

Package ‘CirceComparator’

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Type Package

Title CirceComparator: Review or Compare Circe Cohort Expressions

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Description The CirceComparator R package provides detailed insights into a single Circe cohort expression, including concept sets, entry event criteria, and exit criteria, all presented in tabular form. It also supports pairwise comparison of multiple Circe cohort definitions to highlight similarities and differences.

Depends R (>= 4.1.0)

Imports dplyr,
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stringr,
tidyr

Suggests knitr,
testthat

Remotes

License Apache License

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VignetteBuilder knitr

Roxygen list(markdown = TRUE)

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URL <https://ohdsi.github.io/CirceComparator/>, <https://github.com/OHDSI/CirceComparator>

BugReports <https://github.com/OHDSI/CirceComparator/issues>

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areCohortEventsRestrictedByVisit

Check if Cohort Events are Restricted by Visit

Description

This function checks if cohort events are restricted by visit occurrence in an OHDSI Circe cohort definition.

Usage

```
areCohortEventsRestrictedByVisit(cohortDefinition)
```

Arguments

cohortDefinition

A list representing the OHDSI Circe cohort definition.

Value

A logical value indicating whether cohort events are restricted by visit occurrence.

`checkIfObjectExistsInNestedList`*Check if an Object Exists in a Nested List*

Description

This function checks whether a specified object exists within a nested list.

Usage

```
checkIfObjectExistsInNestedList(nestedList, object)
```

Arguments

<code>nestedList</code>	A nested list in which to search for the object.
<code>object</code>	A character string specifying the name of the object to search for.

Value

A logical value indicating whether the object exists within the nested list.

`convertConceptSetExpressionToDataFrame`*convert a concept set expression R list object into a data frame object*

Description

convert a concept set expression R list object into a data frame object

Usage

```
convertConceptSetExpressionToDataFrame(conceptSetExpression)
```

Arguments

<code>conceptSetExpression</code>	An R object that is concept set expression generated by Circe.
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Value

Returns a tibble data frame.

```
extractConceptSetsInCohortDefinition
```

Get Concept Set Definition Set from Cohort Definition

Description

This function returns a data frame with conceptSetId, conceptSetName, etc

Usage

```
extractConceptSetsInCohortDefinition(cohortDefinition)
```

Arguments

cohortDefinition

A list representing the OHDSI Circe cohort definition.

Value

A data frame

```
extractPathsDepthsAndValues
```

Extract Paths, Depths, and Values from a Nested List

Description

This function recursively traverses a nested list in R and returns the paths, depths, and values of each element. Optionally, you can filter the results to only include elements with a specific name. Unnamed elements are represented by a special character "_".

Usage

```
extractPathsDepthsAndValues(
  nestedList,
  currentPath = "",
  depth = 1,
  item = NULL
)
```

Arguments

nestedList	A nested list object from which to extract paths, depths, and values.
currentPath	A character string representing the current path during recursion. Defaults to an empty string. This parameter is primarily used internally by the function.
depth	An integer representing the current depth of the recursion. Defaults to 1. This parameter is primarily used internally by the function.
item	An optional character string specifying the name of the item to look for. If provided, the function will return only the paths, depths, and values for elements matching this name. If NULL, all elements are included. Defaults to NULL.

Value

A data frame with three columns: "path", "depth", and "value", where each row represents an element in the nested list.

`getContinuousPriorObservationPeriodRequirement`*Get Continuous Prior Observation Period Requirement*

Description

This function retrieves the continuous prior observation period requirements from an OHDSI Circe cohort definition.

Usage

```
getContinuousPriorObservationPeriodRequirement(cohortDefinition)
```

Arguments

`cohortDefinition`

A list representing the OHDSI Circe cohort definition.

Value

A list containing the prior and post days of the observation window.

`getDomainsInEntryEvents`*Get Domains in Cohort Entry Events*

Description

This function retrieves the unique domains present in the cohort entry events of an OHDSI Circe cohort definition.

Usage

```
getDomainsInEntryEvents(cohortDefinition)
```

Arguments

`cohortDefinition`

A list representing the OHDSI Circe cohort definition.

Value

A list containing the unique domains, the number of unique domains, and a tibble indicating the presence of each domain.

```
getInclusionRuleQualifyingEventLimit
```

Get Inclusion Rule Qualifying Event Limit

Description

This function retrieves the inclusion rule qualifying event limit from an OHDSI Circe cohort definition.

Usage

```
getInclusionRuleQualifyingEventLimit(cohortDefinition)
```

Arguments

```
cohortDefinition
```

A list representing the OHDSI Circe cohort definition.

Value

A character string representing the inclusion rule qualifying event limit.

```
getIndexConceptSetsInEntryEvents
```

Get Concept Set used in Cohort Entry Events

Description

This function retrieves the concept set id for the concept sets used in entry event criteria.

Usage

```
getIndexConceptSetsInEntryEvents(cohortDefinition)
```

Arguments

```
cohortDefinition
```

A list representing the OHDSI Circe cohort definition.

