

Expense Tracker API — Documentation

1. Overview

A Node.js + Express + MongoDB + Firebase backend for tracking expenses.

Features:

- Firebase authentication
- CRUD operations for expenses
- Monthly & category-based reports
- Filtering & sorting
- Swagger documentation available

2. Base URL

<http://localhost:5001/api>

3. Authentication Routes

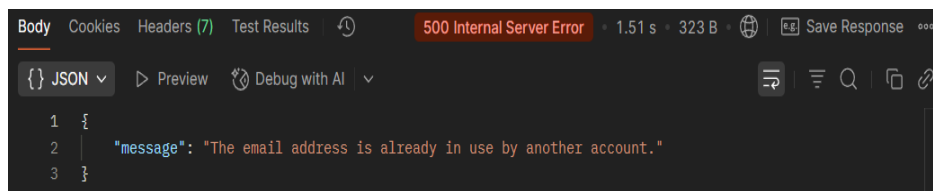
3.1 Register User

- **Endpoint:** /register
- **Method:** POST
- **Auth Required:** No
- **Request Body:**

```
1 {  
2   "email": "testuser@example.com",  
3   "password": "password123"  
4 }
```

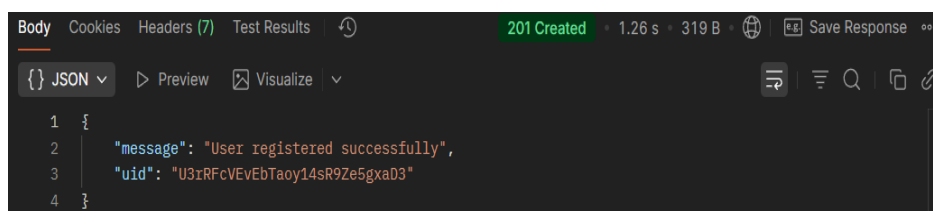
```
1 {  
2   "email": "testuser1@example.com",  
3   "password": "password123"  
4 }
```

- **Response:**



The screenshot shows a REST client interface with the 'Body' tab selected. The status bar at the top indicates a '500 Internal Server Error' with a response time of 1.51 s and a size of 323 B. The response body is a JSON object:

```
1 {  
2   "message": "The email address is already in use by another account."  
3 }
```



The screenshot shows a REST client interface with the 'Body' tab selected. The status bar at the top indicates a '201 Created' response with a response time of 1.26 s and a size of 319 B. The response body is a JSON object:

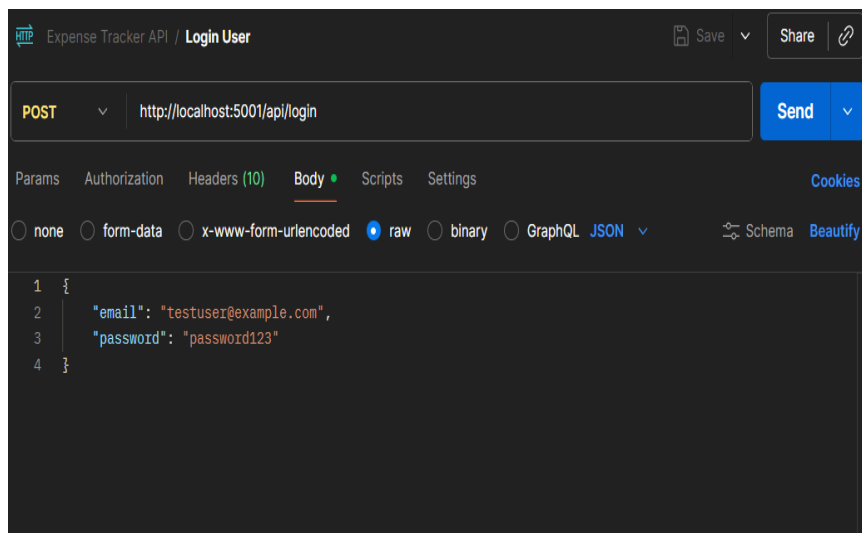
```
1 {  
2   "message": "User registered successfully",  
3   "uid": "U3iRFcVEvEbTaoy14sR9Ze5gxa03"  
4 }
```

