

# Usage of cube DEMO

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## Introduction

This is not a good example yet - there is not real message nor flow in the document. TODO(mja): fix it.

## Create DEMO sample table from CSV file

This script creates the result and codelist for a simple DEMO table.

```
library(rrdfancillary)
devtools::load_all(pkg="../..")
```

## Loading rrdfqbcrndex

```
library(rrdfqbcrnd0)
library(rrdfqb)

cubeVocabularyFn<- system.file("extdata/cube-vocabulary-rdf","cube.ttl", package="rrdfqb")

dataCubeFile<- system.file("extdata/sample-rdf", "DC-DEMO-sample.ttl", package="rrdfqbcrndex")

store <- new.rdf() # Initialize

cat("Loading cube specfication from ", cubeVocabularyFn, "\n")
```

## Loading cube specfication from /home/ma/R/x86\_64-redhat-linux-gnu-library/3.2/rrdfqb/extdata/cube-v

```
tmp<- load.rdf(cubeVocabularyFn, format="TURTLE", appendTo= store)

cat("Loading cube from ", dataCubeFile, "\n")
```

```
## Loading cube from /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DC-DEMO-sample
```

```
tmp<- load.rdf(dataCubeFile, format="TURTLE", appendTo= store)

summarize.rdf(store)
```

```
## [1] "Number of triples: 3375"
```

## Execute the DEMO\* SPARQL queries

```
rqFiles<- system.file("extdata/sample-rdf", list.files(system.file("extdata/sample-rdf", package="rrdfqbcrnd0"),
for (rqFile in rqFiles) {
  cat("File ", rqFile, "\n")
  rq<- paste0(readLines(rqFile),collapse="\n")
  res<- data.frame(sparql.rdf(store, rq),stringsAsFactors=FALSE)
  print(nrow(res))
  if (nrow(res)>0) {
    print(knitr::kable(res))
  }
}
```

```
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOattributes.rq
```

```
## [1] 6
```

```
##
```

```
##
```

```
## p
```

```
## -----
```

```
## crnd-attribute:cellpartno
```

```
## crnd-attribute:measurefmt
```

```
## crnd-attribute:colno
```

```
## crnd-attribute:denominator
```

```
## crnd-attribute:unit
```

```
## crnd-attribute:rowno
```

```
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOcodelist.rq
```

```
## [1] 43
```

```
##
```

```
##
```

