

# API Specification

*There are three types of resources: User, Category, and Item.  
Every item belongs to one and only one Category.*

## 1. User:

<b>POST /users</b>	<b>create user</b>
Body:	{“name” : <string: name>, “password” : <string: password>}
Header:	{"Content-Type": "application/json"}
JWT:	none
Expected return:	{ "message": "user created successfully" } 201 Created

Error:

**400 Bad Request**

Invalid content-type header  
    {"message":"Invalid Content-Type header"}

User name already exists  
    { "message": "user already exists" }

Missing value for fields:  
    {"message":“Failed to decode JSON object: <information from exception>”}

Invalid data (missing fields, empty fields’ values)  
    {"message":"Invalid <field\_name>: <error message from marshmallow>"}

<b>POST /auth</b>	<b>retrieving jwt, authenticate an user</b>
Body:	{"name" : <string: name>, "password" : <string: password>}
Header:	{"Content-Type": "application/json"}
JWT :	none
Expected return:	{"access_token": <jwt_access_token>} 200 OK

Error:

**400 Bad Request**

Invalid header  
    {"message":"Invalid Content-Type header"}

Missing value for fields:  
    {"message":“Failed to decode JSON object: <information\_from\_exception>”}

Invalid data (missing fields, empty fields’ values)  
    {"message":"Invalid <field\_name>: <error\_message\_from\_marshmallow>"}

Invalid name / password  
    { "message":"Invalid username/password" }



**PUT /users/<int:user\_id> update user**

Body: {"name" : <string: name>  
"password" : <string: new\_password>}

Header: {"Content-Type": "application/json",  
"Authorization": "Bearer <string: access\_token>"}

JWT : required

Expected return: { "message": "User updated successfully" } 200 OK

Error:

**400 Bad Request**

Invalid headers

{ "message": "Invalid Content-Type header" }

{ "message": "Invalid Authorization header" }

Fields' value is None:

{ "message": "Failed to decode JSON object: <message\_from\_exception>" }

Invalid data (missing fields, fields' values are None)

{ "message": "Invalid <field\_name>: <error\_message\_from\_marshmallow>" }

Invalid access token

{ "message": "Invalid access token" }

**401 Unauthorized**

Try to update different user

{ "message": "Unauthorized action" }

Expired token

{ "message": "Token is expired" }

## 2. Category:

*Category "Unspecified" is a default category and cannot be altered*

**GET /categories retrieve all categories**

Body: none

Header: none

JWT: none

Expected return: [list of categories in JSON format] 200 OK

Error: none

**GET /categories/<int:category\_id> retrieve a category**

Body: none

Header: none



JWT: none  
Expected return: {"name" : <string:name>,  
"items" : [list of items in JSON format]}, 200 OK

Error:  
**404 Not Found**  
{ "message": "No category found" }

**POST /categories create a category**  
Body: {"name" : <string: name>}  
Header: {"Content-Type": "application/json",  
"Authorization": "Bearer <string: access\_token>"}  
JWT: required, only logged in users can perform  
Expected return: created category in JSON format, 201 Created

Error:  
**400 Bad Request**  
Invalid headers  
{ "message": "Invalid Content-Type header" }  
{ "message": "Invalid Authorization header" }  
Category name already exists  
{ "message": "category name already exists" }  
Fields' values are None:  
{ "message": "Failed to decode JSON object: <message\_from\_exception>" }  
Invalid data (missing fields, fields' values is empty string)  
{ "message": "Invalid <field\_name>: <error\_message\_from\_marshmallow>" }  
Invalid access token  
{ "message": "Invalid access token" }  
**401 Unauthorized**  
Expired token  
{ "message": "Token is expired" }

**PUT /categories/<int:category\_id> update a category**  
Body: {"name" : <string: name>}  
Header: {"Content-Type": "application/json",  
"Authorization": "Bearer <string: access\_token>"}  
JWT: required, only creator can perform  
Expected return: updated category in JSON format, 200 OK

Error:  
**400 Bad Request**



Invalid headers

```
{"message": "Invalid Content-Type header"}
```

```
{"message": "Invalid Authorization header"}
```

Category name already exists

```
{ "message": "category name already exists" }
```

Fields' values are None:

```
{"message": "Failed to decode JSON object: <message_from_exception>"}
```

Invalid data (missing fields, fields' values is empty string)

```
{"message": "Invalid <field_name>: <error_message_from_marshmallow>"}
```