- **Error Responses:**

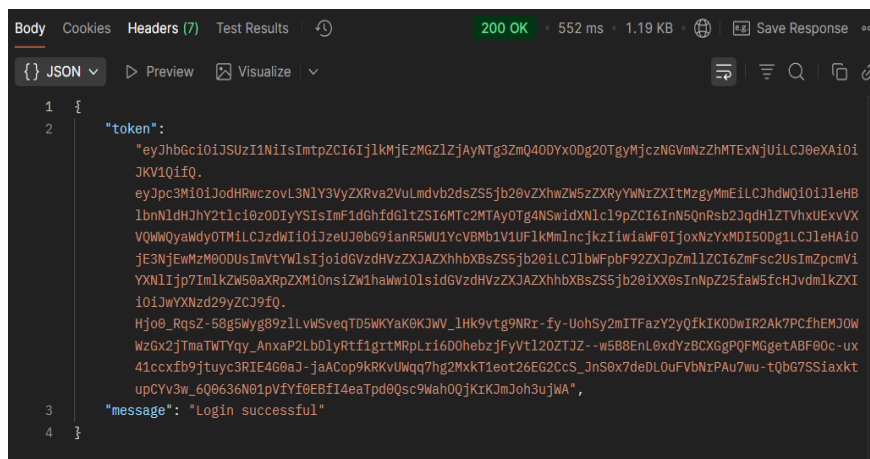
| Code | Description | Example |
|------|-----------------------------------|--|
| 400 | Missing or invalid email/password | { "error": "Email and password are required" } |
| 409 | User already exists | { "error": "User already registered" } |
| 500 | Internal server error | { "error": "Registration failed" } |

3.2 Login User

- **Endpoint:** /login
- **Method:** POST
- **Auth Required:** No
- **Request Body:**



