GOVERNMENT OF INDIA
MINISTRY OF STATISTICS AND
PROGRAMME IMPLEMENTATION

# MOSPI API PLATFORM

# API USER MANUAL FOR CONSUMER PRICE INDEX (CPI)

**COMPUTER CENTRE**
**Ministry of Statistics and Programme Implementation**

# Version Control Table

| DATE | DESCRIPTION | SUBMITTED BY | VERSION |
|---|---|---|---|
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# Contents

# 1. Introduction

1.1. This user guide documents the usage of the API platform of the Ministry of Statistics and Programme Implementation.

1.2. The **Base URL** for accessing the API platform is: https://api.mospi.gov.in 1.3. On accessing this **Base URL**, a user manual button is available which will download a PDF file with the documentation and usage details of the API.

1.4. A Metadata button on this page will download an XLS file for the codes used in the parameters to fetch data using the API.

1.5. The following process is to be followed for fetching the CPI data through the APIs: 1.5.1. The user is required to sign up the first time using a unique email **which can be used only once.** This API can be accessed at **Base URL/api/users/usersignup**

1.5.2. The user is required to obtain an access token which is valid for 30 minutes to fetch the required data through the APIs. Without access token the APIs will fetch only the first 10 records. This API can be accessed at **Base URL/api/login**

1.5.3. Using the platform, the Group and SubGroup level CPI Index and Inflation records can be fetched from **Jan 2011 onwards**. This API can be accessed at

**Base URL/api/getCPIIndex**

1.5.4. Using the platform, the Item level Index and Inflation records can be fetched from **Jan 2011 onwards**. This API can be accessed at **Base URL/api/getItemIndex**:

1.6. The execution of the above process is detailed in the following sections through Swagger tool and Postman.

1.7. Swagger UI tool is for documentation purpose of the API for domain users to understand the filter parameters and API response headers. Access token is not available via the Swagger tool and will return only 10 records.

1.8. Postman tool is for technical users to understand the API execution process via the parameters passed.

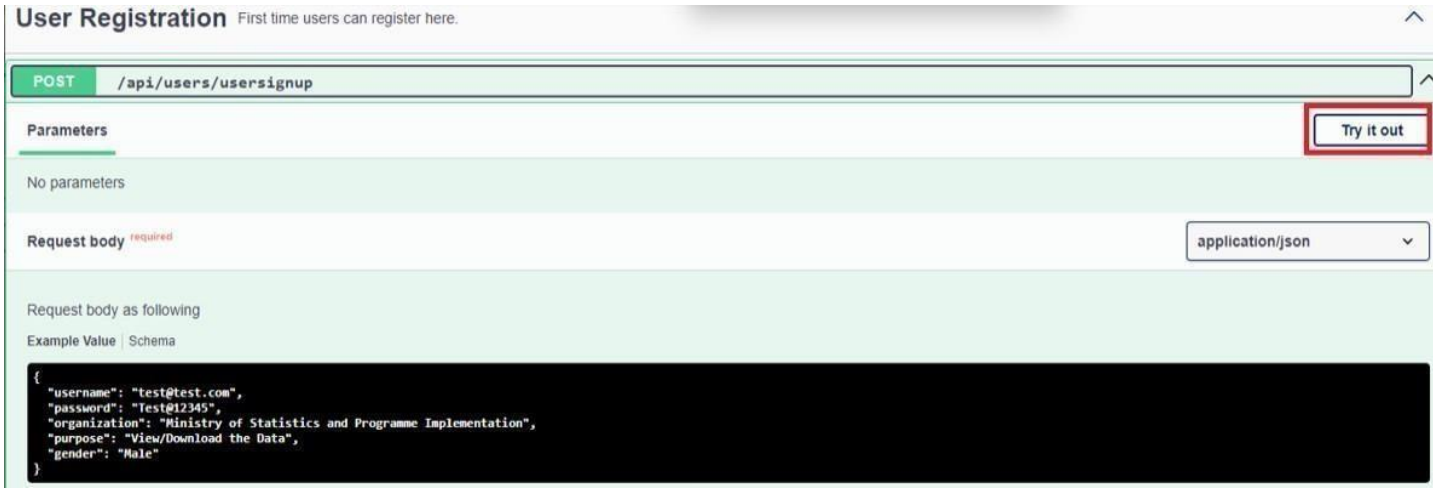
## 2. User Registration

2.1. Using Swagger, the steps for executing the APIs are mentioned below:

2.1.1. The users of the platform are required to sign up for using this API platform by accessing the **Base URL/api/users/usersignup**.

2.1.2. The below screen will open on accessing this URL


2.1.3. Click anywhere on the Green tile shown above and then click on the "Try it out" button on the right as indicated below. The fields in the Request Body section will become editable.




2.1.4. Enter the details in the Request Body as below:

{

"username": "test@test.com",

"password": "Test@12345",

"organization": "Ministry of Statistics andProgramme Implementation",

"purpose": "View/Download the Data",

"gender": "Male"

}

2.1.4.1. A valid email is required in the username field. Only '@' special character is allowed in this field.

2.1.4.2. One email can be used for registration only once.

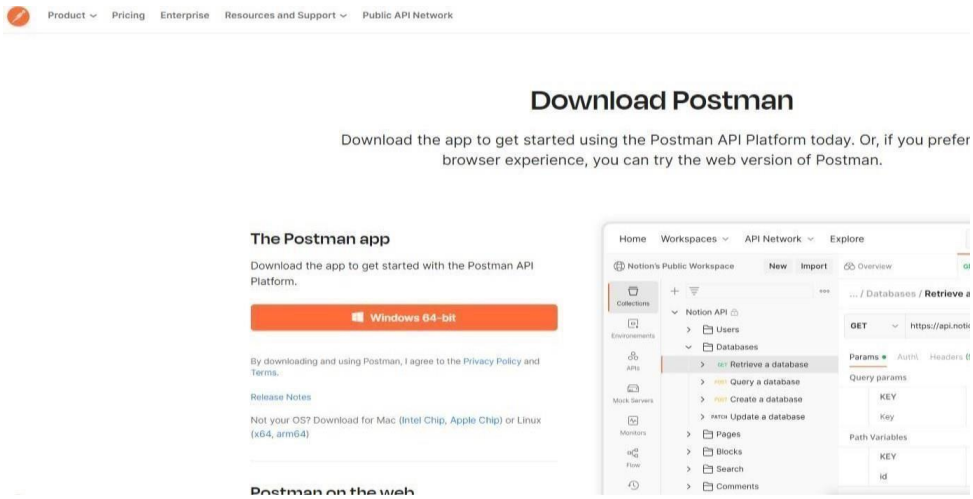
2.1.4.3. No special characters are allowed in the organization, purpose fields and gender.

2.1.4.4. Click on the Execute button. The API response code and description will be returned. A response code of 200 indicates the execution was successful.

