
#### 3. Student

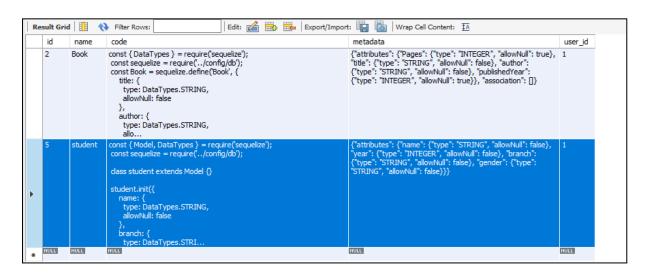
```
http://localhost:3000/api/models
                                                                                                                                      Send
 POST
Params Authorization Headers (10) Body • Scripts Settings
                                                                                                                                           Cookies
\bigcirc none \bigcirc form-data \bigcirc x-www-form-urlencoded \bigcirc raw \bigcirc binary \bigcirc GraphQL JSON \lor
                                                                                                                                          Beautify
          "modelName": "student".
   2
          "attributes": {
  3
            "name": { "type": "STRING", "allowNull": false },
           "branch": { "type": "STRING", "allowNull": false },
"gender": { "type": "STRING", "allowNull": false },
"year": { "type": "INTEGER", "allowNull": false }
  8
        3
                                                                                                                                             *3
Body Cookies (1) Headers (9) Test Results |
                                                                                  201 Created • 10 ms • 332 B • 📵 🐼 Save Response •••
                                                                                                                         = Q 1 6 0
{} JSON ✓ ▷ Preview 🍪 Visualize ✓
            "message": "Model and record created"
```

#### **Database**



## After updation in code:





# 2. Getting all the models created by user\_id: 1

## **URL**: **GET** http://localhost:3000/api/models

```
Send
    GET
                                        http://localhost:3000/api/models
Params Authorization Headers (8) Body Scripts Settings
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cookies
                                                                                                                                                                                                                                                                        200 OK = 26 ms = 1.64 KB = ( Save Response •••
Body Cookies (1) Headers (9) Test Results
{} JSON ∨ ▷ Preview 🍪 Visualize ∨
                                                                                                                                                                                                                                                                                                                                                                                          = 1 = Q 1 G 0
                                                         "id": 1,
                                                          "name": "Product",
                                                          "code": "const { DataTypes } = require('sequelize');\nconst sequelize = require('../config/db');\n\nconst
                                                                      Product = sequelize.define('Product', {\n title: {\n type: DataTypes.STRING,\n allowl false\n },\n price: {\n type: DataTypes.FLOAT,\n allowNull: false\n },\n description: {\n type: DataTypes.TEXT\n },\n}, {\n tableName: 'products',\n timestamps:
                                                                      {\tt false \ncolor{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{local}{loca
                                                          "metadata": }
                                                                         "attributes": {
                                                                                         "price": {
                                                                                                    "type": "FLOAT",
                                                                                                     "allowNull": false
         11
                                                                                         "title": {
         12
                                                                                                     "type": "STRING",
         13
          14
                                                                                                     "allowNull": false
                                                                                          description": {
                                                                                                                                                                                                                                                                                                                                                        Activate Windows
                                                                                                     "type": "TEXT",
          17
                                                                                                     "allowNull": true
          18
                                                                                                                                                                                                                                                                                                                                                        Go to Settings to activate Windows.
```

```
GET
            http://localhost:3000/api/models
                                                                                                                                 Send
Params Authorization Headers (8) Body Scripts Settings
                                                                                                                                       Cookies
Body Cookies (1) Headers (9) Test Results |
                                                                                   200 OK = 26 ms = 1.64 KB = ( Save Response •••
{} JSON ∨ ▷ Preview 🖔 Visualize ∨
                                                                                                                     = | = Q | G @
                              "allowNull": true
  19
  20
   21
   22
                  "user_id": 1
   23
            3,
   25
                 "name": "Book",
   27
                 "code": "const { DataTypes } = require('sequelize');\nconst sequelize = require('../config/db');\n\nconst
                     Book = sequelize.define('Book', {\n title: {\n type: DataTypes.STRING,\n allowNull: false\n },\n author: {\n type: DataTypes.STRING,\n allowNull: false\n },\n publishedYear: {\n type: DataTypes.INTEGER\n },\n genre: {\n type: DataTypes.
                      STRING\n
                                  ,\n}, \n tableName: 'books',\n timestamps: false\n});\n\nmodule.exports = Book;\n",
  28
                 "metadata": {
  29
                      "attributes": {
   30
                          "genre": {
   31
                              "type": "STRING",
   32
                               "allowNull": true
   33
   34
                          "title": {
                               "type": "STRING",
                                                                                                           Go to Settings to activate Windo
```