## DataStructureDefinition	dimension	cprefLabel	cl
## -----	-----	-----	-----
## ds:dsd-DEMO	crnd-dimension:agegr1	Codelist scheme: agegr1	code:agegr1-65-80
## ds:dsd-DEMO	crnd-dimension:agegr1	Codelist scheme: agegr1	code:agegr1-_65
## ds:dsd-DEMO	crnd-dimension:agegr1	Codelist scheme: agegr1	code:agegr1-_80
## ds:dsd-DEMO	crnd-dimension:agegr1	Codelist scheme: agegr1	code:agegr1-_ALL_
## ds:dsd-DEMO	crnd-dimension:agegr1	Codelist scheme: agegr1	code:agegr1-_NONMI
## ds:dsd-DEMO	crnd-dimension:ethnic	Codelist scheme: ethnic	code:ethnic-HISPAN
## ds:dsd-DEMO	crnd-dimension:ethnic	Codelist scheme: ethnic	code:ethnic-NOT_HI
## ds:dsd-DEMO	crnd-dimension:ethnic	Codelist scheme: ethnic	code:ethnic-_ALL_
## ds:dsd-DEMO	crnd-dimension:ethnic	Codelist scheme: ethnic	code:ethnic-_NONMI
## ds:dsd-DEMO	crnd-dimension:factor	Codelist scheme: factor	code:factor-_ALL_
## ds:dsd-DEMO	crnd-dimension:factor	Codelist scheme: factor	code:factor-_NONMI

```

## ds:dsd-DEMO          crnd-dimension:factor      Codelist scheme: factor      code:factor-age
## ds:dsd-DEMO          crnd-dimension:factor      Codelist scheme: factor      code:factor-propor
## ds:dsd-DEMO          crnd-dimension:factor      Codelist scheme: factor      code:factor-quantit
## ds:dsd-DEMO          crnd-dimension:factor      Codelist scheme: factor      code:factor-weight
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-cou
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-max
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-mean
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-med
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-min
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-n
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-per
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-q1
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-q3
## ds:dsd-DEMO          crnd-dimension:procedure    Codelist scheme: procedure    code:procedure-std
## ds:dsd-DEMO          crnd-dimension:race         Codelist scheme: race         code:race-AMERICAN
## ds:dsd-DEMO          crnd-dimension:race         Codelist scheme: race         code:race-ASIAN
## ds:dsd-DEMO          crnd-dimension:race         Codelist scheme: race         code:race-BLACK_OR
## ds:dsd-DEMO          crnd-dimension:race         Codelist scheme: race         code:race-NATIVE_H
## ds:dsd-DEMO          crnd-dimension:race         Codelist scheme: race         code:race-WHITE
## ds:dsd-DEMO          crnd-dimension:race         Codelist scheme: race         code:race-_ALL_
## ds:dsd-DEMO          crnd-dimension:race         Codelist scheme: race         code:race-_NONMISS
## ds:dsd-DEMO          crnd-dimension:sex          Codelist scheme: sex          code:sex-F
## ds:dsd-DEMO          crnd-dimension:sex          Codelist scheme: sex          code:sex-M
## ds:dsd-DEMO          crnd-dimension:sex          Codelist scheme: sex          code:sex-U
## ds:dsd-DEMO          crnd-dimension:sex          Codelist scheme: sex          code:sex-UN
## ds:dsd-DEMO          crnd-dimension:sex          Codelist scheme: sex          code:sex-_ALL_
## ds:dsd-DEMO          crnd-dimension:sex          Codelist scheme: sex          code:sex-_NONMISS_
## ds:dsd-DEMO          crnd-dimension:trt01a        Codelist scheme: trt01a        code:trt01a-Placeb
## ds:dsd-DEMO          crnd-dimension:trt01a        Codelist scheme: trt01a        code:trt01a-Xanome
## ds:dsd-DEMO          crnd-dimension:trt01a        Codelist scheme: trt01a        code:trt01a-Xanome
## ds:dsd-DEMO          crnd-dimension:trt01a        Codelist scheme: trt01a        code:trt01a-_ALL_
## ds:dsd-DEMO          crnd-dimension:trt01a        Codelist scheme: trt01a        code:trt01a-_NONMI
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOcodelistfull.rq
## [1] 43
##
##
## DataStructureDefinition  component      dimension      c      cprefLabel
## -----
## ds:dsd-DEMO          dccs:agegr1      crnd-dimension:agegr1      code:agegr1      Codelist schen
## ds:dsd-DEMO          dccs:agegr1      crnd-dimension:agegr1      code:agegr1      Codelist schen
## ds:dsd-DEMO          dccs:agegr1      crnd-dimension:agegr1      code:agegr1      Codelist schen
## ds:dsd-DEMO          dccs:agegr1      crnd-dimension:agegr1      code:agegr1      Codelist schen
## ds:dsd-DEMO          dccs:agegr1      crnd-dimension:agegr1      code:agegr1      Codelist schen
## ds:dsd-DEMO          dccs:ethnic      crnd-dimension:ethnic      code:ethnic      Codelist schen
## ds:dsd-DEMO          dccs:ethnic      crnd-dimension:ethnic      code:ethnic      Codelist schen
## ds:dsd-DEMO          dccs:ethnic      crnd-dimension:ethnic      code:ethnic      Codelist schen
## ds:dsd-DEMO          dccs:ethnic      crnd-dimension:ethnic      code:ethnic      Codelist schen
## ds:dsd-DEMO          dccs:ethnic      crnd-dimension:ethnic      code:ethnic      Codelist schen
## ds:dsd-DEMO          dccs:factor      crnd-dimension:factor      code:factor      Codelist schen
## ds:dsd-DEMO          dccs:factor      crnd-dimension:factor      code:factor      Codelist schen
## ds:dsd-DEMO          dccs:factor      crnd-dimension:factor      code:factor      Codelist schen
## ds:dsd-DEMO          dccs:factor      crnd-dimension:factor      code:factor      Codelist schen
## ds:dsd-DEMO          dccs:factor      crnd-dimension:factor      code:factor      Codelist schen
## ds:dsd-DEMO          dccs:factor      crnd-dimension:factor      code:factor      Codelist schen
## ds:dsd-DEMO          dccs:factor      crnd-dimension:factor      code:factor      Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen

