

PART A

Task 1: Using Postman tool to connect to a Weather API

1. Get weather description and minimum and maximum temperature in Celsius for the following cities:

- Auckland
- Wellington
- Christchurch
- London
- Paris

The image displays two screenshots of the Postman application interface, showing the configuration and results of two GET requests to the OpenWeatherMap API.

Top Screenshot (Auckland):

- Method:** GET
- URL:** `https://api.openweathermap.org/data/2.5/weather?q=Auckland&appid={API key}&units=metric`
- Settings:** Enable SSL certificate verification (OFF), Automatically follow redirects (ON), Follow original HTTP Method (OFF), Follow Authorization header (OFF), Remove referer header on redirect (OFF).
- Body:** Pretty, Raw, Preview, Visualize. The Raw view shows the JSON response:

```
{ "coord": { "lon": 174.7667, "lat": -36.8667 }, "weather": [ { "id": 803, "main": "Clouds", "description": "broken clouds", "icon": "04d" }, { "base": "stations", "main": { "temp": 14.7, "feels_like": 14.39, "temp_min": 12.86, "temp_max": 15.86, "pressure": 1028, "humidity": 83, "sea_level": 1028, "grnd_level": 1024 }, "visibility": 10000, "wind": { "speed": 2.24, "deg": 340, "gust": 3.13 }, "clouds": { "all": 64 }, "dt": 1720391717, "sys": { "type": 2, "id": 2012285, "country": "NZ", "sunrise": 1720380803, "sunset": 1720415891, "timezone": 43200, "id": 2193733, "name": "Auckland", "cod": 200 } }
```
- Status:** 200 OK, Time: 435 ms, Size: 859 B.

Bottom Screenshot (Christchurch):

- Method:** GET
- URL:** `https://api.openweathermap.org/data/2.5/weather?q=Christchurch&appid={API key}&units=metric`
- Settings:** Enable SSL certificate verification (OFF), Automatically follow redirects (ON), Follow original HTTP Method (OFF), Follow Authorization header (OFF), Remove referer header on redirect (OFF).
- Body:** Pretty, Raw, Preview, Visualize. The Raw view shows the JSON response:

```
{ "coord": { "lon": 172.6333, "lat": -43.5333 }, "weather": [ { "id": 800, "main": "Clear", "description": "clear sky", "icon": "01d" }, { "base": "stations", "main": { "temp": 7.79, "feels_like": 6.56, "temp_min": 7.11, "temp_max": 10.18, "pressure": 1028, "humidity": 81, "sea_level": 1028, "grnd_level": 1022 }, "visibility": 10000, "wind": { "speed": 2.06, "deg": 260 }, "clouds": { "all": 1 }, "dt": 1720391658, "sys": { "type": 1, "id": 7348, "country": "NZ", "sunrise": 1720382493, "sunset": 1720415225, "timezone": 43200, "id": 2192362, "name": "Christchurch", "cod": 200 } }
```
- Status:** 200 OK, Time: 384 ms, Size: 844 B.

GET

https://api.openweathermap.org/data/2.5/weather?q=London&appid=(API key)&units=metric

Send

Params • Authorization • Headers (5) • Body • Scripts • Settings

Enable SSL certificate verification
Verify SSL certificates when sending a request. Verification failures will result in the request being aborted.

Automatically follow redirects
Follow HTTP 3xx responses as redirects.

Follow original HTTP Method
Redirect with the original HTTP method instead of the default behavior of redirecting with GET.

Follow Authorization header
Retain authorization header when a redirect happens to a different hostname.

Remove referer header on redirect
Remove the referer header when a redirect happens.

OFF
Default: Settings

ON
Default: Settings

OFF

OFF

OFF

Body Cookies Headers (9) Test Results

Pretty Raw Preview Visualize

```
{
  "coord": {
    "lon": -0.1257,
    "lat": 51.5085
  },
  "weather": [
    {
      "id": 801,
      "main": "Clouds",
      "description": "few clouds",
      "icon": "02n"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 13.08,
    "feels_like": 12.72,
    "temp_min": 11.42,
    "temp_max": 13.98,
    "pressure": 1013,
    "humidity": 87,
    "sea_level": 1013,
    "grnd_level": 1009
  },
  "visibility": 10000,
  "wind": {
    "speed": 2.57,
    "deg": 220
  },
  "clouds": {
    "all": 11
  },
  "dt": 1720391767,
  "sys": {
    "type": 2,
    "id": 2091269,
    "country": "GB",
    "sunrise": 1720324356,
    "sunset": 1720383476,
    "timezone": 3600,
    "id": 2643743,
    "name": "London",
    "cod": 200
  }
}
```

Status: 200 OK Time: 335 ms Size: 838 B Save as example

Body Cookies Headers (9) Test Results

Pretty Raw Preview Visualize

```
{
  "coord": {
    "lon": 2.3488,
    "lat": 48.8534
  },
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01n"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 16.64,
    "feels_like": 16.08,
    "temp_min": 14.32,
    "temp_max": 17.46,
    "pressure": 1016,
    "humidity": 66,
    "sea_level": 1016,
    "grnd_level": 1007
  },
  "visibility": 10000,
  "wind": {
    "speed": 1.54,
    "deg": 190
  },
  "clouds": {
    "all": 0
  },
  "dt": 1720391998,
  "sys": {
    "type": 2,
    "id": 2036844,
    "country": "FR",
    "sunrise": 1720410993,
    "sunset": 1720468470,
    "timezone": 7200,
    "id": 2988507,
    "name": "Paris",
    "cod": 200
  }
}
```

Status: 200 OK Time: 344 ms Size: 832 B Save as example

Body Cookies Headers (9) Test Results

Pretty Raw Preview Visualize

```
{
  "coord": {
    "lon": 174.7756,
    "lat": -41.2866
  },
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 9.56,
    "feels_like": 7.41,
    "temp_min": 8.88,
    "temp_max": 9.92,
    "pressure": 1029,
    "humidity": 86,
    "sea_level": 1029,
    "grnd_level": 1016
  },
  "visibility": 10000,
  "wind": {
    "speed": 4.12,
    "deg": 360
  },
  "clouds": {
    "all": 7
  },
  "dt": 1720391724,
  "sys": {
    "type": 2,
    "id": 2080525,
    "country": "NZ",
    "sunrise": 1720381552,
    "sunset": 1720415138,
    "timezone": 43200,
    "id": 2179537,
    "name": "Wellington",
    "cod": 200
  }
}
```

Status: 200 OK Time: 354 ms Size: 842 B Save as example

2. Get city name, weather description and minimum and maximum temperature in Celsius for the following cities based on their geographical coordinates:

1. Longitude: -73.99, Latitude: 40.73
2. Longitude: 8.6, Latitude: 45.43
3. Longitude: 144.96, Latitude: -37.81

GET

https://api.openweathermap.org/data/2.5/weather?lat=-37.81&lon=144.96&units=metric&appid=(API_KEY).GET

Send

Params Authorization Headers (5) Body Scripts Settings

Headers 5 hidden

	Key	Value	Description	...	Bulk Edit	Presets
	Key	Value	Description			

Body Cookies Headers (9) Test Results

Status: 200 OK Time: 381 ms Size: 854 B Save as example

Pretty Raw Preview Visualize

```
{
  "coord": {
    "lon": 144.9632,
    "lat": -37.8142
  },
  "weather": [
    {
      "id": 803,
      "main": "Clouds",
      "description": "broken clouds",
      "icon": "04d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 9.26,
    "feels_like": 7.29,
    "temp_min": 7.6,
    "temp_max": 11.75,
    "pressure": 1023,
    "humidity": 78,
    "sea_level": 1023,
    "grnd_level": 1019,
    "visibility": 10000,
    "wind": {
      "speed": 3.6,
      "deg": 50
    },
    "clouds": {
      "all": 75
    },
    "dt": 1720392747,
    "sys": {
      "type": 2,
      "id": 2008797,
      "country": "AU",
      "sunrise": 1720388107,
      "sunset": 1720422894,
      "timezone": 36000,
      "id": 2158177,
      "name": "Melbourne",
      "cod": 200
    }
  }
}
```

GET

https://api.openweathermap.org/data/2.5/weather?lat=40.73&lon=-73.99&units=metric&appid=(API_KEY).GET

Send

Params Authorization Headers (5) Body Scripts Settings

Headers 5 hidden

	Key	Value	Description	...	Bulk Edit	Presets
	Key	Value	Description			

Body Cookies Headers (9) Test Results

Status: 200 OK Time: 478 ms Size: 851 B Save as example

Pretty Raw Preview Visualize

```
{
  "coord": {
    "lon": -73.9866,
    "lat": 40.7306
  },
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 31.23,
    "feels_like": 34.34,
    "temp_min": 28.19,
    "temp_max": 32.89,
    "pressure": 1014,
    "humidity": 56,
    "sea_level": 1014,
    "grnd_level": 1013,
    "visibility": 10000,
    "wind": {
      "speed": 4.12,
      "deg": 60
    },
    "clouds": {
      "all": 0
    },
    "dt": 1720392428,
    "sys": {
      "type": 2,
      "id": 2083229,
      "country": "US",
      "sunrise": 1720344720,
      "sunset": 1720398570,
      "timezone": -14400,
      "id": 5128581,
      "name": "New York",
      "cod": 200
    }
  }
}
```

GET

https://api.openweathermap.org/data/2.5/weather?lat=45.43&lon=8.6&units=metric&appid=(API_KEY).GET

Send

Params Authorization Headers (5) Body Scripts Settings

Headers 5 hidden

	Key	Value	Description	...	Bulk Edit	Presets
	Key	Value	Description			

Body Cookies Headers (9) Test Results

Status: 200 OK Time: 351 ms Size: 853 B Save as example

Pretty Raw Preview Visualize

```
{
  "coord": {
    "lon": 8.6,
    "lat": 45.43
  },
  "weather": [
    {
      "id": 803,
      "main": "Clouds",
      "description": "broken clouds",
      "icon": "04n"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 20.17,
    "feels_like": 20.41,
    "temp_min": 18.9,
    "temp_max": 21.13,
    "pressure": 1014,
    "humidity": 83,
    "sea_level": 1014,
    "grnd_level": 997,
    "visibility": 10000,
    "wind": {
      "speed": 2.84,
      "deg": 45,
      "gust": 7.24
    },
    "clouds": {
      "all": 76
    },
    "dt": 1720392925,
    "sys": {
      "type": 2,
      "id": 2012345,
      "country": "IT",
      "sunrise": 1720410346,
      "sunset": 1720466116,
      "timezone": 7200,
      "id": 3172189,
      "name": "Novara",
      "cod": 200
    }
  }
}
```