- **Response:**

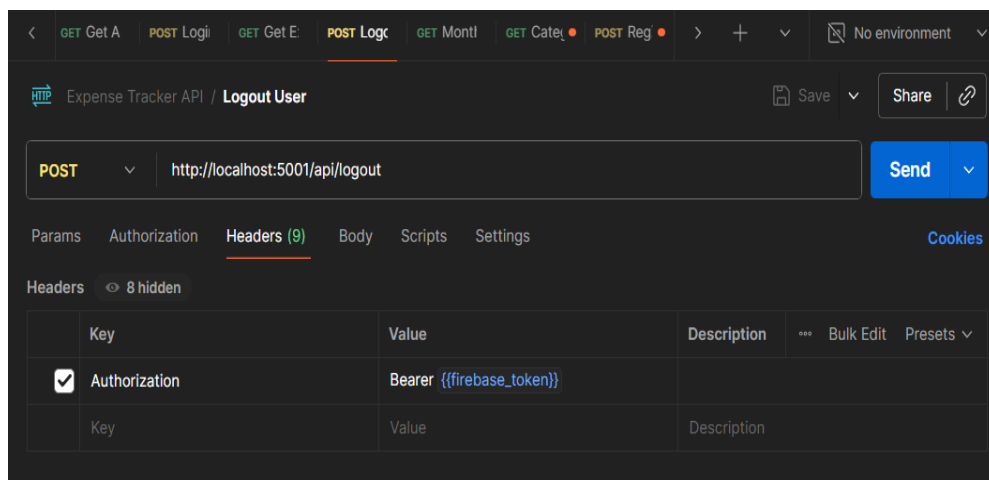


- **Error Responses:**

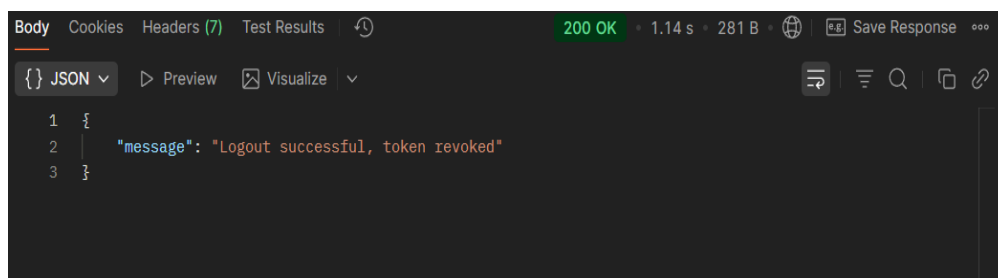
| Code | Description | Example |
|------|-----------------------|--|
| 400 | Missing credentials | { "error": "Email and password are required" } |
| 401 | Invalid credentials | { "error": "INVALID_LOGIN_CREDENTIALS" } |
| 500 | Internal server error | { "error": "Login failed, please try again" } |

3.3 Logout User

- **Endpoint:** /logout
- **Method:** POST
- **Auth Required:** Yes
- **Request Body:**



- **Response:**



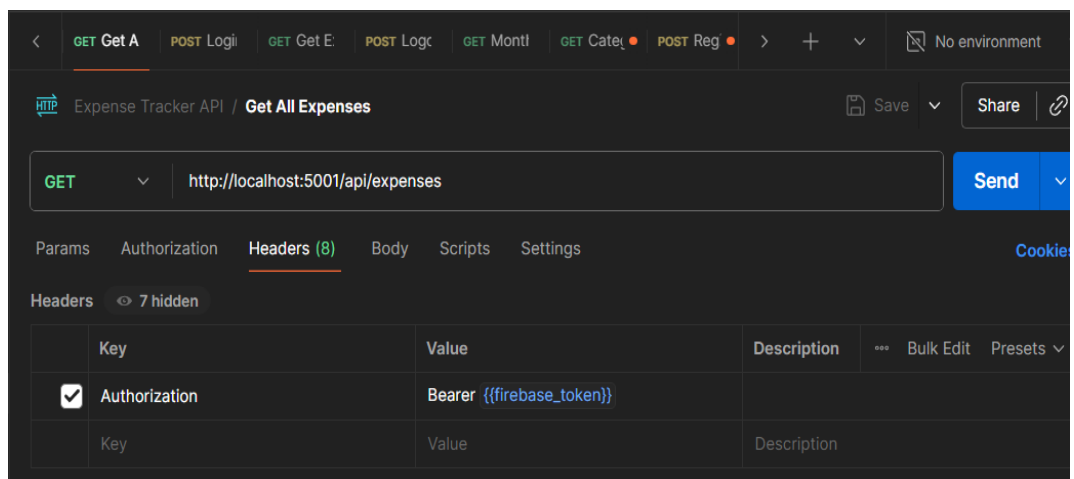
- **Error Responses:**

| Code | Description | Example |
|------|-------------------------------|---|
| 401 | Unauthorized or missing token | { "error": "No token provided" } |
| 403 | Invalid token | { "error": "Invalid or expired token" } |
| 500 | Server error | { "error": "Logout failed" } |

4. Expense Routes

4.1 Get all Expenses

- **Endpoint:** /expenses
- **Method:** GET
- **Auth Required:** Yes
- **Query Parameters (Optional):**
 - **category:** Filter by category
 - **minAmount / maxAmount**
 - **startDate / endDate (YYYY-MM-DD)**
 - **sort (field) & order (asc/desc)**
- **Request Body:**