```

```

## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:procedure    crnd-dimension:procedure    code:procedure    Codelist schen
## ds:dsd-DEMO          dccs:race         crnd-dimension:race         code:race         Codelist schen
## ds:dsd-DEMO          dccs:race         crnd-dimension:race         code:race         Codelist schen
## ds:dsd-DEMO          dccs:race         crnd-dimension:race         code:race         Codelist schen
## ds:dsd-DEMO          dccs:race         crnd-dimension:race         code:race         Codelist schen
## ds:dsd-DEMO          dccs:race         crnd-dimension:race         code:race         Codelist schen
## ds:dsd-DEMO          dccs:race         crnd-dimension:race         code:race         Codelist schen
## ds:dsd-DEMO          dccs:sex          crnd-dimension:sex          code:sex          Codelist schen
## ds:dsd-DEMO          dccs:sex          crnd-dimension:sex          code:sex          Codelist schen
## ds:dsd-DEMO          dccs:sex          crnd-dimension:sex          code:sex          Codelist schen
## ds:dsd-DEMO          dccs:sex          crnd-dimension:sex          code:sex          Codelist schen
## ds:dsd-DEMO          dccs:sex          crnd-dimension:sex          code:sex          Codelist schen
## ds:dsd-DEMO          dccs:sex          crnd-dimension:sex          code:sex          Codelist schen
## ds:dsd-DEMO          dccs:trt01a       crnd-dimension:trt01a       code:trt01a       Codelist schen
## ds:dsd-DEMO          dccs:trt01a       crnd-dimension:trt01a       code:trt01a       Codelist schen
## ds:dsd-DEMO          dccs:trt01a       crnd-dimension:trt01a       code:trt01a       Codelist schen
## ds:dsd-DEMO          dccs:trt01a       crnd-dimension:trt01a       code:trt01a       Codelist schen
## ds:dsd-DEMO          dccs:trt01a       crnd-dimension:trt01a       code:trt01a       Codelist schen
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOfactor-codelist.rq
## [1] 7
##
##
## p
## -----
## crnd-dimension:ethnic
## crnd-dimension:race
## crnd-dimension:procedure
## crnd-dimension:agegr1
## crnd-dimension:factor
## crnd-dimension:trt01a
## crnd-dimension:sex
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOfactor-codelist.rq
## [1] 62
##
##
## s          p          o
## -----
## code:factor-weightbl    skos:topConceptOf    code:factor
## code:factor-weightbl    skos:prefLabel       weightbl
## code:factor-weightbl    skos:inScheme        code:factor
## code:factor-weightbl    rrdfqbcrnd0:R-selectionvalue    weightbl
## code:factor-weightbl    rrdfqbcrnd0:R-selectionoperator    ==
## code:factor-weightbl    rrdfqbcrnd0:DataSetRefD2RQ    rrdfqbcrnd0:ADSL_WEIGHTBL
## code:factor-weightbl    rdfs:comment         Coded values from data source
## code:factor-weightbl    rdf:type             skos:Concept