3. List cities and their coordinates within the following box:

- Longitude: from 12 to 13
- Latitude: from 41 to 42
- Zoom: 10
-

GET

http://api.openweathermap.org/data/2.5/box/city?bbox=12,41,13,42,10&appid=61b7731d5fa180dc18d48d6e2e81c127

Send

Params Authorization Headers (5) Body Scripts Settings Cookies

body Cookies Headers (9) Test Results

Status: 200 OK Time: 829 ms Size: 4.69 KB Save as example

Pretty Raw Preview Visualize

```
{
  "cod": 200,
  "calctime": 0.003999734,
  "cnt": 11,
  "list": [
    {
      "id": 3183005,
      "dt": 1720390453,
      "name": "Anzio",
      "coord": {
        "lon": 12.6271,
        "lat": 41.4475
      },
      "main": {
        "temp": 23.67,
        "feels_like": 24.39,
        "temp_min": 22.38,
        "temp_max": 24.77,
        "pressure": 1014,
        "sea_level": 1014,
        "grnd_level": 1013,
        "humidity": 88,
        "visibility": 10000,
        "wind": {
          "speed": 3.4,
          "deg": 139
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 25
        },
        "weather": [
          {
            "id": 802,
            "main": "Clouds",
            "description": "scattered clouds",
            "icon": "03n"
          }
        ]
      },
      "id": 3182957,
      "dt": 1720390453,
      "name": "Aprilia",
      "coord": {
        "lon": 12.6501,
        "lat": 41.5895
      },
      "main": {
        "temp": 23.27,
        "feels_like": 23.92,
        "temp_min": 21.95,
        "temp_max": 24.53,
        "pressure": 1014,
        "sea_level": 1014,
        "grnd_level": 1006,
        "humidity": 87,
        "visibility": 10000,
        "wind": {
          "speed": 2.83,
          "deg": 135
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 19
        },
        "weather": [
          {
            "id": 801,
            "main": "Clouds",
            "description": "few clouds",
            "icon": "02n"
          }
        ]
      },
      "id": 3170342,
      "dt": 1720394044,
      "name": "Pomezia",
      "coord": {
        "lon": 12.5052,
        "lat": 41.667
      },
      "main": {
        "temp": 22.85,
        "feels_like": 23.04,
        "temp_min": 21.8,
        "temp_max": 23.94,
        "pressure": 1014,
        "sea_level": 1014,
        "grnd_level": 1003,
        "humidity": 71,
        "visibility": 10000,
        "wind": {
          "speed": 2.06,
          "deg": 200
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 0
        },
        "weather": [
          {
            "id": 800,
            "main": "Clear",
            "description": "clear sky",
            "icon": "01n"
          }
        ]
      },
      "id": 3178631,
      "dt": 1720390447,
      "name": "Cisterna di Latina",
      "coord": {
        "lon": 12.8281,
        "lat": 41.5908
      },
      "main": {
        "temp": 23,
        "feels_like": 23.71,
        "temp_min": 21.89,
        "temp_max": 24.28,
        "pressure": 1015,
        "sea_level": 1015,
        "grnd_level": 1005,
        "humidity": 90,
        "visibility": 10000,
        "wind": {
          "speed": 1.75,
          "deg": 119
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 1
        },
        "weather": [
          {
            "id": 800,
            "main": "Clear",
            "description": "clear sky",
            "icon": "01n"
          }
        ]
      },
      "id": 3164630,
      "dt": 1720394037,
      "name": "Velletri",
      "coord": {
        "lon": 12.7793,
        "lat": 41.6692
      },
      "main": {
        "temp": 21.81,
        "feels_like": 22.45,
        "temp_min": 20.88,
        "temp_max": 23.01,
        "pressure": 1015,
        "sea_level": 1015,
        "grnd_level": 987,
        "humidity": 92,
        "visibility": 10000,
        "wind": {
          "speed": 1.63,
          "deg": 120
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 1
        },
        "weather": [
          {
            "id": 800,
            "main": "Clear",
            "description": "clear sky",
            "icon": "01n"
          }
        ]
      },
      "id": 3174741,
      "dt": 1720394050,
      "name": "Lido di Ostia",
      "coord": {
        "lon": 12.2765,
        "lat": 41.7321
      },
      "main": {
        "temp": 23.63,
        "feels_like": 23.35,
        "temp_min": 23.25,
        "temp_max": 24.51,
        "pressure": 1014,
        "sea_level": 1014,
        "grnd_level": 1013,
        "humidity": 50,
        "visibility": 10000,
        "wind": {
          "speed": 2.57,
          "deg": 150
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 40
        },
        "weather": [
          {
            "id": 802,
            "main": "Clouds",
            "description": "scattered clouds",
            "icon": "03n"
          }
        ]
      },
      "id": 3175058,
      "dt": 1720394051,
      "name": "Latina",
      "coord": {
        "lon": 12.9043,
        "lat": 41.4661
      },
      "main": {
        "temp": 23.42,
        "feels_like": 23.91,
        "temp_min": 22.26,
        "temp_max": 23.71,
        "pressure": 1015,
        "sea_level": 1015,
        "grnd_level": 1012,
        "humidity": 80,
        "visibility": 10000,
        "wind": {
          "speed": 1.69,
          "deg": 98
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 2
        },
        "weather": [
          {
            "id": 800,
            "main": "Clear",
            "description": "clear sky",
            "icon": "01n"
          }
        ]
      },
      "id": 3169070,
      "dt": 1720394042,
      "name": "Rome",
      "coord": {
        "lon": 12.4839,
        "lat": 41.8947
      },
      "main": {
        "temp": 23.49,
        "feels_like": 22.91,
        "temp_min": 22.21,
        "temp_max": 24.34,
        "pressure": 1014,
        "sea_level": 1014,
        "grnd_level": 1010,
        "humidity": 39,
        "visibility": 10000,
        "wind": {
          "speed": 2.06,
          "deg": 200
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 0
        },
        "weather": [
          {
            "id": 800,
            "main": "Clear",
            "description": "clear sky",
            "icon": "01n"
          }
        ]
      },
      "id": 3171606,
      "dt": 1720394045,
      "name": "Palestrina",
      "coord": {
        "lon": 12.889,
        "lat": 41.8355
      },
      "main": {
        "temp": 20.4,
        "feels_like": 20.61,
        "temp_min": 18.87,
        "temp_max": 21.68,
        "pressure": 1015,
        "sea_level": 1015,
        "grnd_level": 964,
        "humidity": 81,
        "visibility": 10000,
        "wind": {
          "speed": 0.45,
          "deg": 162
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 0
        },
        "weather": [
          {
            "id": 800,
            "main": "Clear",
            "description": "clear sky",
            "icon": "01n"
          }
        ]
      },
      "id": 3165624,
      "dt": 1720394038,
      "name": "Tivoli",
      "coord": {
        "lon": 12.7989,
        "lat": 41.9609
      },
      "main": {
        "temp": 22.03,
        "feels_like": 22.35,
        "temp_min": 21.03,
        "temp_max": 22.98,
        "pressure": 1015,
        "sea_level": 1015,
        "grnd_level": 987,
        "humidity": 79,
        "visibility": 10000,
        "wind": {
          "speed": 1.54,
          "deg": 96
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 0
        },
        "weather": [
          {
            "id": 800,
            "main": "Clear",
            "description": "clear sky",
            "icon": "01n"
          }
        ]
      },
      "id": 3175298,
      "dt": 1720394051,
      "name": "Ladispoli",
      "coord": {
        "lon": 12.0735,
        "lat": 41.9537
      },
      "main": {
        "temp": 23.56,
        "feels_like": 24.27,
        "temp_min": 23.18,
        "temp_max": 24.51,
        "pressure": 1014,
        "sea_level": 1014,
        "grnd_level": 1013,
        "humidity": 88,
        "visibility": 10000,
        "wind": {
          "speed": 2.64,
          "deg": 142
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 79
        },
        "weather": [
          {
            "id": 803,
            "main": "Clouds",
            "description": "broken clouds",
            "icon": "04n"
          }
        ]
      }
    ]
  }
}
```

GET

http://api.openweathermap.org/data/2.5/box/city?bbox=12,41,13,42,10&appid=61b7731d5fa180dc18d48d6e2e81c127

Send

Params Authorization Headers (5) Body Scripts Settings Cookies

body Cookies Headers (9) Test Results

Status: 200 OK Time: 829 ms Size: 4.69 KB Save as example

Pretty Raw Preview Visualize JSON

```
2  "cod": 200,
3  "calctime": 0.003999734,
4  "cnt": 11,
5  "list": [
6    {
7      "id": 3183005,
8      "dt": 1720390453,
9      "name": "Anzio",
10     "coord": {
11       "lon": 12.6271,
12       "lat": 41.4475
13     },
14     "main": {
15       "temp": 23.67,
16       "feels_like": 24.39,
17       "temp_min": 22.38,
18       "temp_max": 24.77,
19       "pressure": 1014,
20       "sea_level": 1014,
21       "grnd_level": 1013,
22       "humidity": 88
23     },
24     "visibility": 10000,
25     "wind": {
26       "speed": 3.4,
27       "deg": 139
28     },
29     "rain": null,
30     "snow": null,
31     "clouds": {
32       "today": 25
33     },
34     "weather": [
35       {
36         "id": 802,
37         "main": "Clouds",
38         "description": "scattered clouds",
39         "icon": "03n"
40       }
41     ]
42   }
43 ]
44 }
```

Task 2: Using cURL command line tool to connect to a RESTful API

1. Get weather description and minimum and maximum temperature in Celsius for the following cities:

1. Queenstown,

```
1 Queenstown
2 curl "http://api.openweathermap.org/data/2.5/weather?q=Queenstown&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
3
4 Dunedin
5 curl "http://api.openweathermap.org/data/2.5/weather?q=Dunedin&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
6
```

```
guillemozan@Guillermos-MacBook-Pro ~ % curl "http://api.openweathermap.org/data/2.5/weather?q=Queenstown&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
{"coord": {"lon": 26.8753, "lat": -31.8976}, "weather": [{"id": 800, "main": "clear", "description": "clear sky", "icon": "01"}], "base": "stations", "main": {"temp": 3.92, "feels_like": -2.08, "temp_min": 3.52, "temp_max": 3.52, "pressure": 1009, "humidity": 63, "sea_level": 1080, "grnd_level": 884}, "visibility": 10000, "wind": {"speed": 14.35, "deg": 289, "gust": 21}, "clouds": {"all": 5}, "dt": 1728397631, "sys": {"country": "NZ", "sunrise": 1728415556, "sunset": 1728452133}, "timezone": 7200, "id": 983316, "name": "Queenstown", "cod": 200}
```