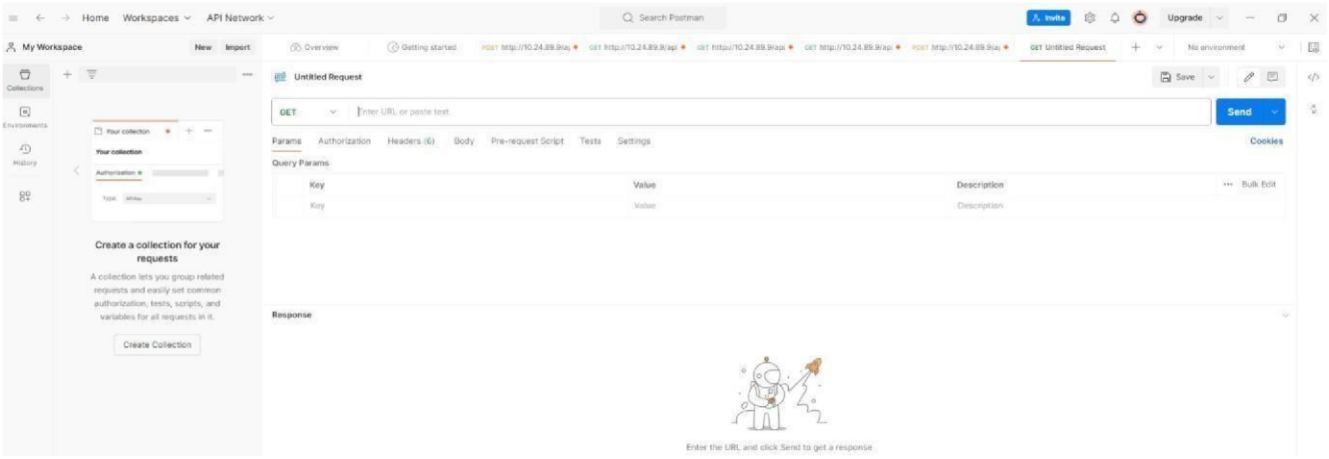

```
{
  "msg": "User registered successfully.",
  "statusCode": true,
  "response": {
    "id": 17,
    "gender": "Male",
    "username": "test7834@test.com",
    "organization": "Ministry of Statistics and Programme Implementation",
    "purpose": "View/Download the Data",
    "password": "VGVzdEAxMjM0NQ==",
    "role": "users",
    "createdBy": "",
    "isActive": "1",
    "updatedAt": "2024-04-15T21:50:14.098Z",
    "createdAt": "2024-04-15T21:50:14.098Z"
  }
}
```


2.2. Using Postman, the steps are mentioned below:

2.2.1. Download Postman from any web browser by visiting the link https://www.postman.com/downloads/

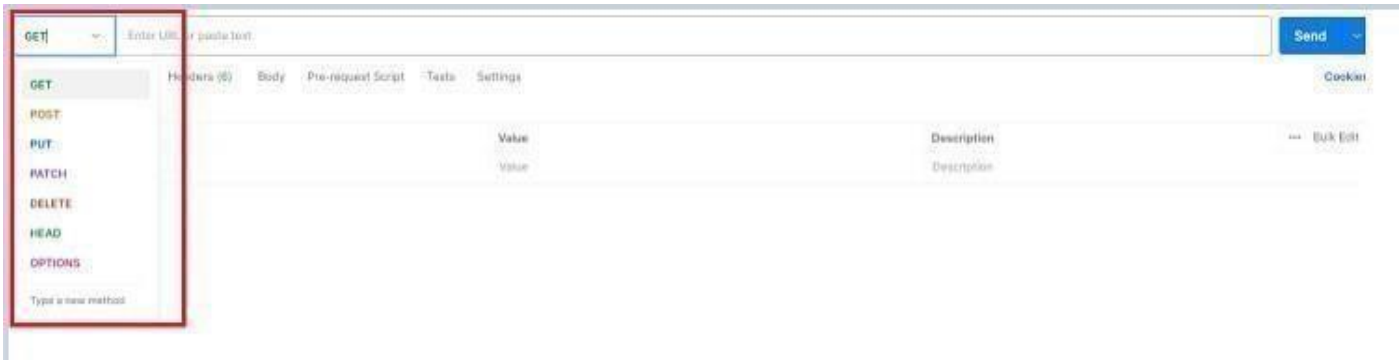



2.2.2. After downloading Postman app, open the app sign in or use the “lightweight API Client” and you will see the following menu:




3.2.3 Click the “+” button to add a request.


3.2.4 Expand the method button.




2.2.3. Use the signup API to register user for using the API platform, as described below.

2.2.3.1. Change the method to POST

2.2.3.2. Enter the **API *BASE URL*/api/users/usersignup** in the textbox

2.2.3.3. Select Body, raw radio button and select JSON from the dropdown where JSON is shown by default as highlighted in Yellow below

2.2.3.4. Enter the data for the signup user details as in step#2.1.4 but make sure the username is unique as shown below and click Send.

2.2.3.5. A success message will be sent as the response of the API indicating user signup is successfull as shown above.

## 3. Login Process

3.1. The below steps describe the process to get the access token for the API through

POSTMAN

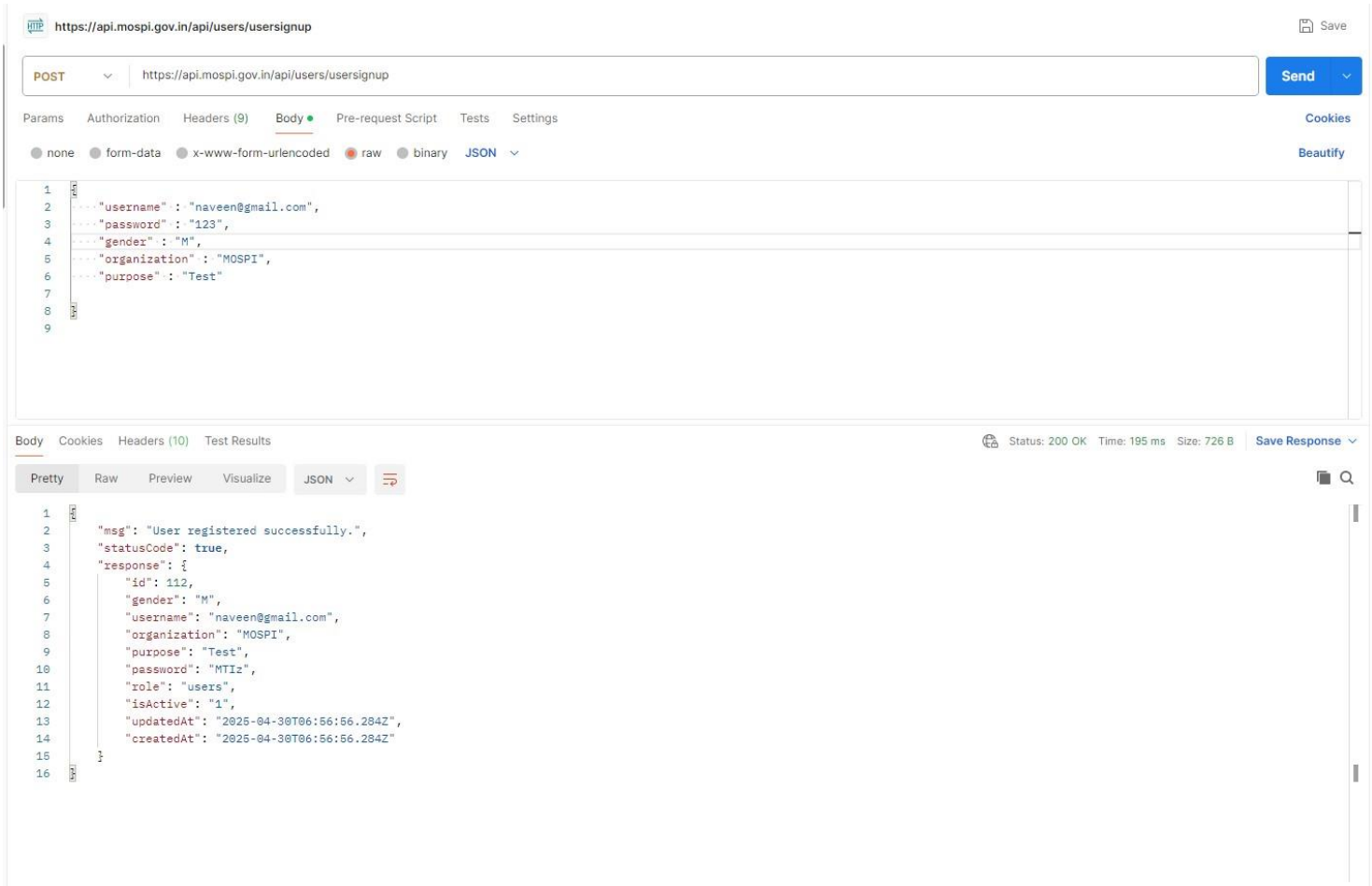
3.2. Select “POST” and add the URL http://api.mospi.gov/api/login