- **Response:**

```

1 {
2   "success": true,
3   "count": 4,
4   "data": [
5     {
6       "_id": "68f37c58c7307488c8198087",
7       "userId": "sy8tlobjtyYMXqPLoUuPYd2igr93",
8       "title": "Dinner",
9       "amount": 550,
10      "category": "Arabic Sea",
11      "date": "2025-10-17T00:00:00.000Z",
12      "createdAt": "2025-10-18T11:39:04.438Z",
13      "updatedAt": "2025-10-18T11:39:04.438Z",
14      "__v": 0
15    },
16    {
17      "_id": "68f37d770cd21a1efaa31063",
18      "userId": "sy8tlobjtyYMXqPLoUuPYd2igr93"
19    }
20  ]
21 }

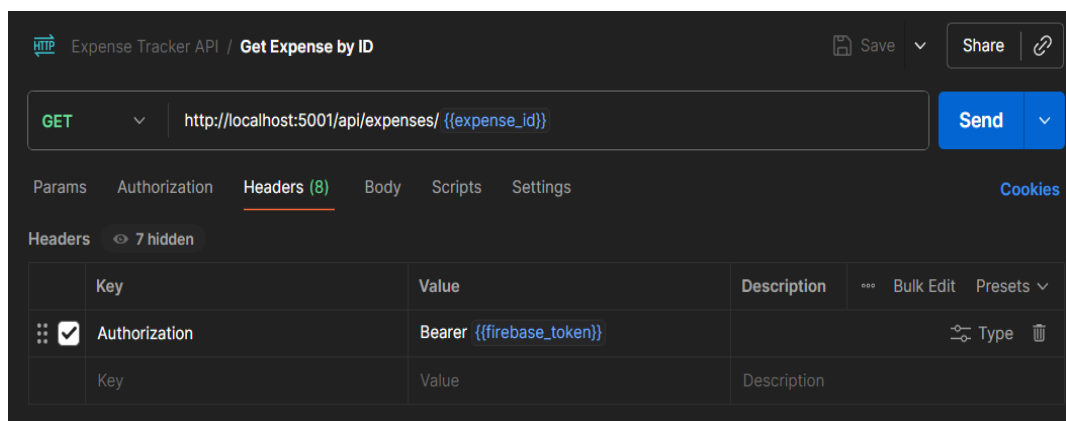
```

- **Error Response:**

| Code | Description | Example |
|------|-----------------------|--|
| 401 | Unauthorized | { "error": "Token missing or invalid" } |
| 404 | No expenses found | { "error": "No expenses found for this user" } |
| 500 | Internal server error | { "error": "Failed to fetch expenses" } |

4.2 Get Expense by ID

- **Endpoint:** /expenses/:id
- **Method:** GET
- **Auth Required:** Yes
- **Request Body:**



- **Response:**

```

1  {
2    "_id": "68f37c58c7307488c8198087",
3    "userId": "syBtlobjtyYMXqPLoUuPYd2igr93",
4    "title": "Dinner",
5    "amount": 550,
6    "category": "Arabic Sea",
7    "date": "2025-10-17T00:00:00.000Z",
8    "createdAt": "2025-10-18T11:39:04.438Z",
9    "updatedAt": "2025-10-18T11:39:04.438Z",
10   "__v": 0
11 }

```

- **Error Response:**

| Code | Description | Example |
|------|-------------------|--|
| 400 | Invalid ID format | { "error": "Invalid expense ID format" } |
| 401 | Unauthorized | { "error": "Missing or invalid token" } |
| 404 | Expense not found | { "error": "Expense not found" } |
| 500 | Server error | { "error": "Failed to fetch expense" } |

4.3 Add Expense

- **Endpoint:** /expenses
- **Method:** POST
- **Auth Required:** Yes
- **Request Body:**

```

1  {
2    "title": "Dinner",
3    "amount": 250,
4    "category": "Food",
5    "date": "2025-10-19"
6  }

```

- **Response:**

```

Body  Cookies  Headers (7)  Test Results  201 Created • 644 ms • 312 B
{ } JSON ▾ ▶ Preview 🖼 Visualize ▾
1  {
2    "message": "Expense added successfully",
3    "id": "68f730bd599681738e9f26ca"
4  }
  
```

- **Error Response:**

| Code | Description | Example |
|------|-------------------------|---|
| 400 | Missing required fields | { "error": "Title, amount, category, and date are required" } |
| 401 | Unauthorized | { "error": "Invalid or missing token" } |
| 422 | Validation failed | { "error": "Amount must be a positive number" } |
| 500 | Internal server error | { "error": "Failed to add expense" } |