2. Dunedin,

```
1 Queenstown
2 curl "http://api.openweathermap.org/data/2.5/weather?q=Queenstown&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
3
4 Dunedin
5 curl "http://api.openweathermap.org/data/2.5/weather?q=Dunedin&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
6
7 Rotorua
8 curl "http://api.openweathermap.org/data/2.5/weather?q=Rotorua&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
9
10 Munich
```

```
guillemozan@Guillermos-MacBook-Pro ~ % curl "http://api.openweathermap.org/data/2.5/weather?q=Dunedin&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
{"coord": {"lon": 178.5836, "lat": -45.8742}, "weather": [{"id": 803, "main": "clouds", "description": "broken clouds", "icon": "04d"}], "base": "stations", "main": {"temp": 10.45, "feels_like": 9.2, "temp_min": 10.45, "temp_max": 10.45, "pressure": 1027, "humidity": 63, "sea_level": 1027, "grnd_level": 1025}, "visibility": 10000, "wind": {"speed": 2.68, "deg": 206, "gust": 14.31}, "clouds": {"all": 58}, "dt": 1728397672, "sys": {"country": "NZ", "id": 75281, "country": "NZ", "sunrise": 1728383490, "sunset": 1728415250}, "timezone": 43200, "id": 2191562, "name": "Dunedin", "cod": 200}
```

3. Rotorua,

```

Welcome  curl.txt
7 Rotorua
8 curl "http://api.openweathermap.org/data/2.5/weather?q=Rotorua&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
9
10 Munich
11 curl "http://api.openweathermap.org/data/2.5/weather?q=Munich&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
12
13 Madrid
14 curl "http://api.openweathermap.org/data/2.5/weather?q=Madrid&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
15

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
guillemoazan@Guillermos-MacBook-Pro: curl % curl "http://api.openweathermap.org/data/2.5/weather?q=Rotorua&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
% Total % Received % Xferd Average Speed Time Time Time Current
100 514 100 514 0 0 685 0 --:--:-- --:--:-- --:--:-- 685
{
  "coord": {
    "lon": 176.2452,
    "lat": -38.1387
  },
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 12.16,
    "feels_like": 10.84,
    "temp_min": 11.55,
    "temp_max": 14.11,
    "pressure": 1027,
    "humidity": 54,
    "sea_level": 1027,
    "grnd_level": 993
  },
  "visibility": 10000,
  "wind": {
    "speed": 0.51,
    "deg": 8,
    "gust": 1.38
  },
  "clouds": {
    "all": 0
  },
  "dt": 1720397725,
  "sys": {
    "type": 2,
    "id": 2008882,
    "country": "NZ",
    "sunrise": 1720380654,
    "sunset": 1720415330
  },
  "timezone": 43200,
  "id": 6241325,
  "name": "Rotorua",
  "cod": 200
}
guillemoazan@Guillermos-MacBook-Pro: curl %

```

4. Munich,

```

Welcome  curl.txt
7 Rotorua
8 curl "http://api.openweathermap.org/data/2.5/weather?q=Rotorua&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
9
10 Munich
11 curl "http://api.openweathermap.org/data/2.5/weather?q=Munich&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
12
13 Madrid
14 curl "http://api.openweathermap.org/data/2.5/weather?q=Madrid&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
15
16 Coordinates 8.6, 45.43

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
guillemoazan@Guillermos-MacBook-Pro: curl % curl "http://api.openweathermap.org/data/2.5/weather?q=Munich&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
% Total % Received % Xferd Average Speed Time Time Time Current
100 518 100 518 0 0 53 0 0:00:09 0:00:09 --:--:-- 150
{
  "coord": {
    "lon": 11.5755,
    "lat": 48.1374
  },
  "weather": [
    {
      "id": 804,
      "main": "Clouds",
      "description": "overcast clouds",
      "icon": "04d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 15.15,
    "feels_like": 15.2,
    "temp_min": 14.24,
    "temp_max": 15.7,
    "pressure": 1017,
    "humidity": 55,
    "sea_level": 1017,
    "grnd_level": 956
  },
  "visibility": 10000,
  "wind": {
    "speed": 0.75,
    "deg": 153,
    "gust": 0.79
  },
  "clouds": {
    "all": 86
  },
  "dt": 1720397632,
  "sys": {
    "type": 2,
    "id": 2002112,
    "country": "DE",
    "sunrise": 1720408968,
    "sunset": 1720466066
  },
  "timezone": 7200,
  "id": 2867714,
  "name": "Munich",
  "cod": 200
}
guillemoazan@Guillermos-MacBook-Pro: curl %

```

5. Madrid

```

Welcome  curl.txt
curl.txt
10  Munich
11  curl "http://api.openweathermap.org/data/2.5/weather?q=Munich&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
12
13  Madrid
14  curl "http://api.openweathermap.org/data/2.5/weather?q=Madrid&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
15
16  Coordinates 8.6, 45.43
17  curl "http://api.openweathermap.org/data/2.5/weather?lat=45.43&lon=8.6&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
18
19  Coordinates 151.22, -33.85

PROBLEMS  OUTPUT  DEBUG  CONSOLE  TERMINAL  PORTS
guillemozan@Guillermos-MacBook-Pro: curl % curl "http://api.openweathermap.org/data/2.5/weather?q=Madrid&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
% Total    % Received % Xferd  Average Speed   Time    Time     Time    Current
           % Done   0     0     0           0         0         0         0
100  497    100  497    0     0    1709     0 --:--:-- --:--:-- --:--:--    1707
{
  "coord": {
    "lon": -3.7026,
    "lat": 40.4165
  },
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01n"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 22.49,
    "feels_like": 21.81,
    "temp_min": 19.8,
    "temp_max": 23.58,
    "pressure": 1012,
    "humidity": 39,
    "sea_level": 1012,
    "grnd_level": 938
  },
  "visibility": 9000,
  "wind": {
    "speed": 3.6,
    "deg": 240
  },
  "clouds": {
    "all": 0
  },
  "dt": 1728397175,
  "sys": {
    "type": 2,
    "id": 2007545,
    "country": "ES",
    "sunrise": 1728414343,
    "sunset": 1728460825
  },
  "timezone": 7200,
  "id": 3117725,
  "name": "Madrid",
  "cod": 200
}
guillemozan@Guillermos-MacBook-Pro: curl %

```

2. Get city name, weather description and minimum and maximum temperature in Celsius for

the following cities based on their geographical coordinates:

1. Longitude: 8.6, Latitude: 45.43

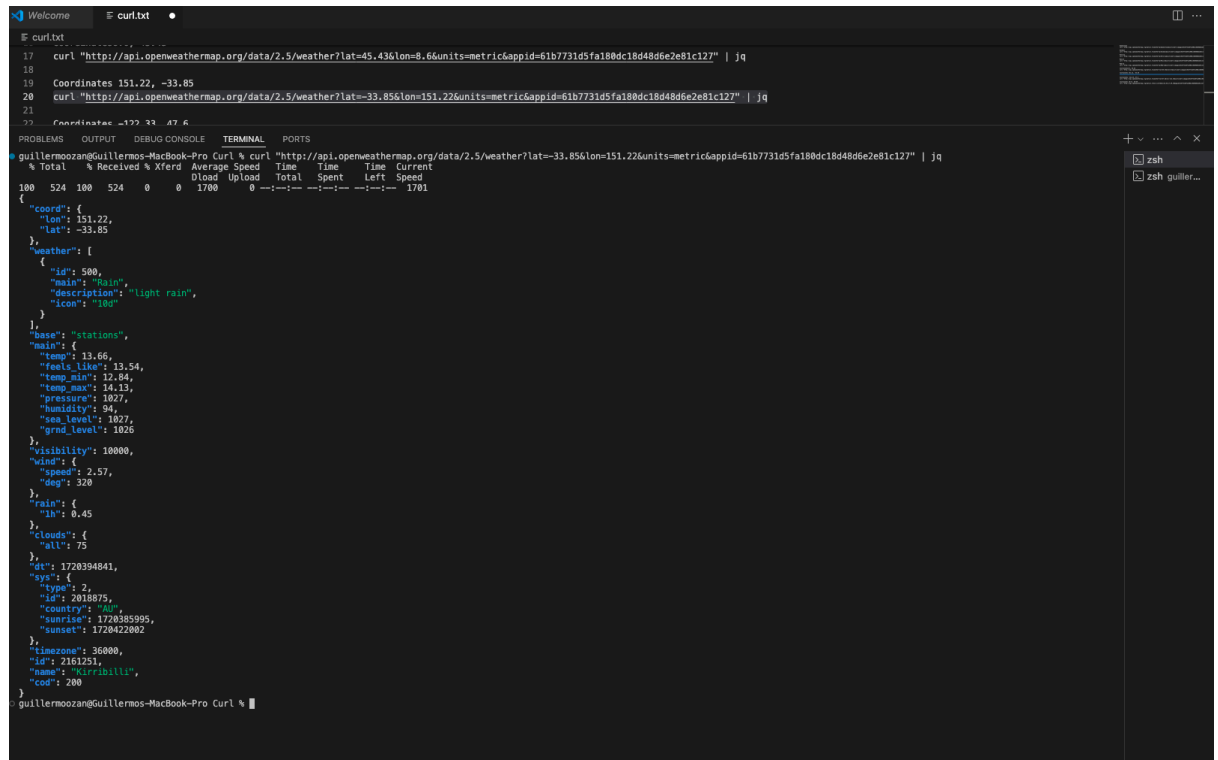
```

Welcome  curl.txt
curl.txt
15  curl "http://api.openweathermap.org/data/2.5/weather?lat=45.43&lon=8.6&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
16  Coordinates 8.6, 45.43
17  curl "http://api.openweathermap.org/data/2.5/weather?lat=45.43&lon=8.6&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
18
19  Coordinates 151.22, -33.85

PROBLEMS  OUTPUT  DEBUG  CONSOLE  TERMINAL  PORTS
guillemozan@Guillermos-MacBook-Pro: curl % curl "http://api.openweathermap.org/data/2.5/weather?lat=45.43&lon=8.6&units=metric&appid=61b7731d5fa188dc18d48d6e2e81c127" | jq
% Total    % Received % Xferd  Average Speed   Time    Time     Time    Current
           % Done   0     0     0           0         0         0         0
100  510    100  510    0     0    1271     0 --:--:-- --:--:-- --:--:--    1268
{
  "coord": {
    "lon": 8.6,
    "lat": 45.43
  },
  "weather": [
    {
      "id": 803,
      "main": "Clouds",
      "description": "broken clouds",
      "icon": "04n"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 20.03,
    "feels_like": 20.26,
    "temp_min": 18.9,
    "temp_max": 20.92,
    "pressure": 1014,
    "humidity": 83,
    "sea_level": 1014,
    "grnd_level": 997
  },
  "visibility": 10000,
  "wind": {
    "speed": 2.84,
    "deg": 45,
    "gust": 7.24
  },
  "clouds": {
    "all": 76
  },
  "dt": 1728394826,
  "sys": {
    "type": 2,
    "id": 2012345,
    "country": "IT",
    "sunrise": 1728410346,
    "sunset": 1728466116
  },
  "timezone": 7200,
  "id": 3172189,
  "name": "Matera",
  "cod": 200
}
guillemozan@Guillermos-MacBook-Pro: curl %