3.3. Select Body, raw radio button and select JSON from the dropdown where JSON is shown by default as highlighted in Yellow below

3.4. Enter username and password as shown below using the same credentials used during signup process:

{

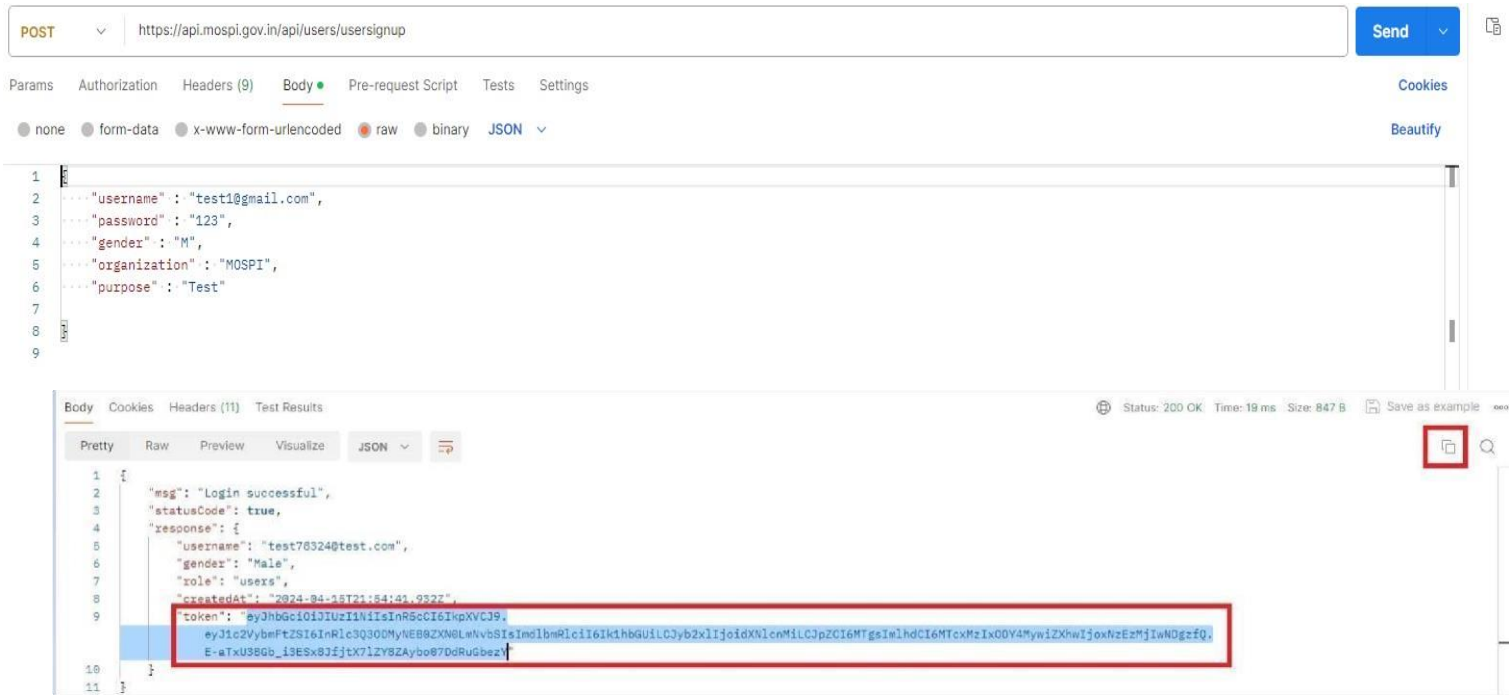
“username”:“test78324@test.com”,




“password”: “Test@123434435”

}

3.5. Click “Send”.




3.6. Copy the “Token” value by clicking the “small double square” icon seen in the snapshot above.

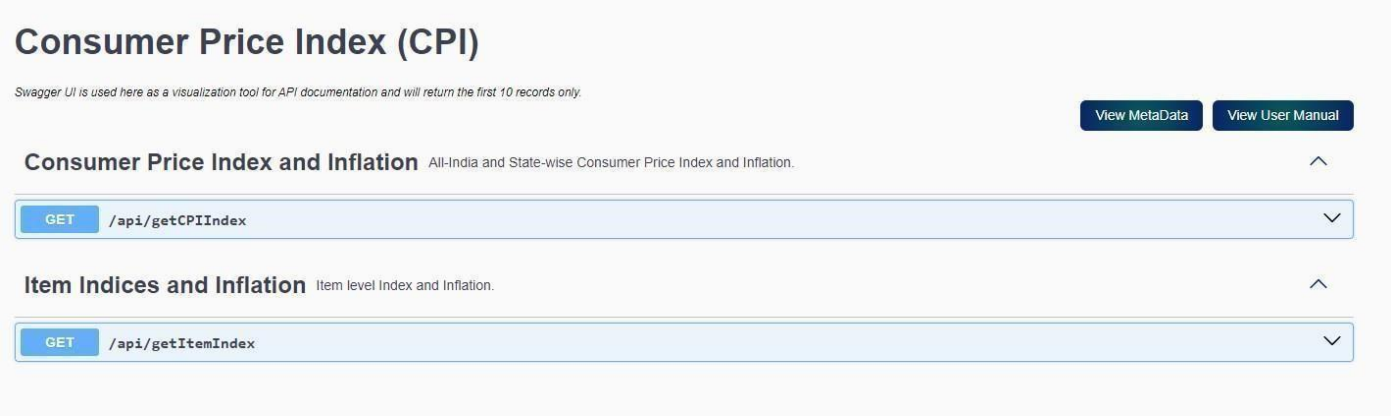
3.7. Open a notepad and paste the value here. Copy only the value from the “token” element without the Quotes.