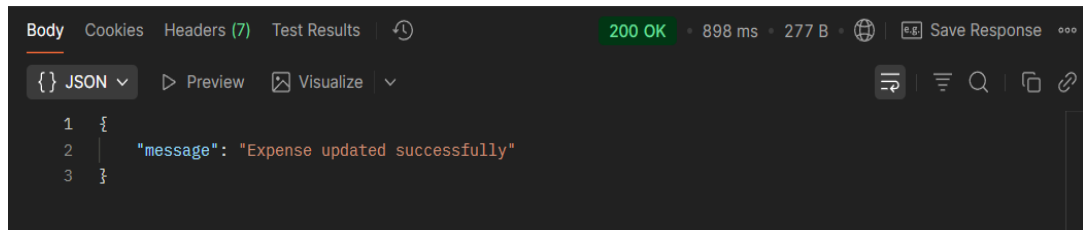
4.4 Update Expense

- **Endpoint:** /expenses/:id
- **Method:** PUT
- **Auth Required:** Yes
- **Request Body:** (any field to update)

```

HTTP Expense Tracker API / Update Expense
PUT http://localhost:5001/api/expenses/ {(expense_id)} Send
Params Authorization Headers (11) Body • Scripts Settings Cookies
none form-data x-www-form-urlencoded raw binary GraphQL JSON ▾ Schema Beautify
1  {
2    "title": "Dinner Updated",
3    "amount": 300,
4    "category": "Food",
5    "date": "2025-10-18"
6  }
  
```

- **Response:**

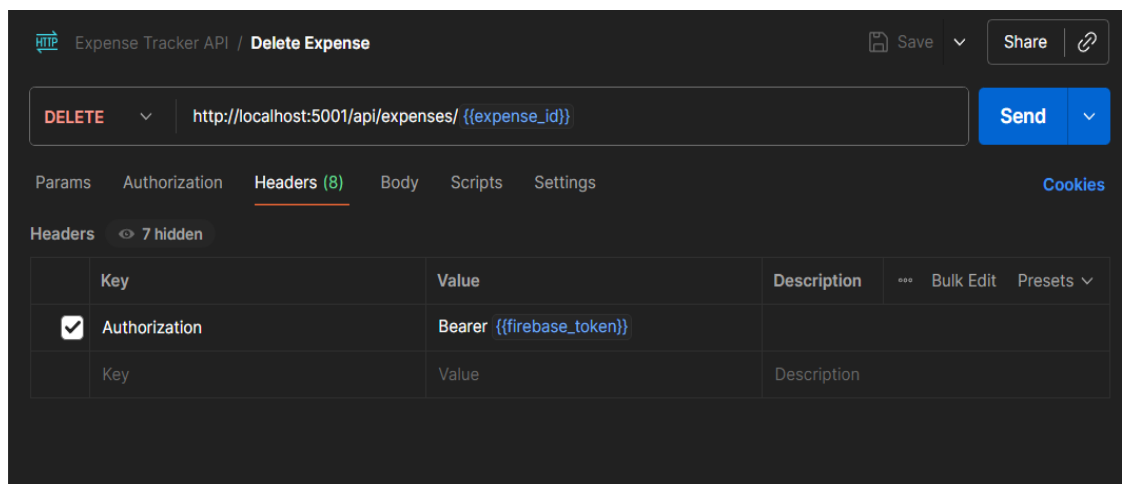


- **Error Responses:**

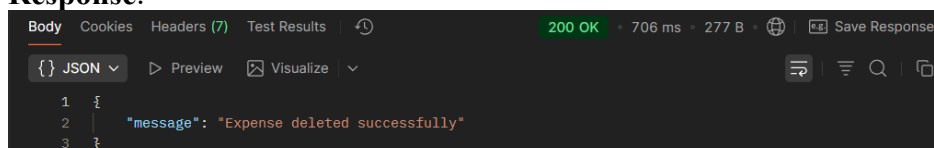
| Code | Description | Example |
|------|-------------------------|--|
| 400 | Invalid or missing data | <code>{ "error": "Provide valid fields to update" }</code> |
| 401 | Unauthorized | <code>{ "error": "Invalid or missing token" }</code> |
| 404 | Expense not found | <code>{ "error": "Expense not found" }</code> |
| 500 | Server error | <code>{ "error": "Failed to update expense" }</code> |