```

## code:factor-weightbl	rdf:type	code:Factor
## code:factor-age	skos:topConceptOf	code:factor
## code:factor-age	skos:prefLabel	age
## code:factor-age	skos:inScheme	code:factor
## code:factor-age	rrdfqbcrnd0:R-selectionvalue	age
## code:factor-age	rrdfqbcrnd0:R-selectionoperator	==
## code:factor-age	rrdfqbcrnd0:DataSetRefD2RQ	rrdfqbcrnd0:ADSL_AGE
## code:factor-age	rdfs:comment	Coded values from data source
## code:factor-age	rdf:type	skos:Concept
## code:factor-age	rdf:type	code:Factor
## code:factor-_ALL_	skos:topConceptOf	code:factor
## code:factor-_ALL_	skos:prefLabel	_ALL_
## code:factor-_ALL_	skos:inScheme	code:factor
## code:factor-_ALL_	rdfs:comment	NON-CDISC: Represents all code
## code:factor-_ALL_	rdf:type	skos:Concept
## code:factor-_ALL_	rdf:type	code:Factor
## code:factor-quantity	skos:topConceptOf	code:factor
## code:factor-quantity	skos:prefLabel	quantity
## code:factor-quantity	skos:inScheme	code:factor
## code:factor-quantity	rrdfqbcrnd0:R-selectionvalue	quantity
## code:factor-quantity	rrdfqbcrnd0:R-selectionoperator	==
## code:factor-quantity	rdfs:comment	Coded values from data source
## code:factor-quantity	rdf:type	skos:Concept
## code:factor-quantity	rdf:type	code:Factor
## code:factor-_NONMISS_	skos:topConceptOf	code:factor
## code:factor-_NONMISS_	skos:prefLabel	_NONMISS_
## code:factor-_NONMISS_	skos:inScheme	code:factor
## code:factor-_NONMISS_	rrdfqbcrnd0:R-selectionfunction	is.na
## code:factor-_NONMISS_	rdfs:comment	NON-CDISC: Represents the non
## code:factor-_NONMISS_	rdf:type	skos:Concept
## code:factor-_NONMISS_	rdf:type	code:Factor
## code:factor-proportion	skos:topConceptOf	code:factor
## code:factor-proportion	skos:prefLabel	proportion
## code:factor-proportion	skos:inScheme	code:factor
## code:factor-proportion	rrdfqbcrnd0:R-selectionvalue	proportion
## code:factor-proportion	rrdfqbcrnd0:R-selectionoperator	==
## code:factor-proportion	rdfs:comment	Coded values from data source
## code:factor-proportion	rdf:type	skos:Concept
## code:factor-proportion	rdf:type	code:Factor
## code:CODING ERROR- no decode value	rdf:type	code:Race
## code:CODING ERROR- no decode value	rdf:type	code:Ethnic
## code:CODING ERROR- no decode value	rdf:type	code:Procedure
## code:CODING ERROR- no decode value	rdf:type	code:Trt01a
## code:CODING ERROR- no decode value	rdf:type	code:Sex
## code:CODING ERROR- no decode value	rdf:type	code:Factor
## code:CODING ERROR- no decode value	rdf:type	code:Agegr1
## code:CODING ERROR- no decode value	rdf:type	skos:Concept
## code:CODING ERROR- no decode value	rdf:type	rdfs:Resource
## code:factor-proportion	rdf:type	rdfs:Resource
## code:factor-_NONMISS_	rdf:type	rdfs:Resource
## code:factor-quantity	rdf:type	rdfs:Resource
## code:factor-_ALL_	rdf:type	rdfs:Resource
## code:factor-age	rdf:type	rdfs:Resource
## code:factor-weightbl	rdf:type	rdfs:Resource

```

## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOfactor.rq
## [1] 6
##
##
## factor          prefLabel      DataSetRefD2RQ          Rselectionvalue
## -----
## code:factor-_ALL_      _ALL_          NA                      NA
## code:factor-proportion proportion      NA                      proportion
## code:factor-weightbl   weightbl       rrdfqbcrnd0:ADSL_WEIGHTBL weightbl
## code:factor-_NONMISS_  _NONMISS_      NA                      NA
## code:factor-quantity   quantity       NA                      quantity
## code:factor-age        age            rrdfqbcrnd0:ADSL_AGE    age
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOobservations-R-data-par
## [1] 0
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOobservations-R-data.rq
## [1] 0
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOobservations-R-selection
## [1] 0
## File /home/ma/projects/rrdfqbcrnd0/rrdfqbcrndex/inst/extdata/sample-rdf/DEMOobservations.rq
## [1] 132
##
##
## s              ethnic          race              procedure
## -----
## ds:obs001      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs002      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs003      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs004      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs005      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs006      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs007      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs008      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs009      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs010      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs011      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs012      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs013      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs014      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs015      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs016      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs017      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs018      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs019      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs020      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs021      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs022      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs023      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs024      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs025      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs026      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs027      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs028      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs029      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER
## ds:obs030      code:CODING ERROR- no decode value  code:CODING ERROR- no decode value  code:CODING ER