```


2. Longitude: 151.22, Latitude: -33.85

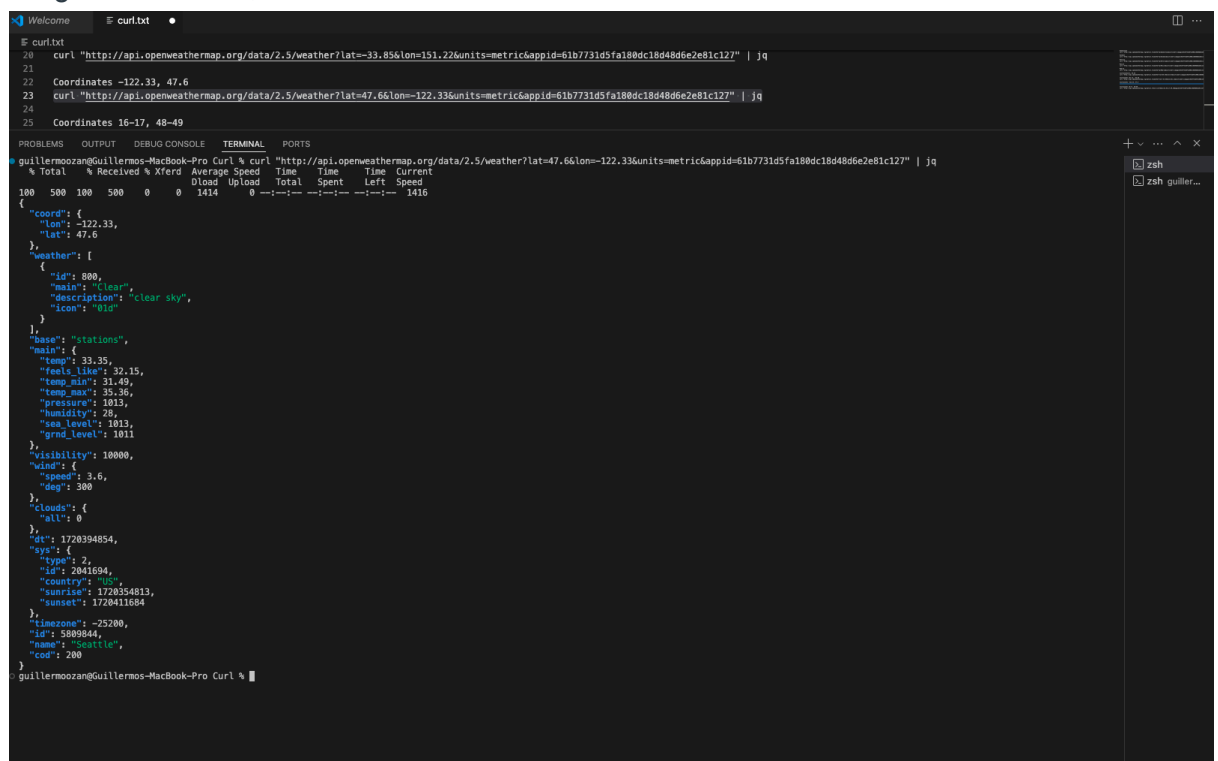


```
17 curl "http://api.openweathermap.org/data/2.5/weather?lat=45.43&lon=8.66&units=metric&appid=61b7731d5fa180dc18d48d6e2e81c127" | jq
18
19 Coordinates 151.22, -33.85
20 curl "http://api.openweathermap.org/data/2.5/weather?lat=-33.85&lon=151.22&units=metric&appid=61b7731d5fa180dc18d48d6e2e81c127" | jq
21
22 Coordinates -122.33, 47.6
23
24
25
```

PROBLEMS	OUTPUT	DEBUG CONSOLE	TERMINAL	PORTS
	% Total	% Received	% Xferd	Average Speed
	100	524	100	524
		0	0	0
				1700
				0
				0
				0
				1701

```
{
  "coord": {
    "lon": 151.22,
    "lat": -33.85
  },
  "weather": [
    {
      "id": 500,
      "main": "Rain",
      "description": "Light rain",
      "icon": "10d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 13.66,
    "feels_like": 13.54,
    "temp_min": 12.84,
    "temp_max": 14.13,
    "pressure": 1027,
    "humidity": 94,
    "sea_level": 1027,
    "grnd_level": 1026
  },
  "visibility": 10000,
  "wind": {
    "speed": 2.57,
    "deg": 320
  },
  "rain": {
    "1h": 0.45
  },
  "clouds": {
    "all": 75
  },
  "dt": 1720394841,
  "sys": {
    "type": 2,
    "id": 2018875,
    "country": "br",
    "sunrise": 1720385995,
    "sunset": 1720422002
  },
  "timezone": 36000,
  "id": 2161251,
  "name": "Arraial",
  "cod": 200
}
```

3. Longitude: -122.33, Latitude: 47.6



```
20 curl "http://api.openweathermap.org/data/2.5/weather?lat=-33.85&lon=151.22&units=metric&appid=61b7731d5fa180dc18d48d6e2e81c127" | jq
21
22 Coordinates -122.33, 47.6
23 curl "http://api.openweathermap.org/data/2.5/weather?lat=47.6&lon=-122.33&units=metric&appid=61b7731d5fa180dc18d48d6e2e81c127" | jq
24
25 Coordinates 16-17, 48-49
26
```

PROBLEMS	OUTPUT	DEBUG CONSOLE	TERMINAL	PORTS
	% Total	% Received	% Xferd	Average Speed
	100	500	100	500
		0	0	0
				1414
				0
				0
				0
				1416

```
{
  "coord": {
    "lon": -122.33,
    "lat": 47.6
  },
  "weather": [
    {
      "id": 800,
      "main": "Clear",
      "description": "clear sky",
      "icon": "01d"
    }
  ],
  "base": "stations",
  "main": {
    "temp": 33.35,
    "feels_like": 32.15,
    "temp_min": 31.49,
    "temp_max": 35.36,
    "pressure": 1013,
    "humidity": 28,
    "sea_level": 1013,
    "grnd_level": 1011
  },
  "visibility": 10000,
  "wind": {
    "speed": 3.6,
    "deg": 300
  },
  "clouds": {
    "all": 0
  },
  "dt": 1720394854,
  "sys": {
    "type": 2,
    "id": 2041684,
    "country": "us",
    "sunrise": 1720354813,
    "sunset": 1720411684
  },
  "timezone": -25200,
  "id": 5095844,
  "name": "Seattle",
  "cod": 200
}
```

3. List

cities and their coordinates within the following box:

- Longitude: from 16 to 17
- Latitude: from 48 to 49

- Zoom: 10

GET

[↕](#)

http://api.openweathermap.org/data/2.5/box/city?bbox=16,48,17,49,10&appid=61b7731d5fa180dc18d48d6e2e81c127

Send

Params

Authorization

Headers (5)

Body

Scripts

Settings

Cookies

Body

Cookies

Headers (9)