# 3. Updating the existing model $\rightarrow$ 2 [Book]

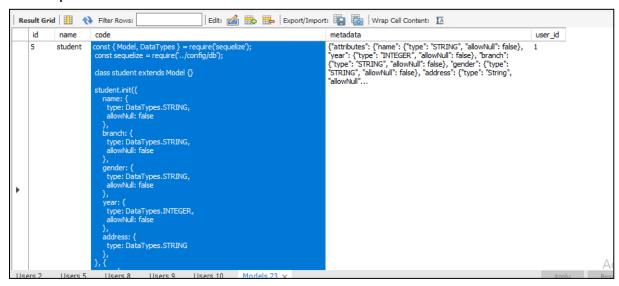
## URL: PUT http://localhost:3000/api/models/2

#### Postman:

```
Send
            http://localhost:3000/api/models/2
Params Authorization Headers (10) Body • Scripts Settings
                                                                                                                                    Cookies
 ○ none ○ form-data ○ x-www-form-urlencoded ○ raw ○ binary ○ GraphQL JSON ∨
                                                                                                                                   Beautify
          "modelName": "Book",
  2
  3
         "attributes":
   4
           "title": { "type": "STRING", "allowNull": false },
           "author": { "type": "STRING", "allowNull": false },
"publishedYear": { "type": "INTEGER", "allowNull": true },
"Pages": { "type": "INTEGER", "allowNull": true }
                                                                                                                                     20
Body Cookies (1) Headers (9) Test Results 4
                                                                                   200 OK 54 ms 329 B 6 B Save Response 000
{} JSON ✓ ▷ Preview 🍪 Visualize ✓
                                                                                                                   = | = Q | □ @
             "message": "Model updated successfully"
```

#### Database

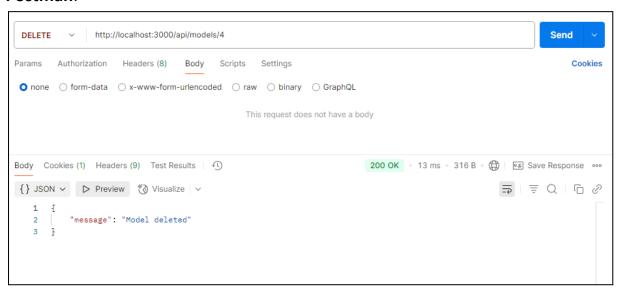
## After updation in code:



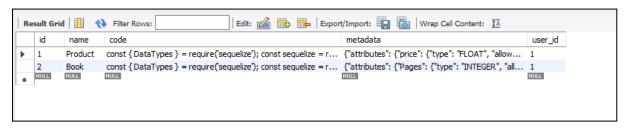
# 4. Deleting the existing model → 4 [Student]

URL: DELETE http://localhost:3000/api/models/4

#### Postman:



### Database



## **RELATIONSHIP API's**

#### **Overview:**

This module provides APIs to define, update, and delete associations between two models. The system ensures that both forward and reverse associations are stored and reflected in the Sequelize code and metadata, making models fully relational and manageable through the UI or programmatically.

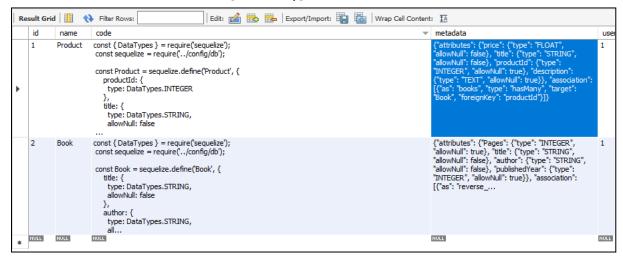
Basic URL: http://localhost:3000/api/relationship