4.5 Delete Expense

- **Endpoint:** `/expenses/:id`
- **Method:** DELETE
- **Auth Required:** Yes
- **Request Body:**



- **Response:**



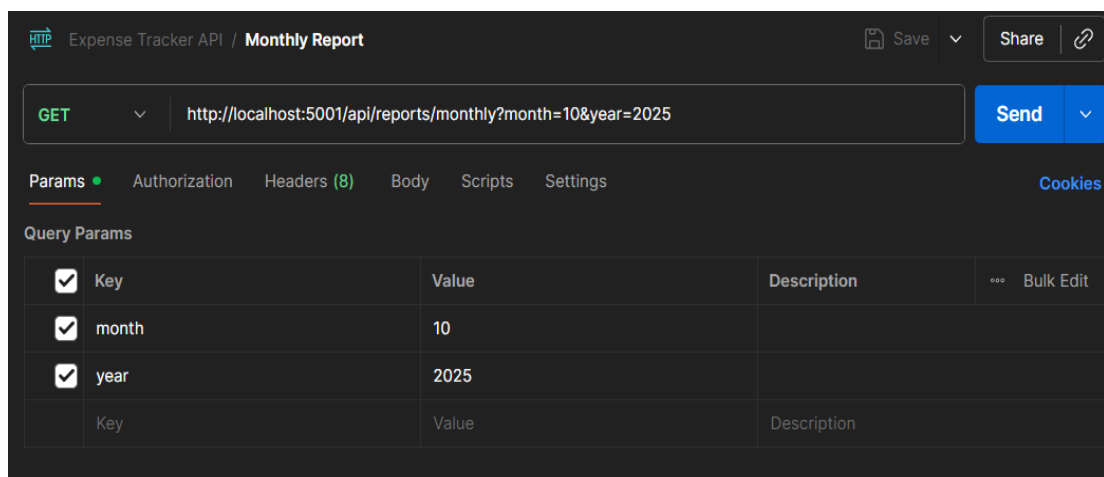
- **Error Responses:**

| Code | Description | Example |
|------|-----------------------|--|
| 400 | Invalid ID format | { "error": "Invalid expense ID format" } |
| 401 | Unauthorized | { "error": "Invalid or missing token" } |
| 404 | Expense not found | { "error": "Expense not found" } |
| 500 | Internal server error | { "error": "Failed to delete expense" } |

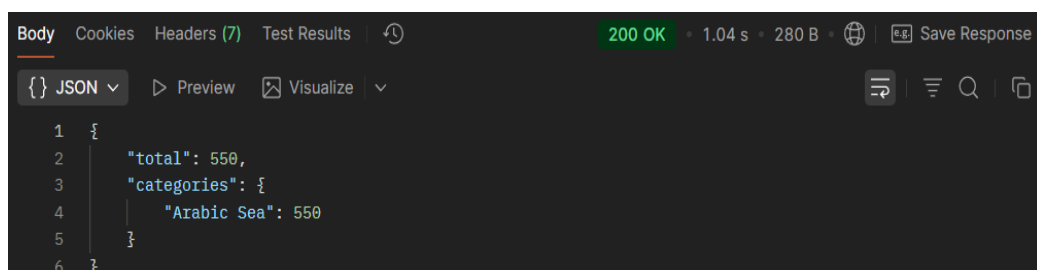
5. Report Routes

5.1 Monthly Report

- **Endpoint:** /reports/monthly
- **Method:** GET
- **Auth Required:** Yes
- **Query Parameters:**
 - month=MM
 - year=YYYY
- **Request Body:**