Test Results

Status: 200 OK

Time: 807 ms

Size: 2.34 KB

Save as example

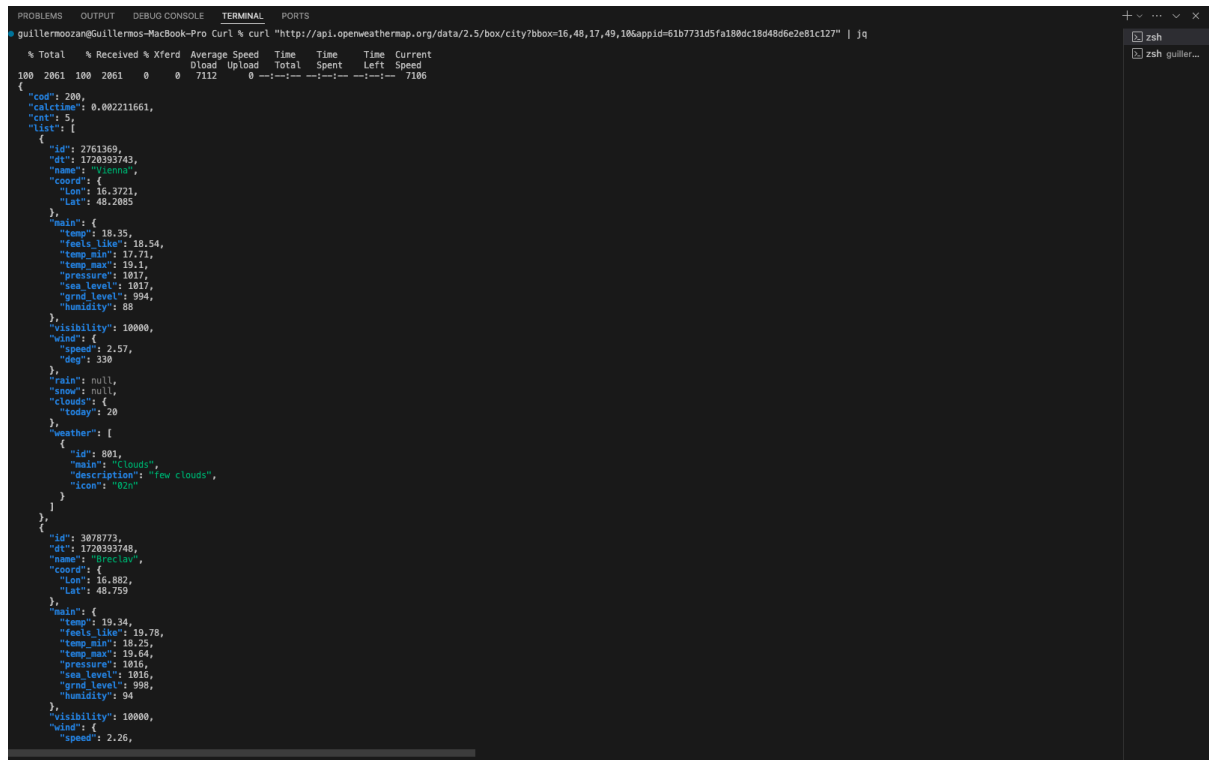
Pretty

Raw

Preview

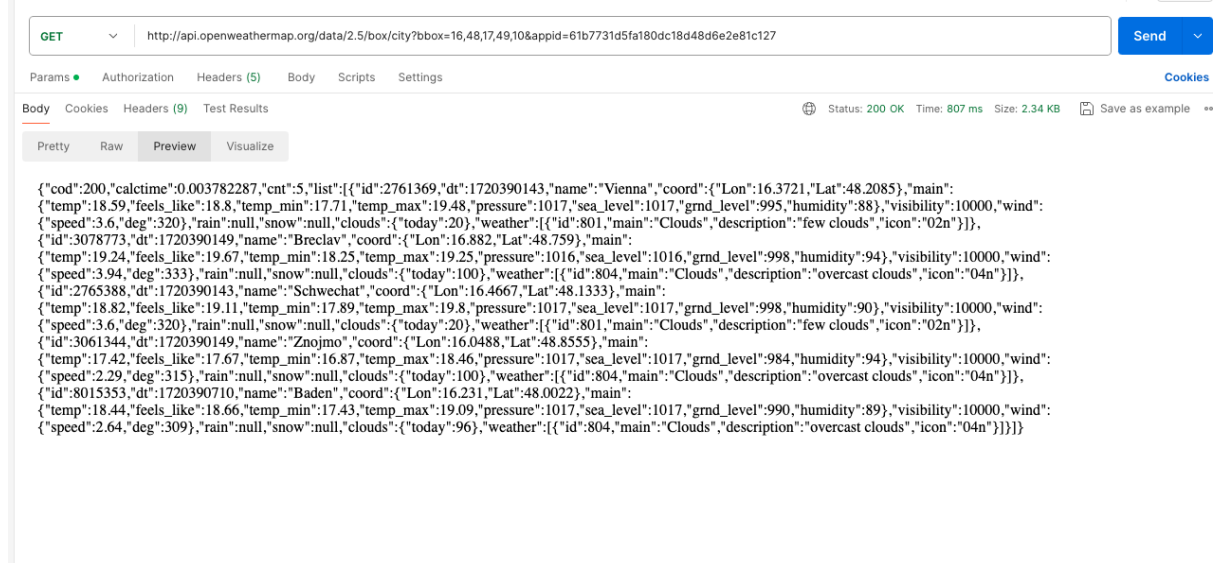
Visualize

```
{
  "cod": 200,
  "caltime": -0.003782287,
  "cnt": 5,
  "list": [
    {
      "id": 2761369,
      "dt": 1720390143,
      "name": "Vienna",
      "coord": {
        "Lon": 16.3721,
        "Lat": 48.2085
      },
      "main": {
        "temp": 18.59,
        "feels_like": 18.8,
        "temp_min": 17.71,
        "temp_max": 19.48,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 995,
        "humidity": 88,
        "visibility": 10000,
        "wind": {
          "speed": 3.6,
          "deg": 320
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 20
        },
        "weather": [
          {
            "id": 801,
            "main": "Clouds",
            "description": "few clouds",
            "icon": "02n"
          }
        ]
      }
    },
    {
      "id": 3078773,
      "dt": 1720390149,
      "name": "Breclav",
      "coord": {
        "Lon": 16.882,
        "Lat": 48.759
      },
      "main": {
        "temp": 19.24,
        "feels_like": 19.67,
        "temp_min": 18.25,
        "temp_max": 19.25,
        "pressure": 1016,
        "sea_level": 1016,
        "grnd_level": 998,
        "humidity": 94,
        "visibility": 10000,
        "wind": {
          "speed": 3.94,
          "deg": 333
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 100
        },
        "weather": [
          {
            "id": 804,
            "main": "Clouds",
            "description": "overcast clouds",
            "icon": "04n"
          }
        ]
      }
    },
    {
      "id": 2765388,
      "dt": 1720390143,
      "name": "Schwechat",
      "coord": {
        "Lon": 16.4667,
        "Lat": 48.1333
      },
      "main": {
        "temp": 18.82,
        "feels_like": 19.11,
        "temp_min": 17.89,
        "temp_max": 19.8,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 998,
        "humidity": 90,
        "visibility": 10000,
        "wind": {
          "speed": 3.6,
          "deg": 320
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 20
        },
        "weather": [
          {
            "id": 801,
            "main": "Clouds",
            "description": "few clouds",
            "icon": "02n"
          }
        ]
      }
    },
    {
      "id": 3061344,
      "dt": 1720390149,
      "name": "Znojmo",
      "coord": {
        "Lon": 16.0488,
        "Lat": 48.8555
      },
      "main": {
        "temp": 17.42,
        "feels_like": 17.67,
        "temp_min": 16.87,
        "temp_max": 18.46,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 984,
        "humidity": 94,
        "visibility": 10000,
        "wind": {
          "speed": 2.29,
          "deg": 315
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 100
        },
        "weather": [
          {
            "id": 804,
            "main": "Clouds",
            "description": "overcast clouds",
            "icon": "04n"
          }
        ]
      }
    },
    {
      "id": 8015353,
      "dt": 1720390710,
      "name": "Baden",
      "coord": {
        "Lon": 16.231,
        "Lat": 48.0022
      },
      "main": {
        "temp": 18.44,
        "feels_like": 18.66,
        "temp_min": 17.43,
        "temp_max": 19.09,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 990,
        "humidity": 89,
        "visibility": 10000,
        "wind": {
          "speed": 2.64,
          "deg": 309
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 96
        },
        "weather": [
          {
            "id": 804,
            "main": "Clouds",
            "description": "overcast clouds",
            "icon": "04n"
          }
        ]
      }
    }
  ]
}
```



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
guillemosang@Guillemos-MacBook-Pro: ~ % curl 'http://api.openweathermap.org/data/2.5/box/city?bbox=16,48,17,49,18&appid=61b7731d5fa180dc18d48d6e2e81c127' | jq
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total   Spent    Left  Speed
100 2061  100 2061    0     0  7112    0 --:--:-- --:--:-- --:--:--  7106

{
  "cod": 200,
  "calctime": 0.002211661,
  "cnt": 5,
  "list": [
    {
      "id": 2761369,
      "dt": 1720393743,
      "name": "Vienna",
      "coord": {
        "lon": 16.3721,
        "lat": 48.2085
      },
      "main": {
        "temp": 18.35,
        "feels_like": 18.54,
        "temp_min": 17.71,
        "temp_max": 19.1,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 994,
        "humidity": 88
      },
      "visibility": 10000,
      "wind": {
        "speed": 2.57,
        "deg": 330
      },
      "rain": null,
      "snow": null,
      "clouds": {
        "today": 20
      },
      "weather": [
        {
          "id": 801,
          "main": "clouds",
          "description": "few clouds",
          "icon": "02n"
        }
      ]
    },
    {
      "id": 3078773,
      "dt": 1720393748,
      "name": "Breclav",
      "coord": {
        "lon": 16.882,
        "lat": 48.759
      },
      "main": {
        "temp": 19.34,
        "feels_like": 19.78,
        "temp_min": 18.25,
        "temp_max": 19.64,
        "pressure": 1016,
        "sea_level": 1016,
        "grnd_level": 998,
        "humidity": 94
      },
      "visibility": 10000,
      "wind": {
        "speed": 2.26,
```



GET http://api.openweathermap.org/data/2.5/box/city?bbox=16,48,17,49,18&appid=61b7731d5fa180dc18d48d6e2e81c127 Send

Params Authorization Headers (5) Body Scripts Settings Cookies

Body Cookies Headers (9) Test Results Status: 200 OK Time: 807 ms Size: 2.34 KB Save as example

Pretty Raw Preview Visualize

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{
  "cod": 200,
  "calctime": 0.003782287,
  "cnt": 5,
  "list": [
    {
      "id": 2761369,
      "dt": 1720390143,
      "name": "Vienna",
      "coord": {
        "lon": 16.3721,
        "lat": 48.2085
      },
      "main": {
        "temp": 18.59,
        "feels_like": 18.8,
        "temp_min": 17.71,
        "temp_max": 19.48,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 995,
        "humidity": 88,
        "visibility": 10000,
        "wind": {
          "speed": 3.6,
          "deg": 320
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 20
        },
        "weather": [
          {
            "id": 801,
            "main": "Clouds",
            "description": "few clouds",
            "icon": "02n"
          }
        ]
      },
      "id": 3078773,
      "dt": 1720390149,
      "name": "Breclav",
      "coord": {
        "lon": 16.882,
        "lat": 48.759
      },
      "main": {
        "temp": 19.24,
        "feels_like": 19.67,
        "temp_min": 18.25,
        "temp_max": 19.25,
        "pressure": 1016,
        "sea_level": 1016,
        "grnd_level": 998,
        "humidity": 94,
        "visibility": 10000,
        "wind": {
          "speed": 3.94,
          "deg": 333
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 100
        },
        "weather": [
          {
            "id": 804,
            "main": "Clouds",
            "description": "overcast clouds",
            "icon": "04n"
          }
        ]
      },
      "id": 2765388,
      "dt": 1720390143,
      "name": "Schwechat",
      "coord": {
        "lon": 16.4667,
        "lat": 48.1333
      },
      "main": {
        "temp": 18.82,
        "feels_like": 19.11,
        "temp_min": 17.89,
        "temp_max": 19.8,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 998,
        "humidity": 90,
        "visibility": 10000,
        "wind": {
          "speed": 3.6,
          "deg": 320
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 20
        },
        "weather": [
          {
            "id": 801,
            "main": "Clouds",
            "description": "few clouds",
            "icon": "02n"
          }
        ]
      },
      "id": 3061344,
      "dt": 1720390149,
      "name": "Znojmo",
      "coord": {
        "lon": 16.0488,
        "lat": 48.8555
      },
      "main": {
        "temp": 17.42,
        "feels_like": 17.67,
        "temp_min": 16.87,
        "temp_max": 18.46,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 984,
        "humidity": 94,
        "visibility": 10000,
        "wind": {
          "speed": 2.29,
          "deg": 315
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 100
        },
        "weather": [
          {
            "id": 804,
            "main": "Clouds",
            "description": "overcast clouds",
            "icon": "04n"
          }
        ]
      },
      "id": 8015353,
      "dt": 1720390710,
      "name": "Baden",
      "coord": {
        "lon": 16.231,
        "lat": 48.0022
      },
      "main": {
        "temp": 18.44,
        "feels_like": 18.66,
        "temp_min": 17.43,
        "temp_max": 19.09,
        "pressure": 1017,
        "sea_level": 1017,
        "grnd_level": 990,
        "humidity": 89,
        "visibility": 10000,
        "wind": {
          "speed": 2.64,
          "deg": 309
        },
        "rain": null,
        "snow": null,
        "clouds": {
          "today": 96
        },
        "weather": [
          {
            "id": 804,
            "main": "Clouds",
            "description": "overcast clouds",
            "icon": "04n"
          }
        ]
      }
    ]
  }
}
```

Task 3 Creating Webhooks

Loom video explain

<https://www.loom.com/share/fe06c94e56154521b8c715d23ce1a626?sid=56b75ba0-1d19-4b3a-861a-c02f273e4312>

The screenshot displays a Trello board titled "Web services" with a workflow for sending emails. The workflow consists of three steps:

1. New Form Response in Google Forms
2. Create Card in Trello
3. Send Email in Gmail

The right sidebar shows the details for the "3. Send Email in Gmail" step, including the app (Gmail), event (Gmail guille@meliamarketing.com #3), and step details (To: guilleozan25@gmail.com, Cc: , From: , From Name:).

