

# Manual

Beau De Clercq

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# 1 Running & using the app

## 1.1 Starting the app

In order to run the app, the user needs to execute the *run.sh* script on Mac/Linux or the *run.bat* script on Windows.

## 1.2 Usage

## 2 API calls

### 2.1 Provinces

---

```
{
  "data": {
    "provinces": [
      {
        "entiteitcode": "A",
        "entiteitnummer": "1",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/1",
          },
          {
            "rel": "haltes",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/1/haltes",
          },
          {
            "rel": "lijnen",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/1/lijnen",
          },
          {
            "rel": "gemeenten",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/1/gemeenten",
          },
        ],
        "omschrijving": "Antwerpen",
      },
      {
        "entiteitcode": "O",
        "entiteitnummer": "2",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/2",
          },
          {
            "rel": "haltes",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/2/haltes",
          },
          {
            "rel": "lijnen",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/2/lijnen",
          },
          {
            "rel": "gemeenten",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/2/gemeenten",
          },
        ],
        "omschrijving": "Oost-Vlaanderen",
      },
      {
        "entiteitcode": "B",
        "entiteitnummer": "3",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/3",
          },
          {
            "rel": "haltes",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/3/haltes",
          },
          {
            "rel": "lijnen",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/3/lijnen",
          },
          {
            "rel": "gemeenten",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/3/gemeenten",
          },
        ],
        "omschrijving": "Vlaams-Brabant",
      },
      {
        "entiteitcode": "L",
        "entiteitnummer": "4",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/4",
          },
          {
            "rel": "haltes",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/4/haltes",
          },
          {
            "rel": "lijnen",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/4/lijnen",
          },
          {
            "rel": "gemeenten",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/4/gemeenten",
          },
        ],
        "omschrijving": "Limburg",
      },
      {
        "entiteitcode": "W",
        "entiteitnummer": "5",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/5",
          },
          {
            "rel": "haltes",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/5/haltes",
          },
          {
            "rel": "lijnen",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/5/lijnen",
          },
          {
            "rel": "gemeenten",
            "url": "https://api.delijn.be/DLKernOpenData/api/v1/entiteiten/5/gemeenten",
          },
        ],
        "omschrijving": "West-Vlaanderen"
      }
    ]
  },
  "status": "success"
}
```

---

API call:

/get\_provinces

Return value: a JSON format response object as shown above.

## 2.2 Lines

---

```
{
  "data": {
    "lines": [
      {
        "bedieningstype": "NORMAAL",
        "entiteitnummer": "1",
        "lijnGeldigTot": "2019-08-31",
        "lijnGeldigVan": "2019-04-22",
        "lijnummer": "2",
        "lijnummerPubliek": "2",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/v1/beta/lijnen/1/2"
          }
        ],
        "omschrijving": "Hoboken - P+R Merksem",
        "publiek": true,
        "vervoertype": "TRAM"
      },
      {
        "bedieningstype": "NORMAAL",
        "entiteitnummer": "1",
        "lijnGeldigTot": "2019-08-31",
        "lijnGeldigVan": "2019-04-22",
        "lijnummer": "3",
        "lijnummerPubliek": "3",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/v1/beta/lijnen/1/3"
          }
        ],
        "omschrijving": "P+R Merksem - P+R Melsele",
        "publiek": true,
        "vervoertype": "TRAM"
      },
      {
        "bedieningstype": "NORMAAL",
        "entiteitnummer": "1",
        "lijnGeldigTot": "2019-08-29",
        "lijnGeldigVan": "2019-06-02",
        "lijnummer": "997",
        "lijnummerPubliek": "Buu",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/v1/beta/lijnen/1/997"
          }
        ],
        "omschrijving": "Buurtbu Brassaant",
        "publiek": true,
        "vervoertype": "BUS"
      },
      {
        "bedieningstype": "TECHNISCHE_LIJD",
        "entiteitnummer": "1",
        "lijnGeldigTot": "2019-08-31",
        "lijnGeldigVan": "2019-04-22",
        "lijnummer": "999",
        "lijnummerPubliek": "999",
        "links": [
          {
            "rel": "detail",
            "url": "https://api.delijn.be/DLKernOpenData/v1/beta/lijnen/1/999"
          }
        ],
        "omschrijving": "Uit- en inrijdende ritten Antwerpen Tram",
        "publiek": false,
        "vervoertype": "BUS"
      }
    ]
  },
  "status": "success"
}
```

---

API call:

`/get_lines/<province>`

Return value: a JSON format response object as (shortened) shown above. This object describes the available lines for the given province.

## 2.3 Routes & passings

---

```
{
  "data": {
    "routes": [
      [
        ["51.2587202", "4.4627988"],
        ["51.2580442", "4.4624877"],
        ["51.2560165", "4.4605994"],
        . . . ,
        ["51.1828995", "4.3736422"],
        ["51.1828244", "4.373138"],
        ["51.1827684", "4.3728861"]
      ],
      "stops": [
        {
          "lati": 51.2587626674685,
          "longi": 4.46271548234936,
          "name": "P+R Merkssem",
          "temp": 17.45,
          "time": ["00:35:00", "06:35:00"],
          "weather": "clear sky",
        },
        {
          "lati": 51.25366088473669,
          "longi": 4.458164614670439,
          "name": "Ringlaan",
          "temp": 17.45,
          "time": ["00:36:00", "06:36:00"],
          "weather": "clear sky",
        },
        {
          "lati": 51.251262697852084,
          "longi": 4.45592564903742,
          "name": "Rerum Novarum",
          "temp": 17.45,
          "time": ["00:37:00", "06:37:00"],
          "weather": "clear sky",
        },
        {
          "lati": 51.18318020637612,
          "longi": 4.383688211677621,
          "name": "Schijfwerper",
          "temp": 17.44,
          "time": ["01:06:00", "07:06:00"],
          "weather": "clear sky",
        },
        {
          "lati": 51.18309990244975,
          "longi": 4.378267845704564,
          "name": "Sportstraat",
          "temp": 17.44,
          "time": ["01:08:00", "07:08:00"],
          "weather": "clear sky",
        },
        {
          "lati": 51.18317216965261,
          "longi": 4.37246136797233,
          "name": "Zwaantjes",
          "temp": 17.42,
          "time": ["01:09:00", "07:09:00"],
          "weather": "clear sky"
        }
      ]
    },
    "status": "success"
  }
}
```

---

API calls:

```
/get_timetable/<province>/<line>/to/
/get_timetable/<province>/<line>/from/
```

Return value: a JSON format response object as (shortened) shown above. This object describes the stops on the line and provides passing times, weather information and coordinates for the route that will be followed.

### 3 Design choices

## 4 Tools used

- Flask as the main framework
- Python *requests* module to reduce the lines of code needed to perform an API call
- JavaScript & LeafLet.js for all things map-related