Invalid access token

```
{ "message": "Invalid access token" }
```

#### **401 Unauthorized**

Try to update different user's category

```
{ "message": "Unauthorized action" }
```

Expired token

```
{ "message": "Token is expired" }
```

#### **404 Not Found**

```
{ "message": "No category found" }
```

### **DELETE      /categories/<int:category\_id>      delete a category**

*All associated items are moved to "Unspecified" category*

Body:                    none

Header:                {"Authorization":      "Bearer <string: token>"}

JWT:                    required, only creator can perform

Expected return:      {"message": "Category deleted"}                    200 OK

Error:

#### **400 Bad Request**

Invalid headers

```
{"message": "Invalid Authorization header"}
```

Invalid access token

```
{ "message": "Invalid access token" }
```

#### **401 Unauthorized**

Try to delete different user's category

```
{ "message": "Unauthorized action" }
```

Token is expired

```
{"message": "Token is expired"}
```

#### **404 Not Found**

```
{"message": "No category found"}
```

### **3. Item:**





**GET** `/categories/all/items` **retrieve all items**

Body:	none
Header:	none
JWT:	none
Expected return:	[list of items in JSON format], 200 OK

<b>GET</b>	<b>categories/&lt;int:category_id&gt;/items/&lt;int:item_id&gt;</b>	<b>retrieve an item</b>
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Body:	none
Header:	none
JWT:	none
Expected return:	item in JSON format, 200 OK

```
Error:      404 Not Found
           { "message": "No item found" }
```

**POST** /categories/<int:category\_id>/items **create an item**

Body:	{ "name": <string:name>, "description": <string:description> }
Header:	{ "Content-Type": "application/json", "Authorization": "Bearer <string: token>" }
JWT:	required, only logged in users can perform
Expected return:	created item in JSON format, 201 Created

Error:

**400 Bad Request**

Invalid headers

```
{ "message": "Invalid Content-Type header" }
{ "message": "Invalid Authorization header" }
```

Item name already exists

```
{ "message": "item name already exists" }
```

Fields' values are None:

```
{ "message": "Failed to decode JSON object: <message_from_exception>" }
```

Invalid data (missing fields, fields' values is empty string)

```
{ "message": "Invalid <field_name>: <error_message_from_marshmallow>" }
```

Category doesn't exist

```
{ "message": "Failed to save item. Possible cause: category does not exist" }
```

Invalid access token

```
{ "message": "Invalid access token" }
```

**401 Unauthorized**

Expired token

```
{ "message": "Token is expired" }
```



**PUT /categories/<int:category\_id>/items/<int:item\_id>                      update an item**

Body:                      {"name":                      <string:name>,  
                                 "description":                      <string:description>,  
                                 "category\_id":                      <int:category\_id>}

Header:                      {"Content-Type":                      "application/json",  
                                 "Authorization":                      "Bearer <string: token>"}

JWT:                      required, only creator can perform

Expected return:                      updated item in JSON format, 200 OK

Error:

**400 Bad Request**

Invalid headers

    {"message": "Invalid Content-Type header"}  
    {"message": "Invalid Authorization header"}

Item name already exists

    { "message": "item name already exists" }

Fields' values are None:

    {"message": "Failed to decode JSON object: <message\_from\_exception>"}

Invalid data (missing fields, fields' values is empty string)

    {"message": "Invalid <field\_name>: <error\_message\_from\_marshmallow>"}

Category doesn't exist

    { "message": "Failed to save item. Possible cause: category does not exist" }

Invalid access token

    { "message": "Invalid access token" }

**401 Unauthorized**

Try to update different user's item

    { "message": "Unauthorized action" }

Expired token

    { "message": "Token is expired" }

**404 Not Found**

    { "message": "No item found" }

**DELETE                      categories/<int:category\_id>/items/<int:item\_id>                      delete an item**

Body:                      none

Header:                      {"Authorization": "Bearer <string: token>"}

JWT:                      required, only creator can perform

Expected return:                      {"message": "Item deleted"}                      200 OK

Error:



## **400 Bad Request**

Invalid headers

```
{"message": "Invalid Authorization header"}
```

Invalid access token

```
{ "message": "Invalid access token" }
```

## **401 Unauthorized**

Try to delete different user's item

```
{ "message": "Unauthorized action" }
```

Token is expired

```
{"message": "Token is expired"}
```

## **404 Not Found**

```
{"message": "No item found"}
```



