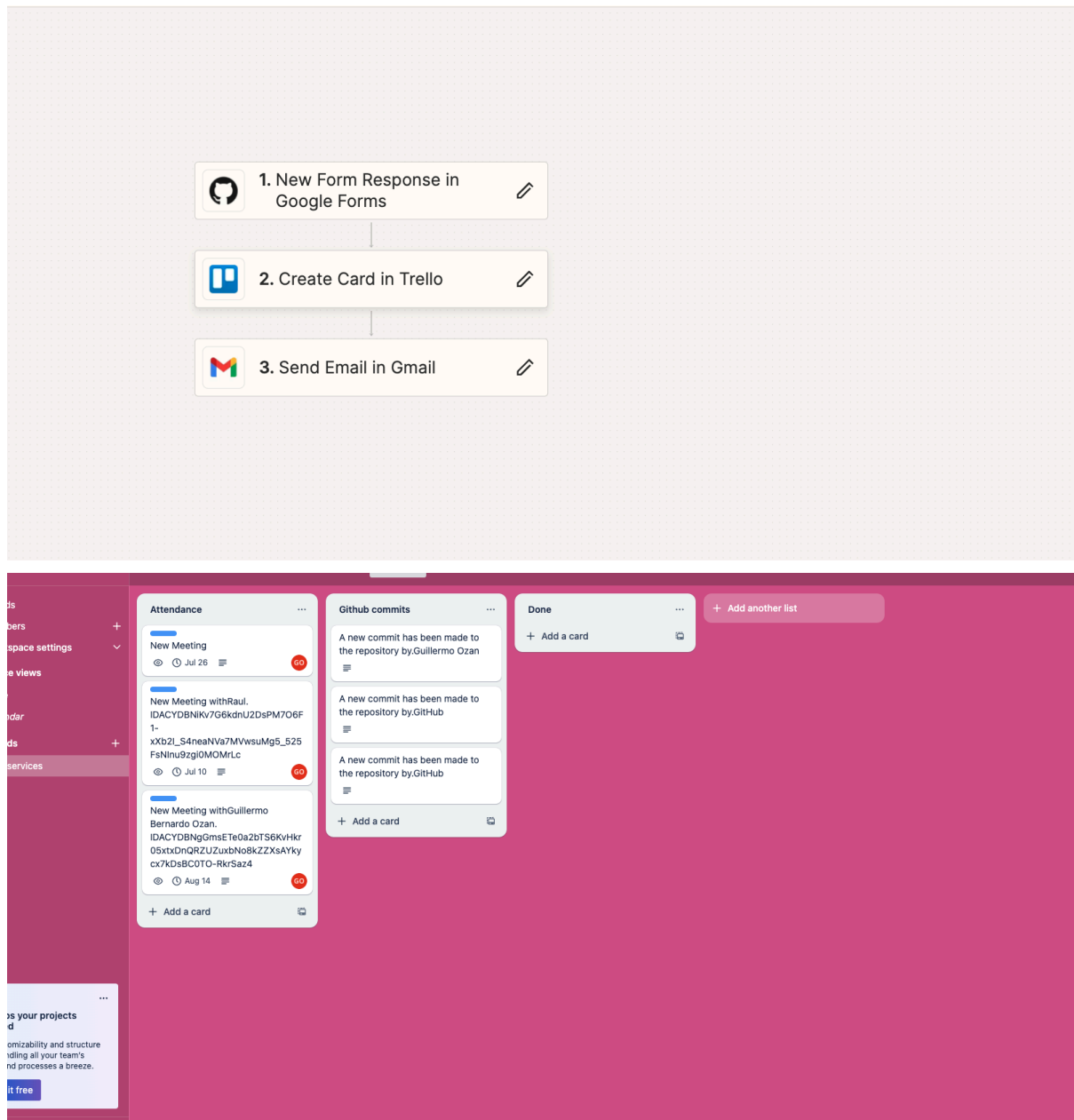
The main board area shows a list of cards under the "Attendance" column. The cards are:

- New Meeting (Jul 26)
- New Meeting with Raul. IDACyDBNikv7G6kdnU2DsPM7O6F 1- xXbZl_S4neaNVa7MVwsuMg5_525 FsNinu9zgiOMOMrLc (Jul 10)
- New Meeting with Guillermo Bernardo Ozan. IDACyDBNgGmsETe0a2bTS6KvHkr 05xtrDnQRZUJuxbNo8kZZxsAYky cx7kDsBC0TO-RkrSaz4 (Aug 14)

The bottom of the screen shows a sidebar with "Jira keeps your projects organized" and a "Try it free" button.

Video explain

<https://www.loom.com/share/019c2c4a824d4906b6949a296adabb20?sid=737ab159-9323-4482-a473-f76448063666>



PART B

To facilitate testing, I have included a few screenshots of the application and the database.

If you wish to test it in your own environment, please use the following login credentials for MongoDB Atlas. Ensure that you authenticate your IP address to gain access.

mongodb username: guilleozan25@gmail.com

password: 4S+d6Fgr5i\$kurB

<https://github.com/guilleozan/web-services>

API Planning

Definition of HTTP Requests

Getting Information from the Database about Multiple Objects

1. GET /api/albums: Retrieve a list of all albums.
2. GET /api/artists: Retrieve a list of all artists.
3. GET /api/playlists: Retrieve a list of all playlists.

Getting Information from the Database about a Specific Object

1. GET /api/albums/:id: Retrieve information about a specific album by ID.
2. GET /api/artists/:id: Retrieve information about a specific artist by ID.
3. GET /api/playlists/:id: Retrieve information about a specific playlist by ID.

Deleting an Object from the Database Based on a Specific Parameter

1. DELETE /api/albums/:id: Delete a specific album by ID.
2. DELETE /api/artists/:id: Delete a specific artist by ID.

Updating an Object from the Database Based on a Specific Parameter

1. PUT /api/albums/:id: Update a specific album by ID.
2. PUT /api/artists/:id: Update a specific artist by ID.

2. API Planning Document

Who Will Be Using the API?

1. Application Developers: Developers building music-related applications that need access to information about albums, artists, and playlists.
2. End Users: Users of applications that consume data via the API to search and manage their favorite music.

Benefits of the API

1. Centralized Access to Music Information: Provides a single source of information for albums, artists, and playlists.
2. Facilitates Integration: Allows developers to quickly and efficiently integrate music functionalities into their applications.
3. Data Management: Enables end users to manage their music preferences through applications using the API.

Actions the API Needs to Accomplish

Retrieve lists of albums, artists, and playlists: Allow users and developers to access collections of music data.

Retrieve specific details of albums, artists, and playlists: Provide detailed information about individual objects for a richer user experience.

Create new records of albums, artists, and playlists: Allow adding new data to the database.

Update existing information: Facilitate the update of existing data in the database.

Delete specific records: Allow deletion of data that is no longer needed or is incorrect.

API Name: Music Hub API

Version: 1.0

HTTP Requests

1. GET /api/albums
2. GET /api/artists
3. GET /api/playlists
4. GET /api/albums/:id
5. GET /api/artists/:id
6. GET /api/playlists/:id
7. DELETE /api/albums/:id
8. DELETE /api/artists/:id
9. PUT /api/albums/:id
10. PUT /api/artists/:id

1. User Registration

```
curl -X POST http://localhost:3000/api/users/signup \  
-H "Content-Type: application/json" \  
-d '{"username": "guilleozan", "password": "123456"}'
```

```
-d '{"email": "test@gmail.com", "password": "password123"}'
```

```
.env
music-hub-apu.yaml
package-lock.json
package.json
server.js
testMongoConnecti...
```

```
7
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

```
o guillemozan@Guillermo-MacBook-Pro music-hub-api % node server.js
Server is running on port 3000
Connected to MongoDB Atlas
[]
```

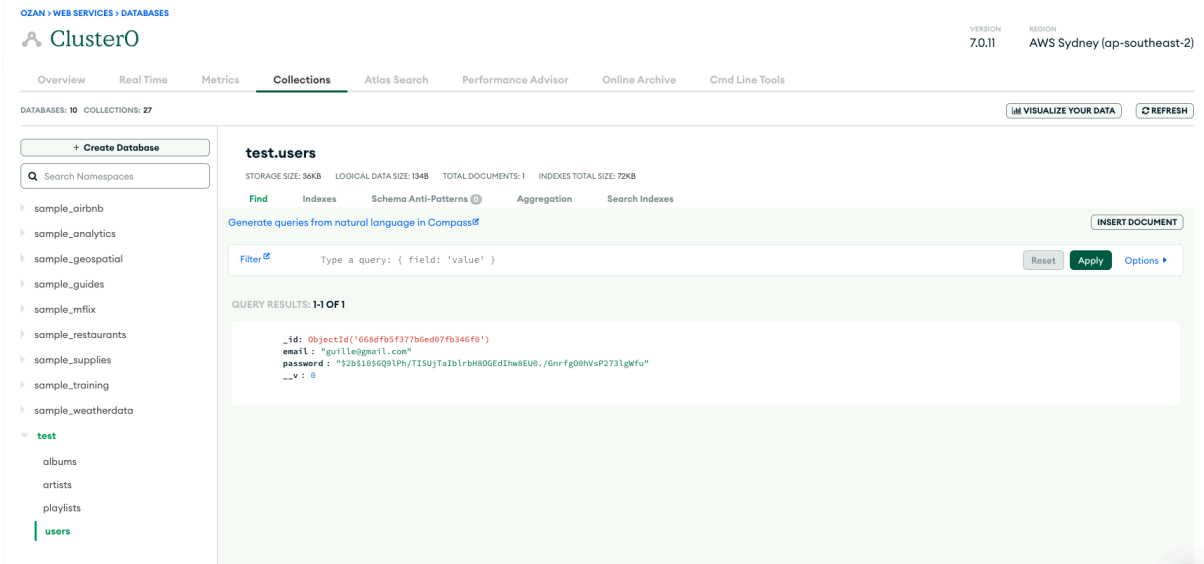
```
o guillemozan@Guillermo-MacBook-Pro music-hub-api % curl -X POST http://localhost:3000/api/us
-H "Content-Type: application/json" \
-d '{"email": "test@gmail.com", "password": "password123"}'
{"error": "E11000 duplicate key error collection: test.users index: email_1 dup key: { email: '
om' }"}
o guillemozan@Guillermo-MacBook-Pro music-hub-api % curl -X POST http://localhost:3000/api/us
-H "Content-Type: application/json" \
-d '{"email": "test@gmail.com", "password": "password123"}'
{"message": "User created"}
o guillemozan@Guillermo-MacBook-Pro music-hub-api %
```

UTLINE


