Why?

* Developers need directions or route planning APIs to develop innovative Apps to find suitable transit routes for commuters and tourists.
* Google Directions API currently does not support the Tokyo subway system.
TransitHQ Overview

- Simple RESTful API with JSON results
- Search subway stops by name or location
- Calculates routes given origin/destination with departure/arrival times
- Results compatible with Google Directions API
- Supports English and Japanese
Stop Search

BY LOCATION

GET https://api.transithq.com/v1/stop/search?location=35.6628667,139.7288993

Results ordered by distance to input location
Stop Search

BY NAME

GET https://api.transithq.com/v1/stop/search?name=shibuya&language=ja

```
{
  "results": [
    {
      "stop": {
        "location": {
          "lat": 35.659092,
          "lng": 139.70257
        },
        "name": "渋谷"
      }
    },
    {
      "stop": {
        "location": {
          "lat": 35.432525,
          "lng": 139.464829
        },
        "name": "高座渋谷"
      }
    }
  ],
  "status": "OK"
}
```

Results returned in English by default. We asked for Japanese results.
Stop Search

BY PARTIAL NAME

GET

https://api.transithq.co/v1/stop/search?name=akihab&language=en

Partial name searches are possible in English and Japanese.
Directions

DIRECT ROUTE - EBISU TO ROPPONGI

The results object contain the bounding box coordinates for the calculated route. It is used to zoom in/out of map views to fit the entire route.
Directions

DIRECT ROUTE - EBISU TO ROPPONGI

Coordinates of the entire route is encoded for map display using Google’s polyline format.
Summary of the route is given. Includes departure/arrival times and locations, total time and distance values with natural language descriptions.
Directions

DIRECT ROUTE - EBISU TO ROPPONGI

Each “step” is a continuous journey along a subway line. The instructions provide train direction and number.
Directions

DIRECT ROUTE - EBISU TO ROPPONGI

Details of this transit “step” is given. Includes departure/arrival times and location details.
Directions
DIRECT ROUTE - EBISU TO ROPPONGI

Stop details between departure and arrival stops are given here. Includes stop times if available.

Details of the subway line in this step are also given.
Directions

MULTIPLE ROUTES - SHIBUYA TO UENO

Two routes were found. The route that arrives earlier at the destination is returned first.
Directions

MULTIPLE ROUTES - SHIBUYA TO UENO (ROUTE 2)
Directions

INDIRECT ROUTE (PLATFORM TRANSFER) - YOKOHAMA TO CHIBA

GET https://api.transithq.co/v1/directions?origin=yokohama&destination=chiba&departure_time=1547582100&language=en
Directions

INDIRECT ROUTE (PLATFORM TRANSFER) - YOKOHAMA TO CHIBA

- **Step 1:** Catch subway from Yokohama to Tokyo station
- **Step 2:** At Tokyo station, walk towards the Sobu Rapid Line
- **Step 3:** Catch subway towards Chiba
Directions

INDIRECT ROUTE (STATION TRANSFER) - TOYOSU TO SHINAGAWA

GET
https://api.transithq.co/v1/directions?origin=toyosu&destination=shinagawa&language=ja
Directions

INDIRECT ROUTE (STATION TRANSFER) - TOYOSU TO SHINAGAWA

Step 1: Catch subway from Toyosu to Ginza-Itchome station

Step 2: Walk to Yamanote Line of Yurakucho Station

Step 3: Catch subway towards Shinagawa
Future Work

- More information such as transit fare, detailed route coordinates, route colours and icons
- Additional subway routes and timetables
- Configurable ranking parameters (duration, fare, number of platform/stop transfers)
- Support additional transit modes when data is available. E.g. Buses, Shinkansen
Resources

- TransitHQ API Documentation
- Google Directions API Documentation