3.8. Use this token in the next sections for fetching the complete data from Postman only and NOT Swagger.

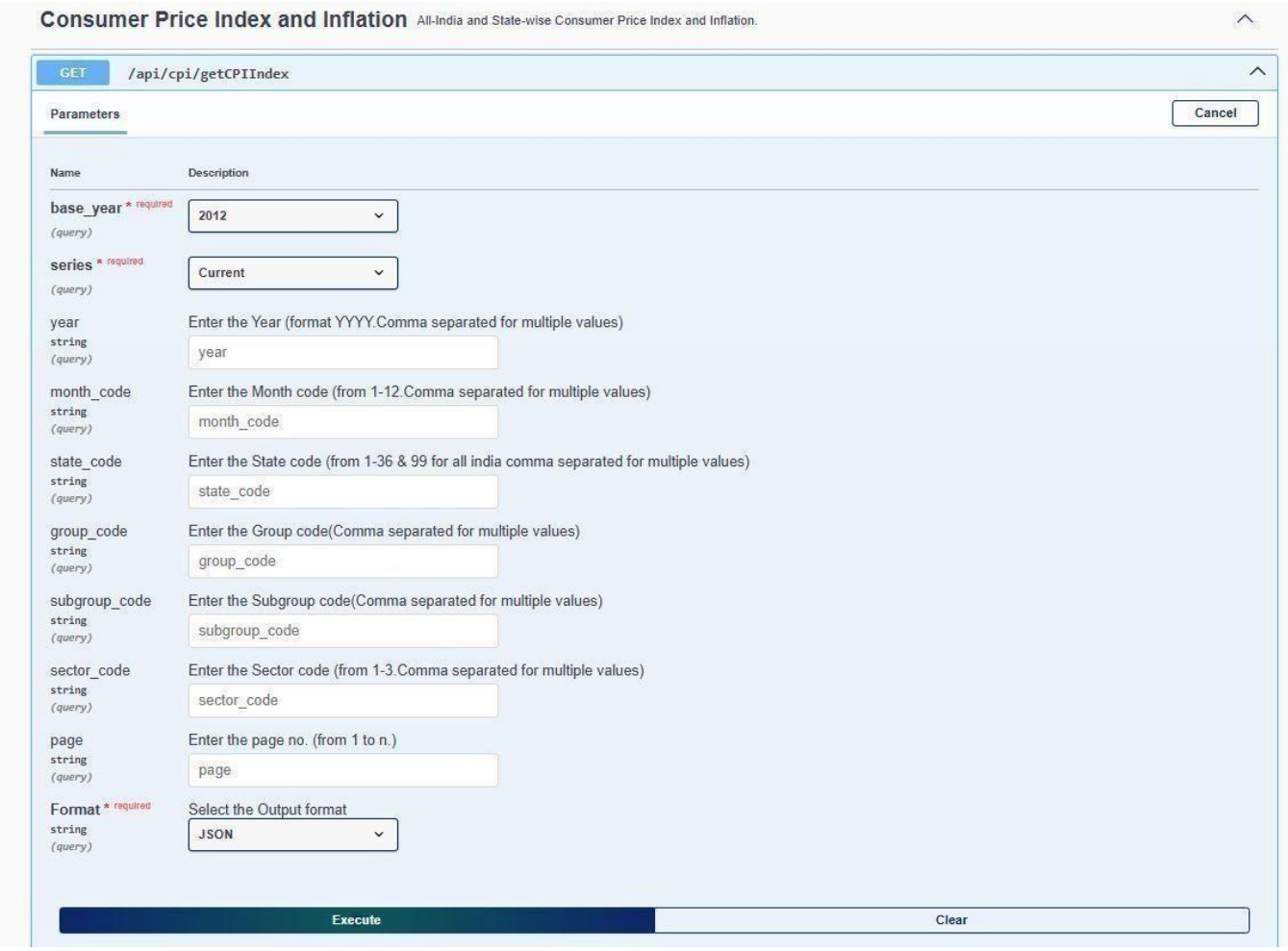
## 4. Accessing Inflation and Index data from Swagger

4.1. **Swagger UI**: Following are the steps for the API execution through the Swagger UI tool:

4.1.1. Access the API **Base URL/cpi** on the web browser. The following page will load.




4.1.2. Click the tile in BLUE as shown above to expand the API **/api/cpi/getCPIIndex**.



4.1.3. Click “Try it out” to enter the following parameters of the APIto query for the required data:

4.1.3.1. base_year: 2012,2010. Only a single value can be select for this parameter.

4.1.3.2. series: Current series, Back series. Only a single value can be sent for this parameter.

4.1.3.3. year: Comma separated multiple values in the Format YYYY is accepted in this parameter.

4.1.3.4. month_code: Comma separated multiple values in the Format ‘1,4’ is accepted in this parameter. Refer the metadata sheet for the codes corresponding to the Month names.

4.1.3.5. state_code: Comma separated multiple values Format‘1,2’etc,is accepted in this parameter.Refer the metadata sheet for the State names.

4.1.3.6. group_code: Comma separated multiple values in the Format ‘5,7’ etc. is accepted in this parameter. Refer the metadata sheet for the codes corresponding to the Group names.

4.1.3.7. subgroup _code: Comma separated multiple values in the Format ‘1.1.01, 3.1.01’ etc. is accepted in this parameter. Refer the metadata sheet for the codes corresponding to the Subgroup names.

4.1.3.8. sector_code: Comma separated multiple values in the Format ‘1,2,3’ is accepted in this parameter. Refer the metadata sheet for the codes corresponding to the Subgroup names.

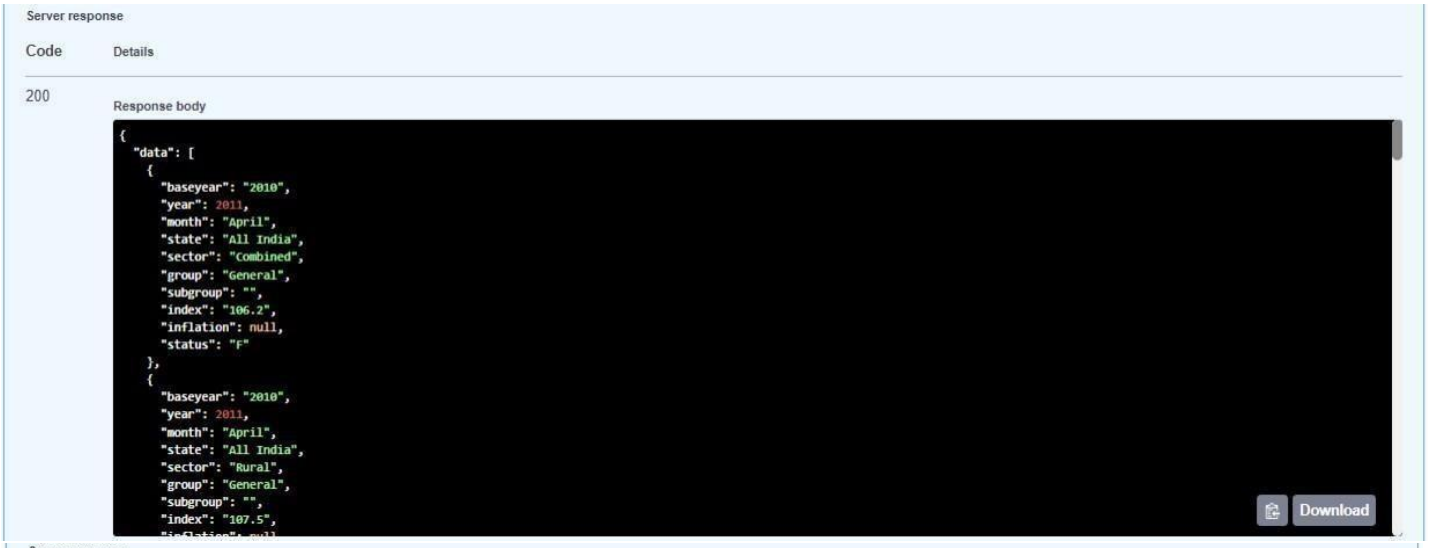
4.1.3.9. page: values in the Format ‘1 to n’ is accepted in this parameter.