```
EXPLODER
... server.js M
WEB-SERVICES
> controllers
> middleware
> models
> node_modules
> routes
> env
> music-hub-api.yaml
> package-lock.json
> package.json
> server.js M
> testMongoConnection.js

server.js ~
1
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8
9 const playlistRoutes = require('./routes/playlistRoutes');
10
11 const app = express();
12
13 // Middleware
14 app.use(bodyParser.json());
15
16 // MongoDB connection
17 const uri = process.env.MONGODB_URI;
18
19 mongoose.connect(uri).then(() => {
20   console.log("Connected to MongoDB Atlas");
21 }).catch(err => {
22   console.error("Error connecting to MongoDB Atlas:", err);
23 });
24
25 // Routes
26 app.use('/api/users', userRoutes);
27 app.use('/api/albums', albumRoutes);
28 app.use('/api/artists', artistRoutes);
29 app.use('/api/playlists', playlistRoutes);
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```

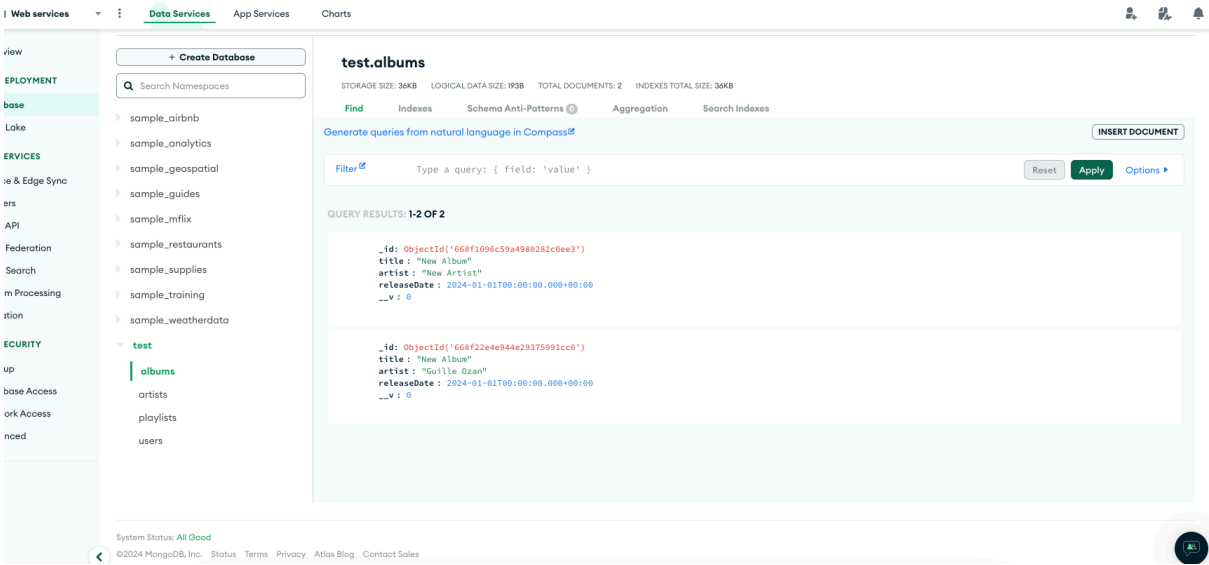
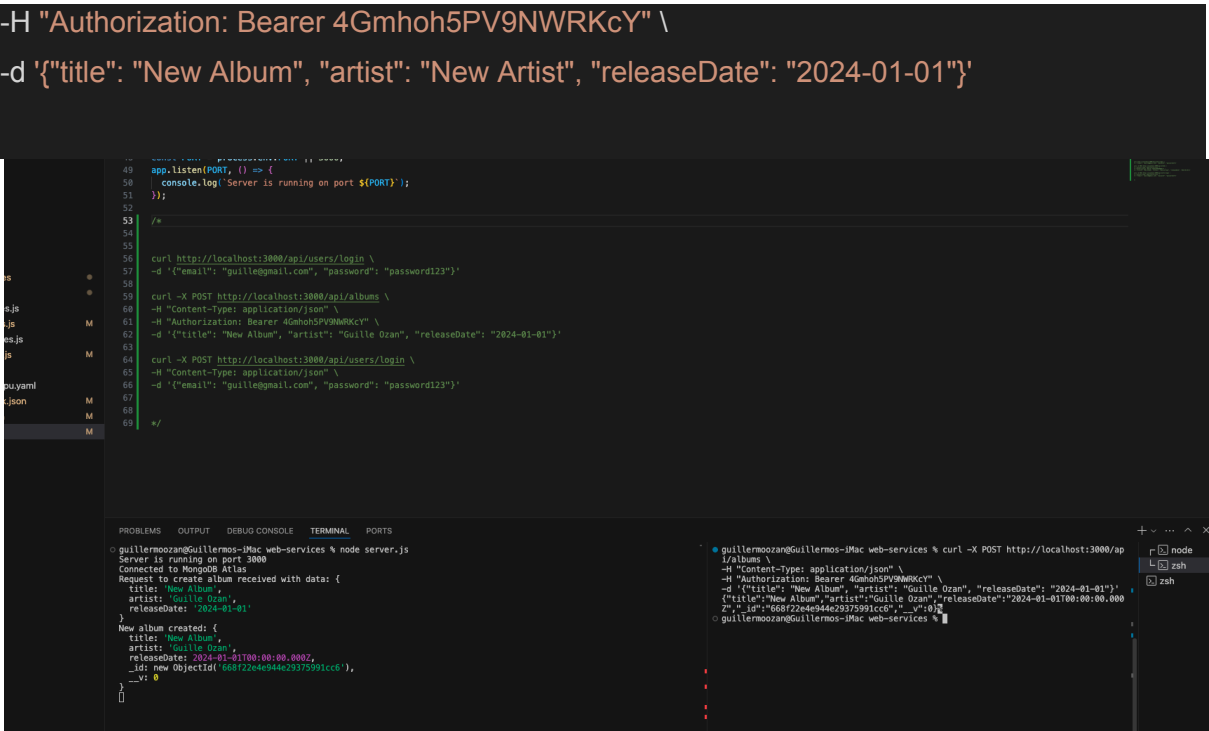


2. User Login

```
curl -X POST http://localhost:3000/api/users/login \
-H "Content-Type: application/json" \
-d '{"email": "test@gmail.com", "password": "password123"}'
```

3. Create an Album

```
curl -X POST http://localhost:3000/api/albums \
-H "Content-Type: application/json" \
```



4. Get All Albums

```
curl -X GET http://localhost:3000/api/albums \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

5. Get an Album by ID

```
curl -X GET http://localhost:3000/api/albums/<album_id> \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

```
curl -X GET http://localhost:3000/api/artists/668f2529e944e29375991ccb \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

Running on port 3000
to create album received with data: {
 "New Album",
 "Guille Ozan",
 "2024-01-01"
}
album created: {
 "New Album",
 "Guille Ozan",
 "2024-01-01T00:00:00.000Z",
 "new ObjectId('668f22e4e944e29375991ccb')",
 0
}
to get all albums received
retrieved: [
 {
 "new ObjectId('668f1096c59a4980282c0ee3')",
 "New Album",
 "New Artist",
 "2024-01-01T00:00:00.000Z",
 0
 },
 {
 "new ObjectId('668f22e4e944e29375991ccb')",
 "New Album",
 "Guille Ozan",
 "2024-01-01T00:00:00.000Z",
 0
 }
]

```
guillemoazan@Guillemos-iMac web-services % curl -X POST http://localhost:3000/api/artists \
-H "Content-Type: application/json" \
-H "Authorization: Bearer " \
-d '{"name": "Eminem", "genre": "Hip-hop"}'
{"name": "Eminem", "genre": "Hip-hop", "_id": "668f2529e944e29375991ccb", "__v": 0}
guillemoazan@Guillemos-iMac web-services % curl -X GET http://localhost:3000/api/artists/668f2529e944e29375991ccb \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
{"_id": "668f2529e944e29375991ccb", "name": "Eminem", "genre": "Hip-hop", "__v": 0}
```

6. Update an album

```
curl -X PUT http://localhost:3000/api/albums/<album_id> \
-H "Content-Type: application/json" \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY" \
-d '{"title": "Updated Album", "artist": "Updated Artist", "releaseDate": "2024-02-01"}'
```

7. Delete an album

```
curl -X DELETE http://localhost:3000/api/albums/<album_id> \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

8. Create an artist

```
curl -X POST http://localhost:3000/api/artists \
-H "Content-Type: application/json" \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY" \
-d '{"name": "New Artist", "genre": "Genre"}'
```

The image shows a terminal window and the MongoDB Compass web interface. The terminal window displays the following commands and output:

```
curl -X POST http://localhost:3000/api/artists \
-H "Content-Type: application/json" \
-H "Authorization: Bearer " \
-d '{"name": "Eminem", "genre": "Hip-hop"}'

curl -X GET http://localhost:3000/api/artists/<artist_id> \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"

*/

Server is running on port 3000
Connected to MongoDB Atlas
Request to create album received with data: {
  title: 'New Album',
  artist: 'Guille Ozan',
  releaseDate: '2024-01-01'
}
Album created: {
  _id: new ObjectId('668f22e4e944e29375991ccb'),
  title: 'New Album',
  artist: 'Guille Ozan',
  releaseDate: 2024-01-01T00:00:00.000Z,
  __v: 0
}
Request to get all albums received
Albums retrieved: [
  {
    _id: new ObjectId('668f1096c59a4980282c0ee3'),
    title: 'New Album',
    artist: 'New Artist',
    releaseDate: 2024-01-01T00:00:00.000Z,
    __v: 0
  },
  {
    _id: new ObjectId('668f22e4e944e29375991ccb'),
    title: 'New Album',
    artist: 'Guille Ozan',
    releaseDate: 2024-01-01T00:00:00.000Z,
    __v: 0
  }
]

guillemoazan@Guillermo-Mac web-services % curl -X POST http://localhost:3000/api/artists \
-H "Content-Type: application/json" \
-H "Authorization: Bearer " \
-d '{"name": "Eminem", "genre": "Hip-hop"}'
{"_id": "668f2529e944e29375991ccb", "name": "Eminem", "genre": "Hip-hop"}
guillemoazan@Guillermo-Mac web-services %
```

The MongoDB Compass interface shows the 'test.artists' collection. The left sidebar lists various sample databases, with 'test' expanded to show 'albums', 'artists', 'playlists', and 'users'. The main panel displays the 'test.artists' collection with the following details:

- STORAGE SIZE: 20KB
- LOGICAL DATA SIZE: 134B
- TOTAL DOCUMENTS: 2
- INDEXES TOTAL SIZE: 20KB

The 'Find' tab is active, showing a query filter: `{ field: 'value' }`. The query results show 1-1 OF 1 document:

```
{
  _id: ObjectId('668f2529e944e29375991ccb'),
  name: "Eminem",
  genre: "Hip-hop",
  __v: 0
}
```

The system status at the bottom is 'All Good'.