```

[illegible]





9

## code:procedure-mean	skos:topConceptOf	code:procedure
## code:procedure-mean	skos:prefLabel	mean
## code:procedure-mean	skos:inScheme	code:procedure
## code:procedure-mean	rrdfqbcrnd0:RdescStatDefFun	function (x) { mean(x, na
## code:procedure-mean	rrdfqbcrnd0:R-selectionvalue	mean
## code:procedure-mean	rrdfqbcrnd0:R-selectionoperator	==
## code:procedure-mean	rdfs:comment	Descriptive statistics mean
## code:procedure-mean	rdf:type	skos:Concept
## code:procedure-mean	rdf:type	code:Procedure
## code:procedure-q1	skos:topConceptOf	code:procedure
## code:procedure-q1	skos:prefLabel	q1
## code:procedure-q1	skos:inScheme	code:procedure
## code:procedure-q1	rrdfqbcrnd0:RdescStatDefFun	function (x) { quantile(
## code:procedure-q1	rrdfqbcrnd0:R-selectionvalue	q1
## code:procedure-q1	rrdfqbcrnd0:R-selectionoperator	==
## code:procedure-q1	rdfs:comment	Descriptive statistics q1
## code:procedure-q1	rdf:type	skos:Concept
## code:procedure-q1	rdf:type	code:Procedure
## code:procedure-n	skos:topConceptOf	code:procedure
## code:procedure-n	skos:prefLabel	n
## code:procedure-n	skos:inScheme	code:procedure
## code:procedure-n	rrdfqbcrnd0:RdescStatDefFun	function (x) { length(x[
## code:procedure-n	rrdfqbcrnd0:R-selectionvalue	n
## code:procedure-n	rrdfqbcrnd0:R-selectionoperator	==
## code:procedure-n	rdfs:comment	Descriptive statistics n
## code:procedure-n	rdf:type	skos:Concept
## code:procedure-n	rdf:type	code:Procedure
## code:procedure-percent	skos:topConceptOf	code:procedure
## code:procedure-percent	skos:prefLabel	percent
## code:procedure-percent	skos:inScheme	code:procedure
## code:procedure-percent	rrdfqbcrnd0:RdescStatDefFun	function (x) { -1 }
## code:procedure-percent	rrdfqbcrnd0:R-selectionvalue	percent
## code:procedure-percent	rrdfqbcrnd0:R-selectionoperator	==
## code:procedure-percent	rdfs:comment	Descriptive statistics percent
## code:procedure-percent	rdf:type	skos:Concept
## code:procedure-percent	rdf:type	code:Procedure
## code:CODING ERROR- no decode value	rdf:type	code:Race
## code:CODING ERROR- no decode value	rdf:type	code:Ethnic
## code:CODING ERROR- no decode value	rdf:type	code:Procedure
## code:CODING ERROR- no decode value	rdf:type	code:Trt01a
## code:CODING ERROR- no decode value	rdf:type	code:Sex
## code:CODING ERROR- no decode value	rdf:type	code:Factor
## code:CODING ERROR- no decode value	rdf:type	code:Agegr1
## code:CODING ERROR- no decode value	rdf:type	skos:Concept
## code:CODING ERROR- no decode value	rdf:type	rdfs:Resource
## code:procedure-q3	rdf:type	rdfs:Resource
## code:procedure-mean	rdf:type	rdfs:Resource
## code:procedure-q1	rdf:type	rdfs:Resource
## code:procedure-std	rdf:type	rdfs:Resource
## code:procedure-count	rdf:type	rdfs:Resource
## code:procedure-median	rdf:type	rdfs:Resource
## code:procedure-percent	rdf:type	rdfs:Resource
## code:procedure-min	rdf:type	rdfs:Resource
## code:procedure-max	rdf:type	rdfs:Resource

```

## code:procedure-n          rdf:type          rdfs:Resource
## File /home/ma/projects/rrdfqbc rnd0/rrdfqbc rndex/inst/extdata/sample-rdf/DEMOprocedure-median.rq
## [1] 10
##
##
## s          p          o
## -----
## code:procedure-median  skos:topConceptOf          code:procedure
## code:procedure-median  skos:prefLabel          median
## code:procedure-median  skos:inScheme          code:procedure
## code:procedure-median  rrdfqbc rnd0:RdescStatDefFun          function (x) {      median(x, na.rm = TRUE)
## code:procedure-median  rrdfqbc rnd0:R-selectionvalue          median
## code:procedure-median  rrdfqbc rnd0:R-selectionoperator          ==
## code:procedure-median  rdfs:comment          Descriptive statistics median
## code:procedure-median  rdf:type          skos:Concept
## code:procedure-median  rdf:type          code:Procedure
## code:procedure-median  rdf:type          rdfs:Resource
## File /home/ma/projects/rrdfqbc rnd0/rrdfqbc rndex/inst/extdata/sample-rdf/DEMOprocedure.rq
## [1] 10
##
##
## procedure          prefLabel  functiondef
## -----
## code:procedure-max  max          function (x) {      max(x, na.rm = TRUE) }
## code:procedure-std  std          function (x) {      sd(x, na.rm = TRUE) }
## code:procedure-mean  mean          function (x) {      mean(x, na.rm = TRUE) }
## code:procedure-min  min          function (x) {      min(x, na.rm = TRUE) }
## code:procedure-percent  percent          function (x) {      -1 }
## code:procedure-count  count          function (x) {      length(x) }
## code:procedure-q3  q3          function (x) {      quantile(x, probs = c(0.75), na.rm = TRUE) }
## code:procedure-n  n          function (x) {      length(x[!is.na(x)]) }
## code:procedure-median  median          function (x) {      median(x, na.rm = TRUE) }
## code:procedure-q1  q1          function (x) {      quantile(x, probs = c(0.25), na.rm = TRUE) }