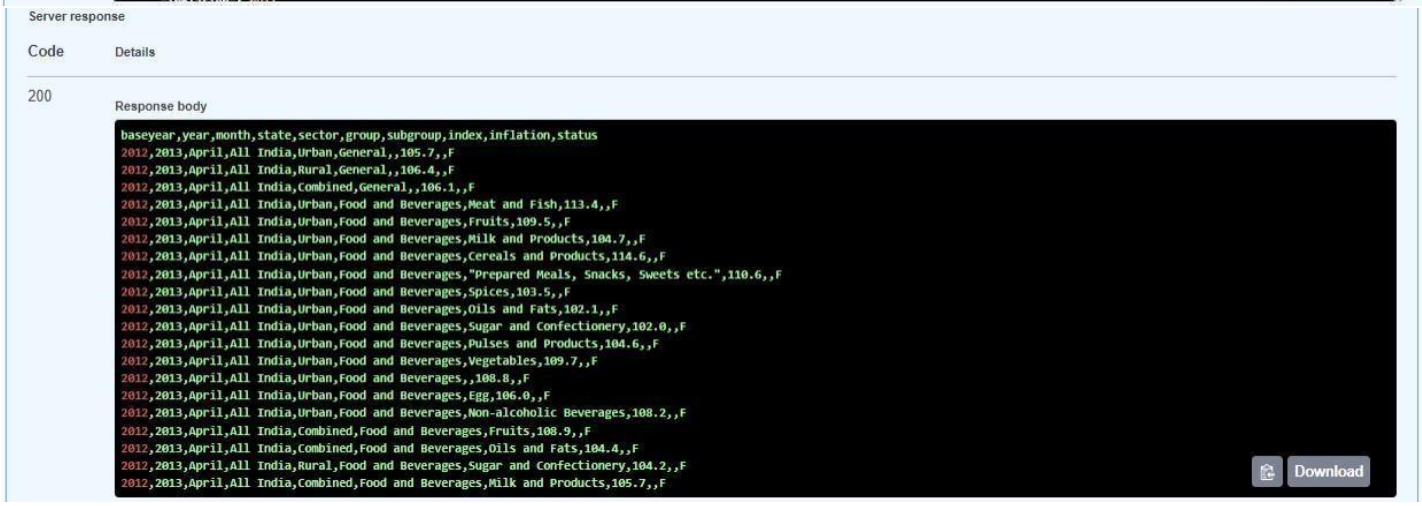
4.1.3.10. Format: CSV or JSON option can be mentioned for the data format returned from the API.

4.1.4. If no value is supplied for a particular parameter then the API will not apply a filter for that parameter.

4.1.5. Click on 'Execute' for fetching the data with the applied parameter values.

4.1.6. The below is the response of the API in JSON and CSV formats. Click on the Download button to download the data in a file:



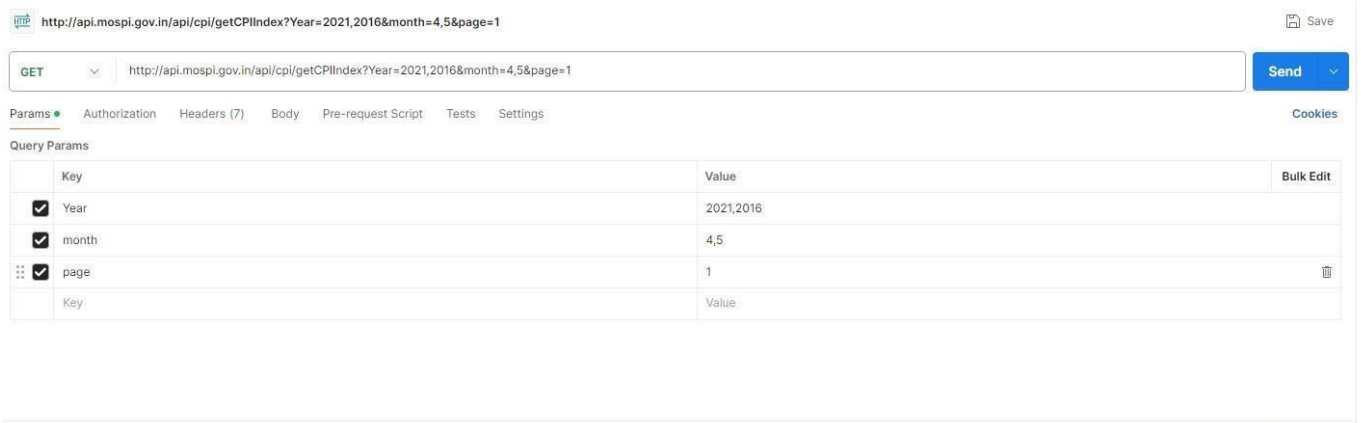



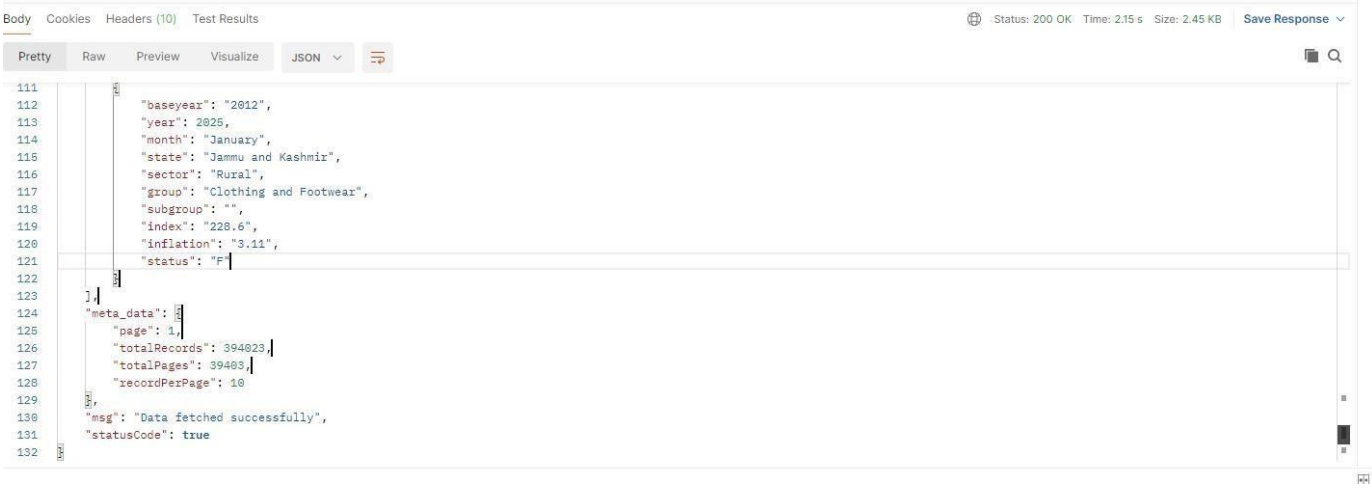

4.2. **Postman**: Following are the steps for the API execution through Postman tool:

