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Synthetic Patient Population Simulator <https://synthetichealth.github.io/syn...>


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2,977 commits | 30 branches | 0 packages | 9 releases | 54 contributors | Apache-2.0

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jwalonoski and hadleyne Update CQL engine off of snapshot. 8 days ago	
config	update example ecg simulation
gradle/wrapper	Fix gradle build for Java 13
lib	add license information for SBSCL usage
src	Fix checkstyleTest warnings
.gitignore	Ignore NetBeans settings last month
.travis.yml	Add openjdk13 to Travis Build Matrix 2 months ago
CODE_OF_CONDUCT.md	Update CODE_OF_CONDUCT.md 2 years ago
LICENSE	Initial commit 3 years ago
NOTICE	Update NOTICE 3 months ago
README.md	Update README.md 3 months ago
build.gradle	Update CQL engine off of snapshot. 7 days ago
deploy.sh	Add javadocs to Synthea website on succesful build of master branch 6 months ago
gradlew	Upgrade to Gradle 4.8.1. 2 years ago
gradlew.bat	Initial commit. Partial implementation. 3 years ago
run_synthea	some cleanup 2 years ago
run_synthea.bat	some cleanup 2 years ago
settings.gradle	Change project references and restore deploy.sh. 2 years ago

Synthea™ Patient Generator build passing 

Synthea™ is a Synthetic Patient Population Simulator. The goal is to output synthetic, realistic (but not real), patient data and associated health records in a variety of formats.

Read our [wiki](#) for more information.

Currently, Synthea™ features include:

- Birth to Death Lifecycle
- Configuration-based statistics and demographics (defaults with Massachusetts Census data)
- Modular Rule System

- Drop in [Generic Modules](#)
- Custom Java rules modules for additional capabilities
- Primary Care Encounters, Emergency Room Encounters, and Symptom-Driven Encounters
- Conditions, Allergies, Medications, Vaccinations, Observations/Vitals, Labs, Procedures, CarePlans
- Formats
 - HL7 FHIR (STU3 v3.0.1, DSTU2 v1.0.2 and R4)
 - Bulk FHIR in ndjson format (set `exporter.fhir.bulk_data = true` to activate)
 - C-CDA (set `exporter.cda.export = true` to activate)
 - CSV (set `exporter.csv.export = true` to activate)
 - CPCDS (set `exporter.cpcds.export = true` to activate)
- Rendering Rules and Disease Modules with Graphviz

Developer Quick Start

These instructions are intended for those wishing to examine the Synthea source code, extend it or build the code locally. Those just wishing to run Synthea should follow the [Basic Setup and Running](#) instructions instead.

Installation

System Requirements: Synthea™ requires Java 1.8 or above.

To clone the Synthea™ repo, then build and run the test suite:

```
git clone https://github.com/synthetichealth/synthea.git
cd synthea
./gradlew build check test
```

Changing the default properties

The default properties file values can be found at `src/main/resources/synthea.properties`. By default, synthea does not generate CCDAs, CPCDAs, CSV, or Bulk FHIR (ndjson). You'll need to adjust this file to activate these features. See the [wiki](#) for more details.

Generate Synthetic Patients

Generating the population one at a time...

```
./run_synthea
```

Command-line arguments may be provided to specify a state, city, population size, or seed for randomization.

Usage is

```
run_synthea [-s seed] [-p populationSize] [-m moduleFilter] [state [city]]
```

For example:

- `run_synthea Massachusetts`
- `run_synthea Alaska Juneau`
- `run_synthea -s 12345`
- `run_synthea -p 1000`
- `run_synthea -s 987 Washington Seattle`
- `run_synthea -s 21 -p 100 Utah "Salt Lake City"`
- `run_synthea -m metabolic*`

Some settings can be changed in `./src/main/resources/synthea.properties`.

Synthea™ will output patient records in C-CDA and FHIR formats in `./output`.

Synthea™ GraphViz

Generate graphical visualizations of Synthea™ rules and modules.

```
./gradlew graphviz
```

Concepts and Attributes

Generate a list of concepts (used in the records) or attributes (variables on each patient).

```
./gradlew concepts  
./gradlew attributes
```

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