

Read Me

This document give some details about the set of 60 Home Health Care Routing and Scheduling Problem instances. For more informations, contact : florian.grenouilleau@polymtl.ca

1 Instances

This benchmark contains 60 instances split in 3 sets of 20 instances. The general values of these sets are given in the table 1

Instance	Patient	Visits	Caregiver	Workdays
Small (01->20)	40	120	5	25
Medium (21->40)	80	225	10	45
Large (41->60)	150	430	20	90

Table 1: Characteristics of the generated instances

For each instance, we have 3 files :

- Patient.json
- Caregiver.json
- Continuity.json

1.1 Patient.json

This file contains the informations for each patient. In the order, we have for each patient :

- The patient's id (root of the json leaf)
- The location's id
- The number of required visits
- The duration of the service
- The list of the available days
- The time windows per available day
- The optional expertises
- The mandatory expertises

1.2 Caregiver.json

This file contains the informations for each caregiver. In the order, we have for each caregiver :

- The caregiver's id (root of the json leaf)
- The location's id
- The expertises
- The minimal work time over the week

- The maximal work time over the week
- The workdays
- The time window per workday
- The minimal and maximal work time per work day

1.3 Continuity.json

This file contains the informations corresponding to the continuity of care and the score associated for each patient-caregiver pair.

For each patient id (root of the leaf), we have the list of the know caregivers' ids and the corresponding score of continuity of care.

2 General data

- Location.txt : Contains the list of the possible (patients/caregivers) locations. Each line correspond to a zip-code and its corresponding zone. The zones are used for the traffic indexes.
- DistanceSpeedDuration.txt : Contains the distance(km), the maximal speed(km/min) and the duration (min) between each pair of zip-code.
- Traffic_Indexes.txt : Contains the traffic index for each pair of zone and for each time section over the week. Currently, the week is divided by section of 30 min, so there is $7*24*2 = 336$ sections.