9. Get All Artists

```
curl -X GET http://localhost:3000/api/artists \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

```
91 | curl -X GET http://localhost:3000/api/artists \
92 |
93 | -H "Authorization: Bearer 4GmhohSPV9NMRRKcy"
94 |
95 | */
```

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PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

guillermoozan@Guillemos-iMac web-services % node server.js
Server is running on port 3000
Connected to MongoDB Atlas
Request to get all artists received
Artists retrieved: [

```
{
  _id: new ObjectId('668f2529e944e29375991ccb'),
  name: 'Emine',
  genre: 'Hip-hop',
  __v: 0
},
]
```

guillermoozan@Guillemos-iMac web-services % curl -X GET http://localhost:3000/api/artists \

```
-H "Authorization: Bearer 4GmhohSPV9NMRRKcy"
```

[{"_id":"668f2529e944e29375991ccb","name":"Emine","genre":"Hip-hop",__v":0}]

10. Get an Artist by ID

```
curl -X GET http://localhost:3000/api/artists/<artist_id> \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

11. Update an artist

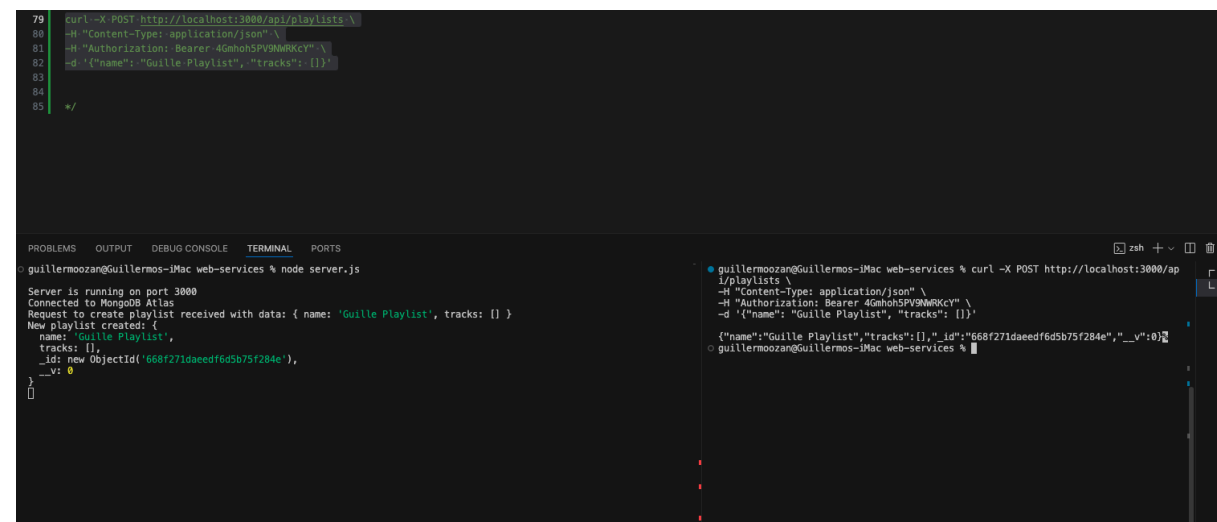
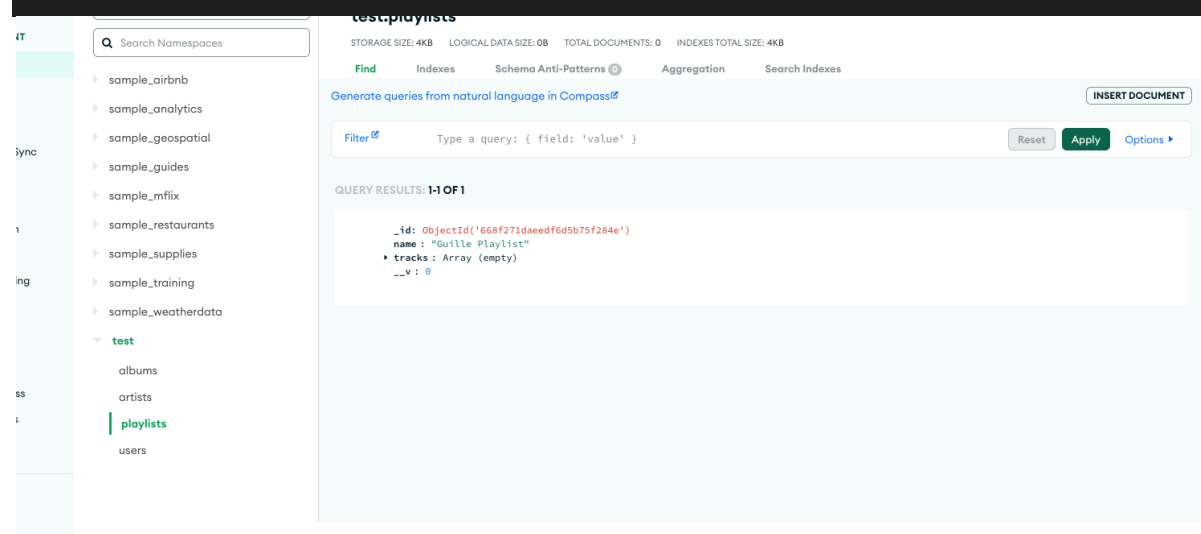
```
curl -X PUT http://localhost:3000/api/artists/<artist_id> \
-H "Content-Type: application/json" \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY" \
-d '{"name": "Updated Artist", "genre": "Updated Genre"}
```

12. Delete an artist

```
curl -X DELETE http://localhost:3000/api/artists/<artist_id> \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

13. Create a Playlist

```
curl -X POST http://localhost:3000/api/playlists \
-H "Content-Type: application/json" \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY" \
-d '{"name": "New Playlist", "tracks": []}'
```



14. Get all playlists

```
curl -X GET http://localhost:3000/api/playlists \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

15. Get a playlist by ID

```
curl -X GET http://localhost:3000/api/playlists/<playlist_id> \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

```

19   try {
20     const playlists = await Playlist.find();
21     res.json(playlists);
22     console.log("Playlists retrieved:", playlists);
23   } catch (err) {
24     console.error("Error retrieving playlists:", err);
25     res.status(500).json({ error: err.message });
26   }
27 }

```

```

guillemoazan@Guillermo-Mac web-services % node server.js
Server is running on port 3000
Connected to MongoDB Atlas
Request to create playlist received with data: { name: 'Guille Playlist', tracks: [] }
New playlist created: {
  name: 'Guille Playlist',
  tracks: [],
  _id: new ObjectId('668f271daeedf6d5b75f284e'),
  __v: 0
}
Request to get playlist by ID received with ID: 668f271daeedf6d5b75f284e
Playlist retrieved: {
  _id: new ObjectId('668f271daeedf6d5b75f284e'),
  name: 'Guille Playlist',
  tracks: [],
  __v: 0
}

```

```

guillemoazan@Guillermo-Mac web-services % curl -X POST http://localhost:3000/api/playlists \
-H "Content-type: application/json" \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY" \
-d '{"name": "Guille Playlist", "tracks": []}'
{"name":"Guille Playlist","tracks":[],"_id":"668f271daeedf6d5b75f284e","__v":0}
guillemoazan@Guillermo-Mac web-services % curl -X GET http://localhost:3000/api/playlists/668f271daeedf6d5b75f284e \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY" \
{"_id":"668f271daeedf6d5b75f284e","name":"Guille Playlist","tracks":[],"__v":0}
guillemoazan@Guillermo-Mac web-services %

```

16. Update a playlist

```
curl -X PUT http://localhost:3000/api/playlists/<playlist_id> \
-H "Content-Type: application/json" \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY" \
-d '{"name": "Updated Playlist", "tracks": []}'
```

17. Delete a Playlist

```
curl -X DELETE http://localhost:3000/api/playlists/<playlist_id> \
-H "Authorization: Bearer 4Gmhoh5PV9NWRKcY"
```

```
86 // ...
87
88
89 curl -X DELETE http://localhost:3000/api/playlists/668f271daaed6d5b75f284e \
90 -H "Authorization: Bearer 4GmhohSPV9NMWkcy"
91
92 */

```

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS

guillemoozan@Guillemos-Mac web-services % node server.js

```
Server is running on port 3000
Connected to MongoDB Atlas
Request to create playlist received with data: { name: 'Guille Playlist', tracks: [] }
New playlist created: {
  name: 'Guille Playlist',
  tracks: [],
  _id: new ObjectId('668f271daaed6d5b75f284e'),
  __v: 0
}
Request to get playlist by ID received with ID: 668f271daaed6d5b75f284e
Playlist retrieved: {
  _id: new ObjectId('668f271daaed6d5b75f284e'),
  name: 'Guille Playlist',
  tracks: [],
  __v: 0
}
>[[{"id": "668f271daaed6d5b75f284e"}]]
Request to delete playlist received with ID: 668f271daaed6d5b75f284e
Playlist deleted: {
  _id: new ObjectId('668f271daaed6d5b75f284e'),
  name: 'Guille Playlist',
  tracks: [],
  __v: 0
}

```

guillemoozan@Guillemos-Mac web-services % curl -X DELETE http://localhost:3000/api/playlists/668f271daaed6d5b75f284e \

```
-H "Authorization: Bearer 4GmhohSPV9NMWkcy"

{"message": "Playlist deleted"}
```

guillemoozan@Guillemos-Mac web-services %