4.2.1. The below steps describe the process to get the access token for the API through POSTMAN

4.2.1.1. Select "GET", enter the API **Base URL/api/cpi/getCPIIndex** in the URL field.

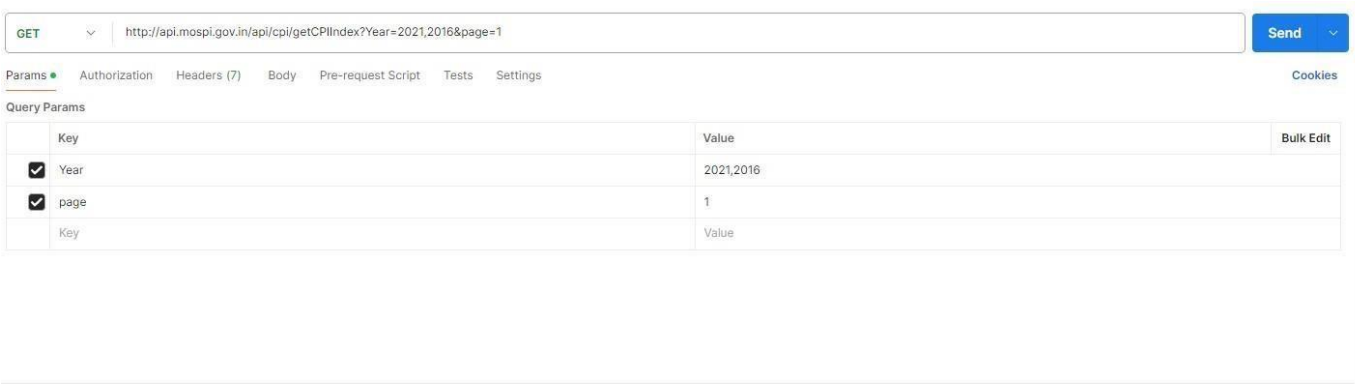
4.2.1.2. Fill the Authorization access token (refer Section 3.4 above to generate the token) and add it in the Headers tab as shown below and click on Send:

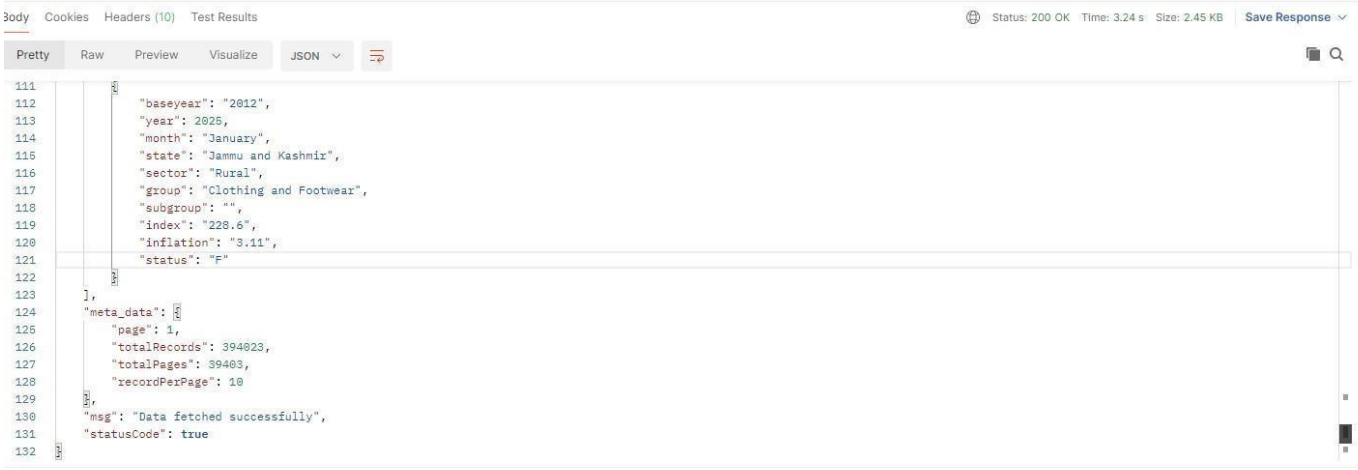



4.2.1.3. If no parameters are given then the complete data is fetched for the API as shown in the snapshot above.

4.2.1.4. Now enter the required parameters in the Params tab along with Authorization token under Headers tab and click Send as per the below screenshot. The data as per the query parameters is fetched in the JSON/CSV format.



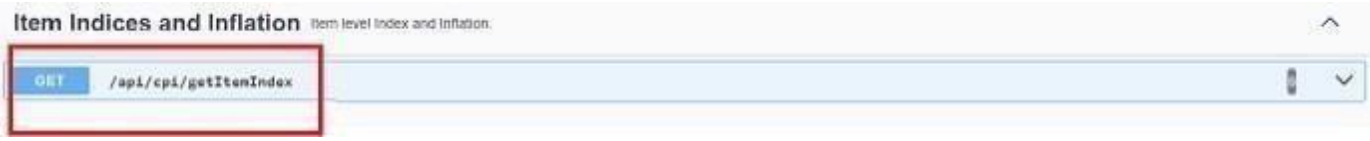


```
        {
            "baseyear": "2012",
            "year": 2025,
            "month": "January",
            "state": "Jammu and Kashmir",
            "sector": "Rural",
            "group": "Clothing and Footwear",
            "subgroup": "",
            "index": "228.6",
            "inflation": "3.11",
            "status": "F"
        }
    ],
    "meta_data": {
        "page": 1,
        "totalRecords": 394823,
        "totalPages": 39483,
        "recordPerPage": 10
    },
    "msg": "Data fetched successfully",
    "statusCode": true
}
```

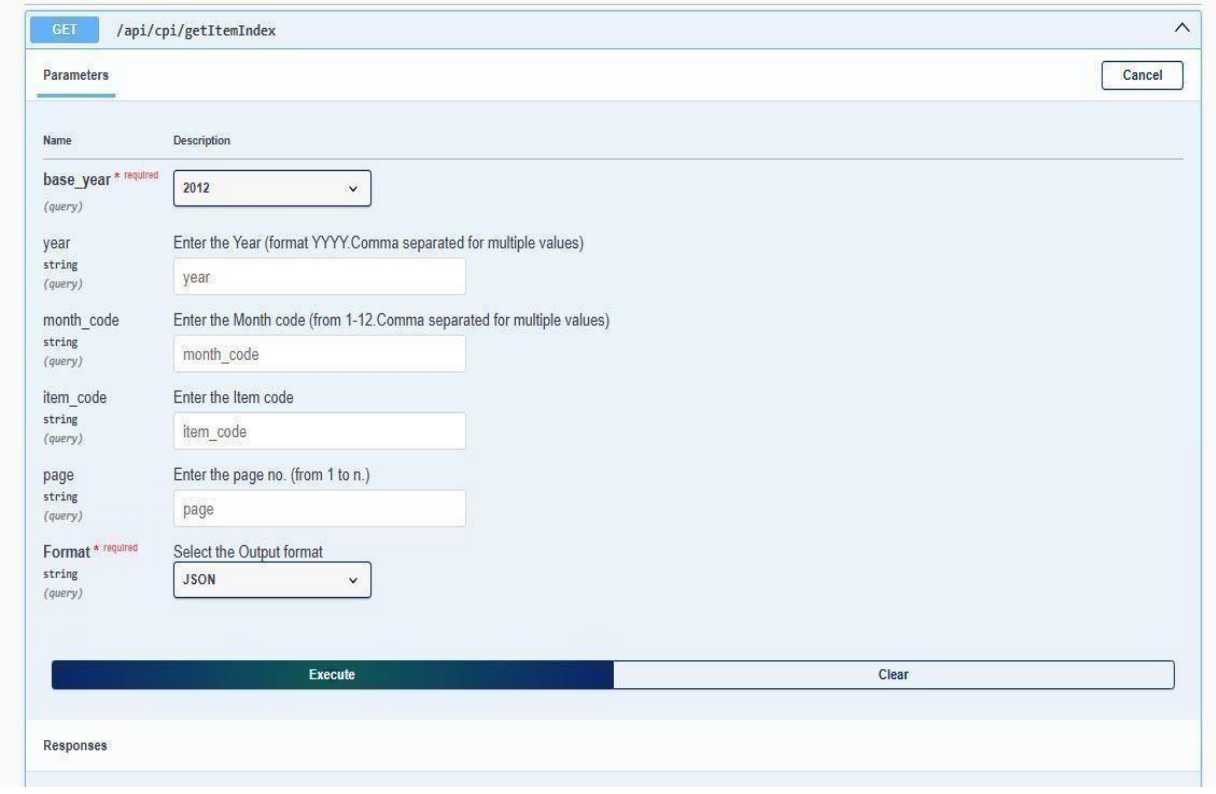
## 5. Accessing Item level Inflation and Index data from Swagger

