bitemp - a test of bitemporarity based on downloaded files

bitemp is based on the rules for bitemporarity as stated in the Grunddata program. It is a set of tools to test that the based rules are followed.

Notation

Virknintstid and Registreringstid is a time interval.

virkningstid = [virkningstidstart .. virkningstidend [registreringstid = [registreringstidstart .. registreringstidend [

Bitemporarity rules

1. Every data entity must have registreringstid, virkningstid and status
2. Registreringstid and virkningstid must have a start time and a end time (for virkningstid one does not need to specify the virkningstidstart and -end)
3. The must be no time overlap for registreringstid. Let Reg1 and Reg2 be the registreringstid for object1 and object2, Then the rules is Reg1 = Reg2 or Reg1 Union Reg2 = Ø
4. The must be no time overlap for virkningstid. Let Virk1 and Virk2 be the virkningstid for object1 and object2, Then the rules is Virk1 = Virk2 or Virk1 Union Virk2 = Ø

The procedure

This is the procedure based on file downloads (Total)

1. Get a total file download
2. Run indexjson with extraction
3. Build a sqlite database
4. Run check query

Run indexjson with extraction

```
Usage:
  perl indexjson.pl --zipfile=<zipfile> [--csv=<csvfile>] [--info=<infofile>]

$ perl ./indexjson.pl  --zipfile=DAR-Totaludtraek-Ugentlig-JSON_20200223000500.zip
```

The indexjson will generate the following files: .csv - extracted values from the zip data file .inf - a csv file with som main statistics on the number objects per list The csv file contains the following columns: 1. UUID 1. STARTPOS 1. ENDPOS 1. ENDLINE 1. LISTNAME 1. REGTIMEFRA 1. REGTIMETIL 1. VIRKTIMEFRA 1. VIRKTIMETIL 1. STATUS

Run check query

```
perl checkrules.pl --csv=<csvfile> --info=<infofile> [--report=<reportfile>]
```

Combined run

Combine the two scripts in the run script:

```
run.sh <zipfile>
```

Example

./run.sh DAF-TU-DAR-TOTAL_3_20200228090223.zip Input file DAF-TU-DAR-TOTAL_3_20200228090223.zip Csv file DAF-TU-DAR-TOTAL_3_20200228090223.csv Info file DAF-TU-DAR-TOTAL_3_20200228090223.inf