- **Response:**

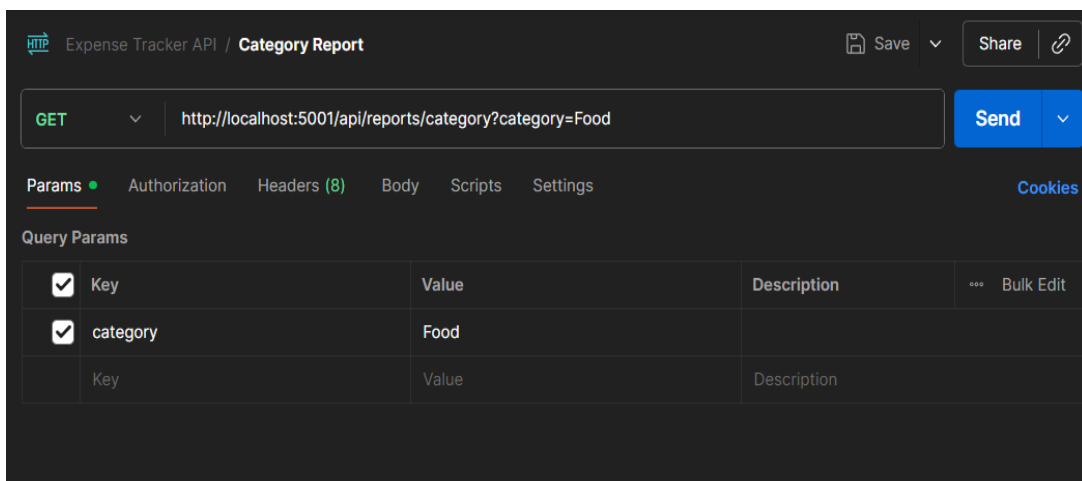


- Error Responses:**

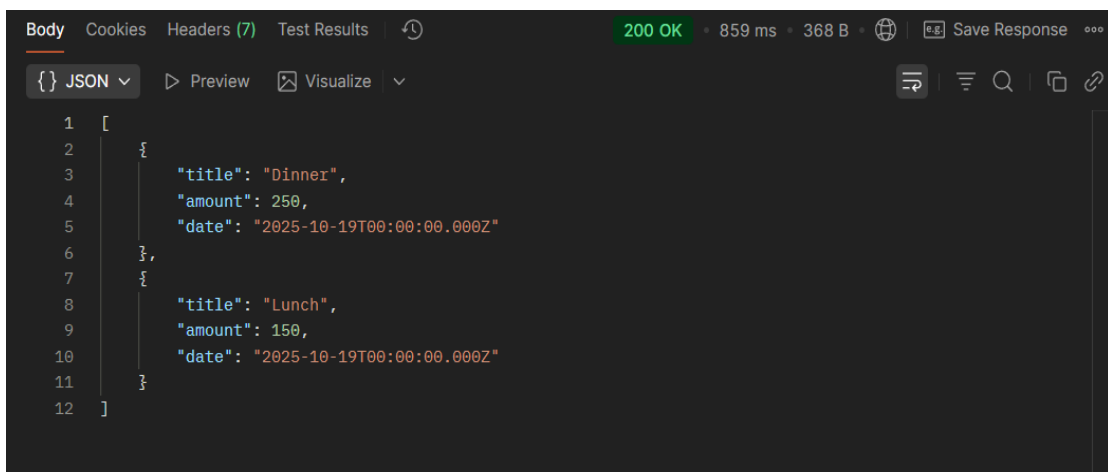
| Code | Description | Example |
|------|----------------------|---|
| 400 | Missing query params | { "error": "Month and year are required" } |
| 401 | Unauthorized | { "error": "Invalid or missing token" } |
| 404 | No expenses found | { "error": "No data found for selected month" } |
| 500 | Server error | { "error": "Failed to generate report" } |

5.2 Category Report

- Endpoint:** /reports/category
- Method:** GET
- Auth Required:** Yes
- Query Parameter:** category=Food
- Request Body:**



- Response:**



- **Error Responses:**

| Code | Description | Example |
|-------------|-------------------------------|--|
| 400 | Missing category param | { "error": "Category query parameter is required" } |
| 401 | Unauthorized | { "error": "Invalid or missing token" } |
| 404 | No expenses found | { "error": "No expenses found for this category" } |
| 500 | Internal server error | { "error": "Failed to fetch category report" } |