5.1. **Swagger UI**: Following are the steps for the API execution through the Swagger UI tool:

5.1.1. Access the API on the web browser: **Base URL/cpi**. The following page will load




5.1.2. Click the tile in BLUE as shown above to expand the API **/api/cpi/getItemIndex**




5.1.2.1. Click “Try it out” to enter the following parameters of the API to query for the required data:

5.1.2.2. base_year:2010,2012,Only single value can be select for this parameter.

5.1.2.3. year: Comma separated multiple values in the Format YYYY is accepted in this parameter.

5.1.2.4. month_code: Comma separated multiple values in the Format '1,4' is accepted in this parameter. Refer the metadata sheet for the codes

corresponding to the Month names.

5.1.2.5. Item_code:Comma Separated multiple values in the Format '1.1.01.1.1.02.X, 1.1.01.1.1.01.P' is accepted in this parameter. Refer to the metadata sheet for

the codes corresponding to the Item codes.

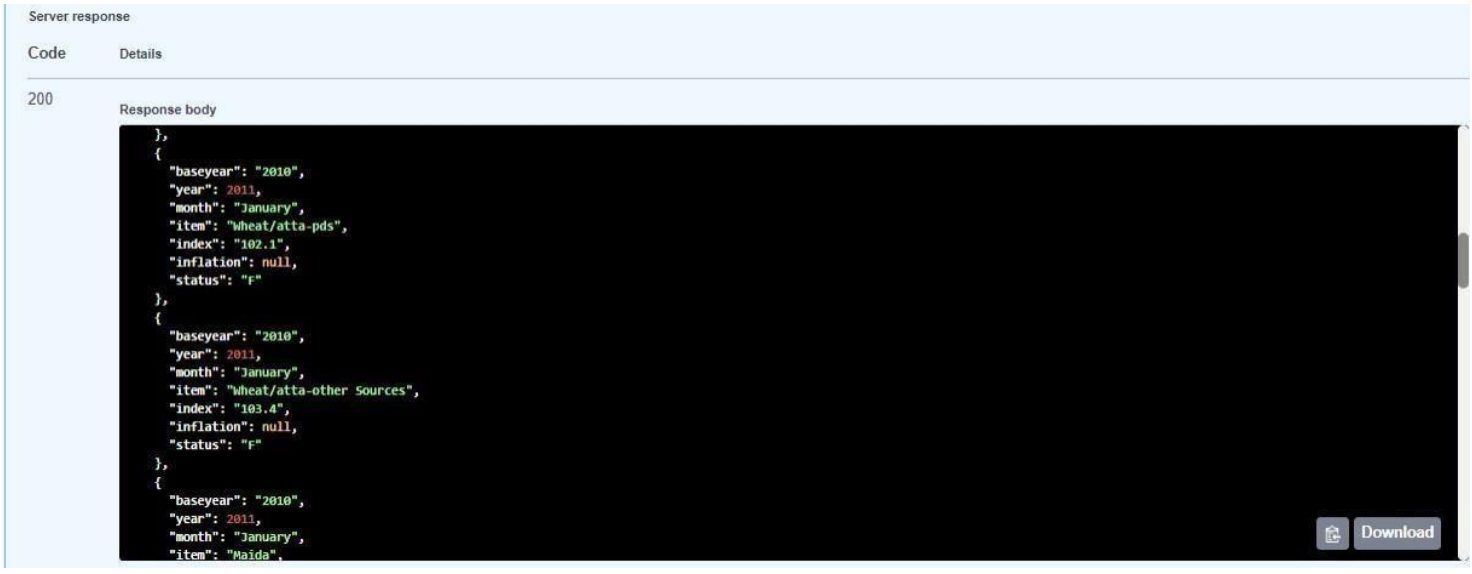
5.1.2.6 Page: values in the Format '1 to n' is accepted in this parameter.

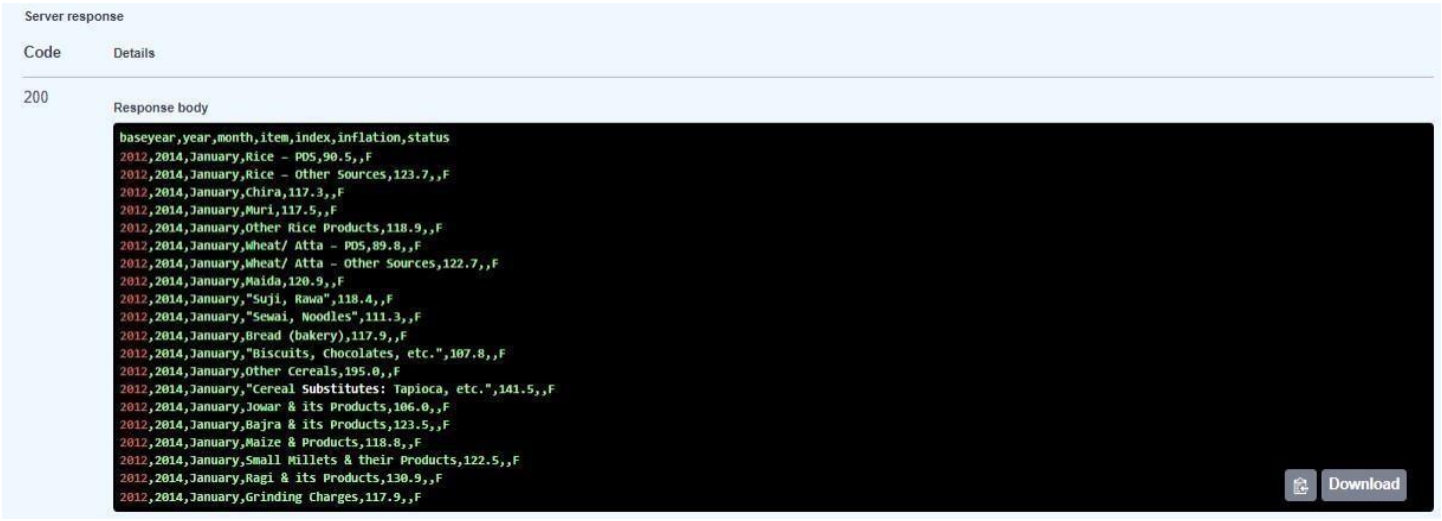
5.1.2.6. Format: CSV or JSON option can be mentioned for the data format returned from the API.