```

This works do not change

```

dsdName<- GetDsdNameFromCube( store )
domainName<- GetDomainNameFromCube( store )
cat("dsdName ", dsdName, ", domainName ", domainName, "\n" )

```

```
## dsdName  dsd-DEMO , domainName  DEMO
```

```

forsparqlprefix<- GetForSparqlPrefix( domainName )
cat(forsparqlprefix,"\n")

```

```

## prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
## prefix skos: <http://www.w3.org/2004/02/skos/core#>
## prefix prov: <http://www.w3.org/ns/prov#>
## prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#>
## prefix dcat: <http://www.w3.org/ns/dcat#>
## prefix owl: <http://www.w3.org/2002/07/owl#>

```

```

## prefix xsd: <http://www.w3.org/2001/XMLSchema#>
## prefix pav: <http://purl.org/pav>
## prefix dc: <http://purl.org/dc/elements/1.1/>
## prefix dct: <http://purl.org/dc/terms/>
## prefix mms: <http://rdf.cdisc.org/mms#>
## prefix cts: <http://rdf.cdisc.org/ct/schema#>
## prefix cdiscs: <http://rdf.cdisc.org/std/schema#>
## prefix cdash-1-1: <http://rdf.cdisc.org/std/cdash-1-1#>
## prefix cdashct: <http://rdf.cdisc.org/cdash-terminology#>
## prefix sdtmct: <http://rdf.cdisc.org/sdtm-terminology#>
## prefix sdtm-1-2: <http://rdf.cdisc.org/std/sdtm-1-2#>
## prefix sdtm-1-3: <http://rdf.cdisc.org/std/sdtm-1-3#>
## prefix sdtms-1-3: <http://rdf.cdisc.org/sdtm-1-3/schema#>
## prefix sdtmig-3-1-2: <http://rdf.cdisc.org/std/sdtmig-3-1-2#>
## prefix sdtmig-3-1-3: <http://rdf.cdisc.org/std/sdtmig-3-1-3#>
## prefix sendct: <http://rdf.cdisc.org/send-terminology#>
## prefix sendig-3-0: <http://rdf.cdisc.org/std/sendig-3-0#>
## prefix adamct: <http://rdf.cdisc.org/adam-terminology#>
## prefix adam-2-1: <http://rdf.cdisc.org/std/adam-2-1#>
## prefix adamig-1-0: <http://rdf.cdisc.org/std/adamig-1-0#>
## prefix adamvr-1-2: <http://rdf.cdisc.org/std/adamvr-1-2#>
## prefix qb: <http://purl.org/linked-data/cube#>
## prefix rrdqbcrnd0: <http://www.example.org/rrdfqbcrnd0/>
## prefix code: <http://www.example.org/dc/code/>
## prefix dccc: <http://www.example.org/dc/demo/dccc/>
## prefix ds: <http://www.example.org/dc/demo/ds/>
## prefix crnd-dimension: <http://www.example.org/dc/dimension#>
## prefix crnd-attribute: <http://www.example.org/dc/attribute#>
## prefix crnd-measure: <http://www.example.org/dc/measure#>
##