Value

A list containing the unique domains, the number of unique domains, and a tibble indicating the presence of each domain.

getInitialEventLimit	<i>Get Initial Event Limit</i>
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Description

This function retrieves the initial event limit from the primary criteria of an OHDSI Circe cohort definition.

Usage

```
getInitialEventLimit(cohortDefinition)
```

Arguments

cohortDefinition

A list representing the OHDSI Circe cohort definition.

Value

A character string representing the initial event limit used in the primary criteria.

getInitialEventRestrictionAdditionalCriteriaLimit	<i>Get Initial Event Restriction Additional Criteria Limit</i>
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Description

This function retrieves the limit value for additional criteria used in initial event restriction of an OHDSI Circe cohort definition.

Usage

```
getInitialEventRestrictionAdditionalCriteriaLimit(cohortDefinition)
```

Arguments

cohortDefinition

A list representing the OHDSI Circe cohort definition.

Value

A character string representing the limit value for additional criteria in initial event restriction. If no additional criteria exist, the default value is "All".

getNumberOfCohortEntryEvents

Get Number of Cohort Entry Events

Description

This function retrieves the number of entry events defined in the primary criteria of an OHDSI Circe cohort definition.

Usage

```
getNumberOfCohortEntryEvents(cohortDefinition)
```

Arguments

cohortDefinition

A list representing the OHDSI Circe cohort definition.

Value

An integer representing the number of cohort entry events.

getNumberOfConceptSets

Get Number of Concept Sets

Description

This function retrieves the number of concept sets defined in an OHDSI Circe cohort definition.

Usage

```
getNumberOfConceptSets(cohortDefinition)
```

Arguments

cohortDefinition

A list representing the OHDSI Circe cohort definition.

Value

An integer representing the number of concept sets.

`getNumberOfInclusionRules`*Get Number of Inclusion Rules*

Description

This function retrieves the number of inclusion rules defined in an OHDSI Circe cohort definition.

Usage

```
getNumberOfInclusionRules(cohortDefinition)
```

Arguments

`cohortDefinition`

A list representing the OHDSI Circe cohort definition.

Value

An integer representing the number of inclusion rules.

`hasInitialEventRestrictionAdditionalCriteria`*Check for Initial Event Restriction Additional Criteria*

Description

This function checks if there are additional criteria for initial event restrictions in an OHDSI Circe cohort definition.

Usage

```
hasInitialEventRestrictionAdditionalCriteria(cohortDefinition)
```

Arguments

`cohortDefinition`

A list representing the OHDSI Circe cohort definition.

Value

A logical value indicating whether additional criteria for initial event restrictions exist.

`parseCohortDefinitionSpecifications`*Parse OHDSI Circe Cohort Definition Specifications*

Description

This function parses various specifications from an OHDSI Circe cohort definition, including censor window, collapse settings, cohort exit strategy, and several other cohort entry event criteria.

Usage

```
parseCohortDefinitionSpecifications(cohortDefinition)
```

Arguments

`cohortDefinition`

A list representing the OHDSI Circe cohort definition.

Value

A tibble containing the parsed cohort definition specifications.

`readCensorWindow`*Parse Censor Window from OHDSI Circe Cohort Definition*

Description

This function parses the censor window dates from an OHDSI Circe cohort definition.

Usage

```
readCensorWindow(cohortDefinition)
```

Arguments

`cohortDefinition`

A list representing the OHDSI Circe cohort definition.

Value

A list containing the parsed censor window start and end dates.

readCohortExit	<i>Parse Cohort Exit Strategy from OHDSI Circe Cohort Definition</i>
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Description

This function parses the cohort exit strategy from an OHDSI Circe cohort definition.

Usage

```
readCohortExit(cohortDefinition)
```

Arguments

cohortDefinition

A list representing the OHDSI Circe cohort definition.

Value

A list containing the parsed cohort exit strategy, including exitStrategy, dateOffsetField, dateOffset, drugCodeSetId, persistenceWindow, and surveillanceWindow.

readCollapseSettings	<i>Parse Collapse Settings from OHDSI Circe Cohort Definition</i>
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Description

This function parses the collapse settings from an OHDSI Circe cohort definition.

Usage

```
readCollapseSettings(cohortDefinition)
```

Arguments

cohortDefinition

A list representing the OHDSI Circe cohort definition.

Value

A list containing the parsed collapse settings, including collapseType and eraPad.

`stringPresentInCohortDefinitionText`*Check if a string is present in a cohort definition text*

Description

This function checks if a given string is present within the text of a cohort definition.

Usage

```
stringPresentInCohortDefinitionText(cohortDefinition, textToSearch)
```

Arguments

`cohortDefinition`

A list representing the cohort definition, which will be converted to JSON.

`textToSearch`

A character string to search for within the cohort definition text.

Value

A logical value indicating whether the `textToSearch` is present in the cohort definition text.

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