# 1. Updating the code by adding the relation between Product & book→ one-to-many

**URL**: POST <a href="http://localhost:3000/api/relationship/update">http://localhost:3000/api/relationship/update</a>

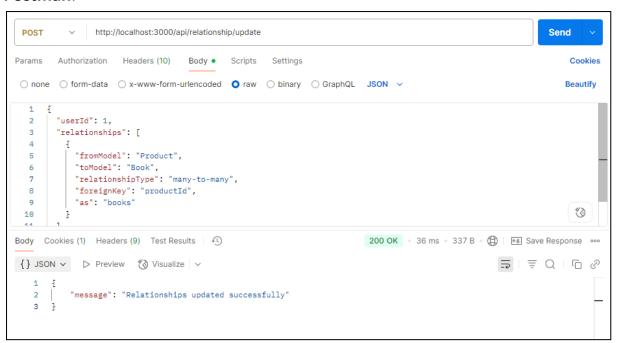


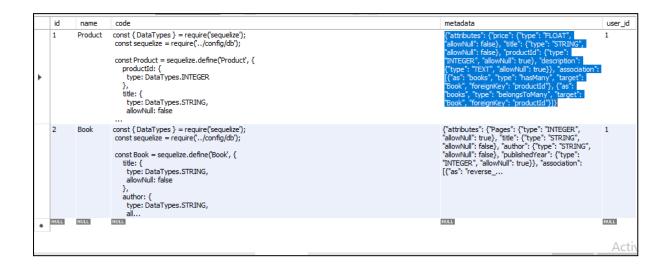
## Database → association added [hasMany]



# 2. Updating the code by another relation between Product & book→ many-to-many

**URL**: POST <a href="http://localhost:3000/api/relationship/update">http://localhost:3000/api/relationship/update</a>

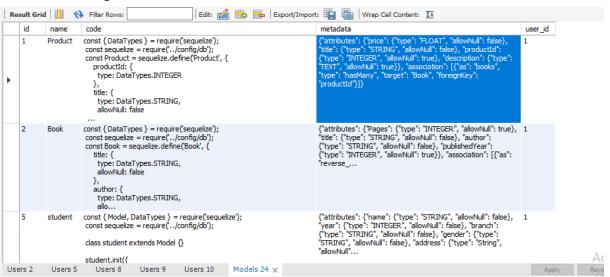




## **ISSUE**: Duplicate Associations in Metadata When Updating Relationships

→ Instead of replacing the existing one-to-many relationship, the system **added** a new many-to-many relationship

## After Correcting the Issue:

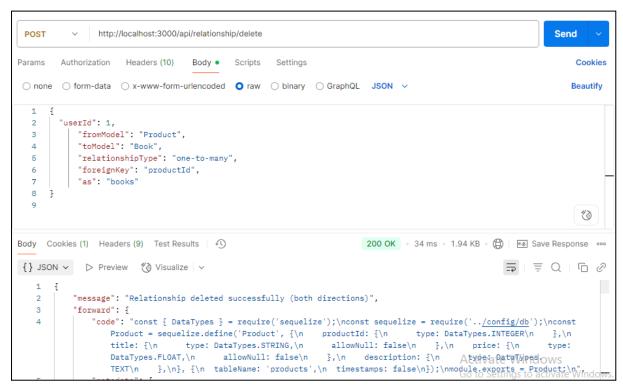


```
http://localhost:3000/api/relationship/update
                                                                                                                   Send
 POST
Params Authorization Headers (10) Body • Scripts Settings
                                                                                                                       Cookies
\bigcirc none \bigcirc form-data \bigcirc x-www-form-urlencoded \bigcirc raw \bigcirc binary \bigcirc GraphQL JSON \lor
                                                                                                                      Beautify
        "userId": 1,
  2
  3
        "relationships": [
  4
            "fromModel": "Product",
  5
            "toModel": "Book",
            "relationshipType": "one-to-many",
            "foreignKey": "productId",
            "as": "books"
                                                                                                                         *
 10
Body Cookies (1) Headers (9) Test Results |
                                                                           200 OK 54 ms 337 B 6 Save Response 000
                                                                                                        = 1 = Q 1 G 0
{} JSON ∨ ▷ Preview 🍪 Visualize ∨
           "message": "Relationships updated successfully"
```