```

```

rq<- paste( forsparqlprefix,
,
select *
where {
?s a qb:Observation ;
?p ?o .
[] qb:dimension ?p .
values (?s) {
(ds:obs114)
}
}
# limit 30
,
"\n"
)

cube.observations<- sparql.rdf(store, rq)
knitr::kable(cube.observations)

```

s	p	o
ds:obs114	crnd-dimension:sex	code:CODING ERROR- no decode value
ds:obs114	crnd-dimension:race	code:CODING ERROR- no decode value

s	p	o
ds:obs114	crnd-dimension:trt01a	code:CODING ERROR- no decode value
ds:obs114	crnd-dimension:agegr1	code:CODING ERROR- no decode value
ds:obs114	crnd-dimension:procedure	code:CODING ERROR- no decode value
ds:obs114	crnd-dimension:ethnic	code:CODING ERROR- no decode value
ds:obs114	crnd-dimension:factor	code:CODING ERROR- no decode value

## Getting triples with information of object if literal

```
cons.rq<- paste( forsparqlprefix,
',
construct { ?s ?p ?o }
where {
?s ?p ?o .
BIND( datatype(?o) as ?datatype )
BIND( isLiteral(?o) as ?isLiteral )
BIND( lang(?o) as ?lang )
values (?s) {
(ds:obs114)
}
}
',
"\n"
)

save.rdf(construct.rdf( store, cons.rq) , file.path(tempdir(), "rapperin.ttl"), "TURTLE")
```

```
## [1] "/tmp/RtmppNfirb/rapperin.ttl"
```

To see dot code generated by rapper:

```
rapper -i turtle -o dot /tmp/Rtmpcccgdg/rapperin.ttl
```

To display the dot code

```
rapper -i turtle -o dot /tmp/Rtmpcccgdg/rapperin.ttl | dot -x -Tpdf -ograph.pdf
```

See also (<http://www.bioconductor.org/packages/release/bioc/vignettes/Rgraphviz/inst/doc/Rgraphviz.pdf>) for Rgraphviz package - may be used to display graphs.

ToDo(MJA): move this to another package - is more an example of R code for making Rgraphviz statement

```
rq<- paste( forsparqlprefix,
',
select *
where {
?s ?p ?o .
BIND( datatype(?o) as ?datatype )
```

```

BIND( isLiteral(?o) as ?isLiteral )
BIND( lang(?o) as ?lang )
values (?s) {
(ds:obs114)
}
}
',
"\n"
)

res<- sparql.rdf(store, rq)
knitr::kable(res)

dimnames(res)

allIRI<- c( res[,1],res[,2])
uallIRI<- unique(allIRI)
L<- list()
for (i in 1:length(uallIRI) ) {
L[[ uallIRI[i] ]] <- paste( "L", i, sep="" )
}

rowcols<- cbind( as.matrix(apply(res[,1:2],c(1,2),function(x) as.character(L[[x]] ))),as.matrix(res[,3]),
cat(paste(rowcols, sep=", ", "\n")

```

## Check the statistics

ToDo(MJA): move this to another package - maybe the check package

```

stmtSQL<- GetSQLFromCube(store)
cat(stmtSQL$summStatSQL)

```