

## Java Demo - HSL Open Data App

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The following covers the logic behind the Java application linked at the end of the document. The application uses open data information from HSL public transportation (<https://www.hsl.fi/en/opendata>), using the datasets “HSL:n pysäkit” and “HSL:n pysäkit linjoittain”. The application is able to search for HSL’s stops by their name and ID as well as HSL’s routes by their ID, which the application then presents as a drop-down list and a textbox for further information on selected stations and routes.

The application utilizes five classes: MainWindow, MainHandler, Parser, RouteInformation and StopInformation. It also utilizes Gson Java library (<https://github.com/google/gson>) to parse the JSON files. MainWindow acts as the application’s user interface, which is used to search the information as well as show the results. MainWindow carries out these searches through MainHandler, which in turn relies on Parser to provide the JSON information from online sources. Upon reading the JSON files, Parser would store the gathered data in Gson’s JsonObject format for faster processing until the application is closed. While MainHandler and Parser could work as a single class in this instance, if I ever were to expand on this software this would enable me to keep MainWindow’s external dependency to as few classes as possible. RouteInformation and StopInformation are both classes that are meant to store information regarding singular routes and stops. RouteInformation also includes a list of StopInformation that includes information on all of singular route’s stops. When Parser searches through the JSON data and passes the results to MainHandler, these are the classes that are used to pass them on. If nothing is written as a search word, the application will present information on every stop or route. But in case no matches are found, the application will display “(NULL)” results.

The application and its source code can be found here:

[https://www.dropbox.com/sh/on9nou2ejslxcc6/AAAE3bUigiy\\_HczBX31iux0Ka?dl=0](https://www.dropbox.com/sh/on9nou2ejslxcc6/AAAE3bUigiy_HczBX31iux0Ka?dl=0)