5.1.2.6. If no value is supplied for a particular parameter then the API will not apply a filter for that parameter.

5.1.2.7. Click on 'Execute' for fetching the data with the applied parameter values.

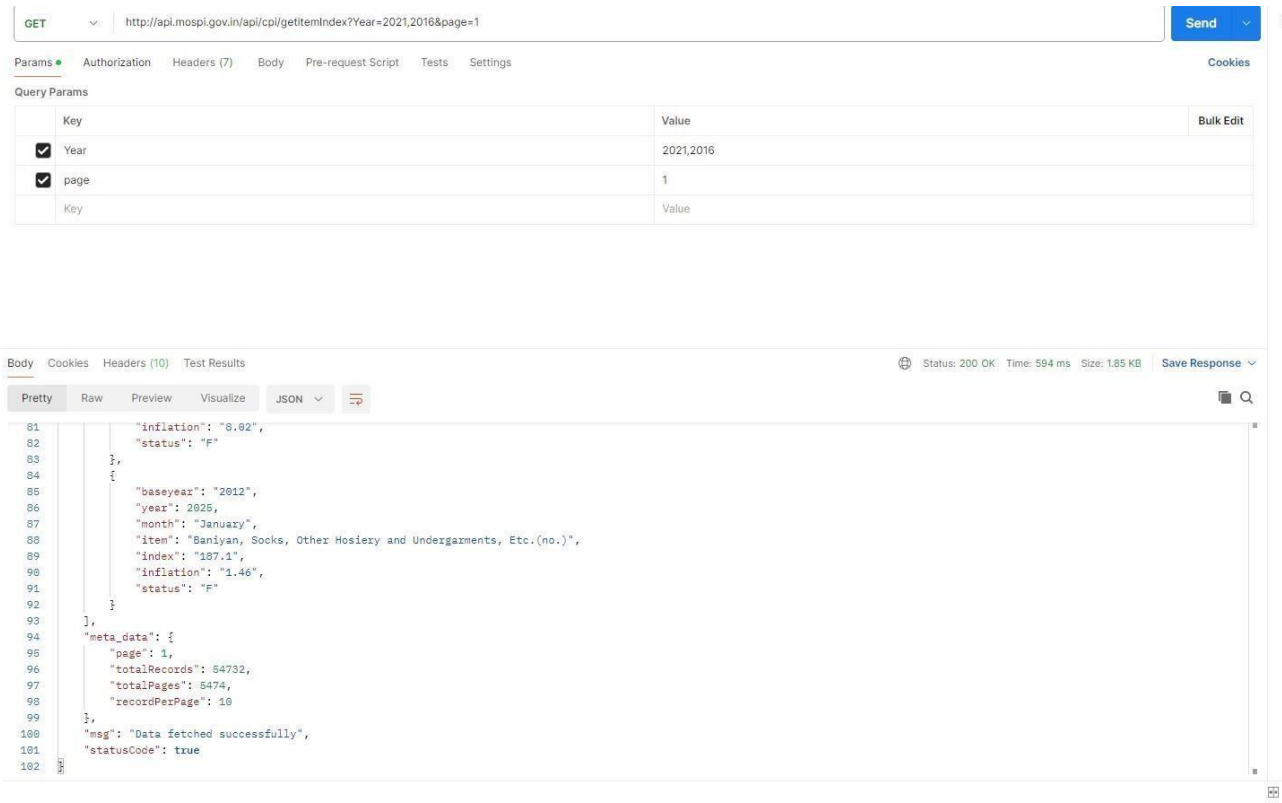
5.1.2.8. The below is the response of the API in JSON and CSV formats respectively. Click on the Download button to download the data in a file:





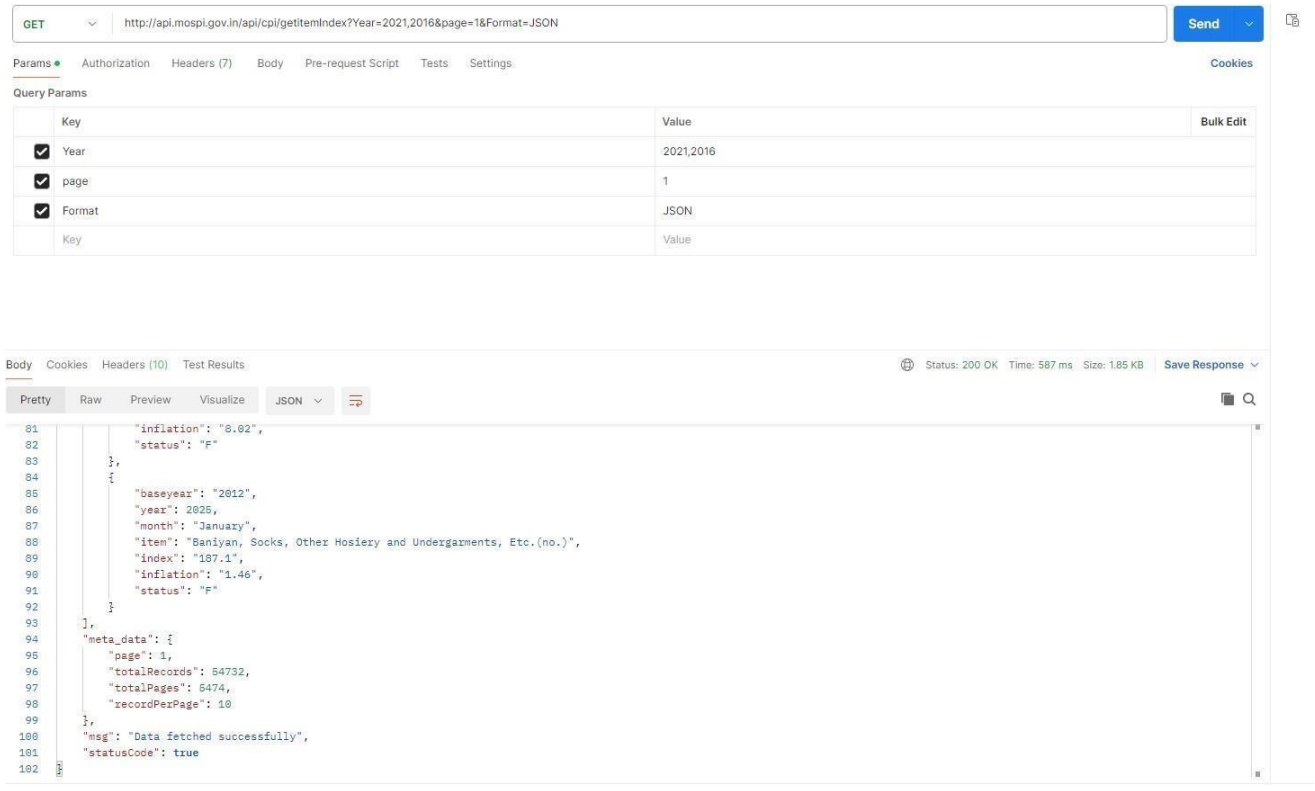

5.2. **Postman**: Following are the steps for the API execution through the Postman tool: 5.2.1. Select “GET”, enter the API **Base URL/api/cpi/getItemIndex** in the URL field.

5.2.2. Fill the Authorization access token (refer Section 3.4 above for the steps to generate the token) and add it in the Headers tab shown below and click Send:




5.2.3. If no parameters are given then the complete data is fetched for the API shown above.

5.2.4. Enter the required parameters in the Params tab along with the authorization token under Headers tab and click Send. The data as per the query parameters is fetched in the JSON/CSV format shown below.



## 6. Accessing the API through Python and Curl

6.1. The Python and CURL scripts for executing the API is available in the below GitHub repo:

**https://github.com/CCSPIDev/mospi_api_platform.git**

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