**Summarized Weather Data API Documentation**

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6. **Introduction**

This API documentation provides detailed information on the endpoints, request and response formats, and usage guidelines for the Weather Data API.

1. **Base URL**

The base URL for all API endpoints is: <http://localhost:8000/api/>

1. **Endpoints**
   1. **Get data on the basis of given region and weather parameter**

**Endpoint**: ‘GET /parametric\_data/{region} /{parameter} / ‘

**Description**:

Inputs:

region: The region whose summarized weather data is required

parameter: Weather parameter whose summary is required

**Note:** Kindly refer last section for supported regions and parameters

**Response:**

Returns JSON body consisting of monthly, seasonal and annual data .

Pagination is used for this response, where page size is 5.

Status Code: 200 OK

**Body**: {

"count": 188,

"next": "http://localhost:8000/api/parametric\_data/England\_NW\_&\_N\_Wales/Rainfall/?page=2",

"previous": **null**,

"results": [

         {

   "year": 1836,

    "jan": 0.0,

"feb": 0.0,

    "mar": 0.0,

.

.

.}

{"year": 1836,

    "jan": 0.0,

"feb": 0.0,

    "mar": 0.0,

.

.

.}...]

* 1. **GET data on the basis of given region and weather parameter**

**Endpoint:** `GET /yearly\_data/{year}/{region} /{parameter} / `

**Description**:

**Inputs**:

year: Year whose weather data is required

region: The region whose summarized weather data is required

parameter: Weather parameter whose summary is required

**Note:** Kindly refer last section for supported year, regions and parameters

**Response:**

Returns JSON body consisting of monthly, seasonal and annual data for a year

Status Code: 200 OK

**Body:**

{ "id": 1148,

"region": "England\_NW\_&\_N\_Wales",

     "parameter": "Rainfall",

     "year": 1910,

     "jan": 83.3,

     "feb": 58.3,

     "mar": 96.7,

     "apr": 97.9,

     "may": 51.4,

     "jun": 76.6,

     "jul": 143.8,

     "aug": 87.7,

     "sep": 93.1,

     "oct": 192.4,

     "nov": 58.9,

     "dec": 188.4,

     "winter": 244.5,

     "summer": 308.1,

     "autmn": 344.5,

     "spring": 246.0,

     "annual": 1228.5

}

* 1. **DELETE data for a given year, region and weather parameter**

**Endpoint:** `DELETE /yearly\_data/{year}/{region} /{parameter} / `

**Description**:

**Inputs**:

parameter: Weather parameter

year: Valid Year for a specific parameter whose weather data is to be deleted

region: The region whose summarized weather data is to be deleted

**Response:**

Status Code: 202 ACCEPTED

1. **Error Responses**

In case of errors, the API may return the following response formats:

* 1. Status Code: 404 Not found

When Invalid year is provided:

{

    "error": "weather data with given Year not found. Kindly check documentation for valid inputs.Possible reasons: Year out of range."

}

* 1. Status Code: 400 Bad Request

When region or weather parameter is invalid;

{

     "error": "Invalid region or parameter passed"

}

1. **Supported Regions, Parameters and Years**
   1. region

UK , England , Wales , Scotland , Northern\_Ireland , England\_&\_Wales , England\_N , England\_S , Scotland\_N , Scotland\_E , Scotland\_W , England\_E\_&\_NE , England\_NW\_&\_N\_Wales , Midlands , East\_Angelia ,

England\_SW\_&\_S\_Wales , England\_SE\_&\_Central\_S.

* 1. parameter

Max\_temp , Min\_temp , Mean\_temp , Sunshine , Rainfall , Rain\_days\_1.0mm , Days\_of\_Air\_Frost

* 1. valid year range for specific parameters

Years within the following range should be selected for the corresponding parameter:

* + - 1. Max\_temp = 1884 to 2023
      2. Min\_temp = 1884 to 2023
      3. Mean\_temp = 1884 to 2023
      4. Sunshine = 1910 to 2023
      5. Rainfall = 1836 to 2023
      6. Rain\_days\_1.0mm = 1891 to 2023
      7. Days\_of\_Air\_Frost = 1960 to 2023