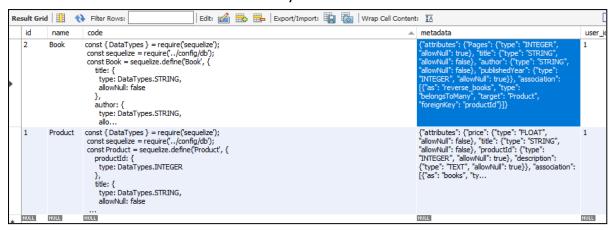
```
Send
 POST
        http://localhost:3000/api/relationship/update
Params Authorization Headers (10) Body • Scripts Settings
                                                                                                                      Cookies
\bigcirc none \bigcirc form-data \bigcirc x-www-form-urlencoded \bigcirc raw \bigcirc binary \bigcirc GraphQL JSON \vee
                                                                                                                     Beautify
        "userId": 1,
  2
        "relationships": [
  3
  4
            "fromModel": "Product",
           "toModel": "Book",
            "relationshipType": "many-to-many",
           "foreignKey": "productId",
  8
           "as": "books"
  9
                                                                                                                       *3
 10
Body Cookies (1) Headers (9) Test Results |
                                                                         200 OK 22 ms 337 B 6 Save Response 000
{} JSON ✓ ▷ Preview 🍪 Visualize ✓
                                                                                                      = Q 1 6 0
           "message": "Relationships updated successfully"
```

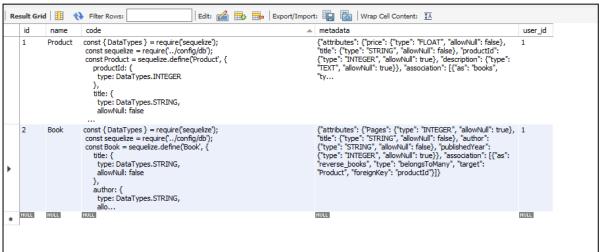
# 3. Delete the relation relation between Product & book $\rightarrow$ one-to-many

URL: POST <a href="http://localhost:3000/api/relationship/delete">http://localhost:3000/api/relationship/delete</a>



### Database → relation deleted successfully from both side

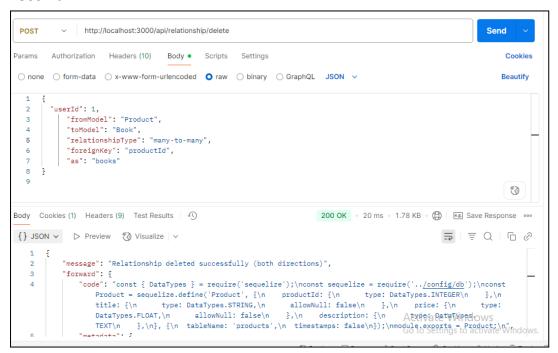




# 4. Delete the another relation between Product & book→ many-to-many

URL: POST <a href="http://localhost:3000/api/relationship/delete">http://localhost:3000/api/relationship/delete</a>

#### Postman:



## Database → relation deleted successfully from both side

```
| Edit: 🚄 🖶 🖶 | Export/Import: 🏣 📸 | Wrap Cell Content: 🏗
                                                                                                                                                               "attributes": {"Pages": {"type": "INTEGER", "allowNull": true}, 1
"tite": {"type": "STRING", "allowNull": false}, "author":
{"type": "STRING", "allowNull": false}, "publishedYear":
{"type": "INTEGER", "allowNull": true}}, "association": []}
                                       const { DataTypes } = require('sequelize');
                                       const sequelize = require('../config/db');
const Book = sequelize.define('Book', {
                                              type: DataTypes.STRING,
                                               allowNull: false
                                            author: {
                                              type: DataTypes.STRING,
                                                                                                                                                               {"attributes": {"price": {"type": "FLOAT", "allowNull": false}, "itile": {"type": "STRING", "allowNull": false}, "productid": {"type": "INTEGER", "allowNull": true}, "description": {"type": "TEXT", "allowNull": true}}, "association": []}
                    Product const { DataTypes } = require('sequelize');
                                       const sequelize = require('../config/db');
const Product = sequelize.define('Product', {
productId: {
                                              type: DataTypes.INTEGER
                                            }, 
title: {
                                             type: DataTypes.STRING,
allowNull: false
NULL
                  NULL
                                     NULL
                                                                                                                                                               NULL
                                                                                                                                                                                                                                                                         NULL
```