Package 'amVennDiagram5'

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Title Interactive Venn Diagrams

Version 1.0.0

Description Creates interactive Venn diagrams using the 'amCharts5' library for 'JavaScript'. They can be used directly from the R console, from 'RStudio', in 'shiny' applications, and in 'rmarkdown' documents.

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URL https://github.com/stla/amVennDiagram5

BugReports https://github.com/stla/amVennDiagram5/issues

Imports htmlwidgets, partitions, venn, utils

Suggests shiny

Encoding UTF-8

RoxygenNote 7.3.1

NeedsCompilation no

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Repository CRAN

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allVennDiagrams *Enumeration of Venn diagrams*

Description

Given the cardinalities of some sets, returns all possible Venn diagrams of these sets.

Usage

```
allVennDiagrams(cardinalities, output = "dataframes")
```

Arguments

cardinalities	vector of positive integers
output	either "lists" or "dataframes"

Value

List of Venn diagrams.

amVennDiagram *Venn diagram widget*

Description

Creates an amVennDiagram widget.

Usage

```
amVennDiagram(
  data,
  theme = "default",
  legendPosition = "right",
  elementId = NULL
)
```

Arguments

data	a list such as one returned by makeVennData
theme	the theme: "default", "dark", "dataviz", "frozen", "kelly", "material", "moonrise", or "spirited"
legendPosition	legend position: "right" or "bottom"
elementId	a HTML id (usually useless)

Value

An amVennDiagram widget.

Examples

```
sets <- list(A = 1:20, B = 10:30, C = 15:35)
dat <- makeVennData(sets)
amVennDiagram(dat, theme = "kelly")
```

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amVennDiagram-shiny *Shiny bindings for 'amVennDiagram'*

Description

Output and render functions for using amVennDiagram within Shiny applications and interactive Rmd documents.

Usage

```
amVennDiagramOutput(outputId, width = "100%", height = "400px")

renderAmVennDiagram(expr, env = parent.frame(), quoted = FALSE)
```

Arguments

outputId	output variable to read from
width, height	a valid CSS dimension (like "100%", "400px", "auto") or a number, which will be coerced to a string and have "px" appended
expr	an expression that generates an amVennDiagram
env	the environment in which to evaluate expr
quoted	logical, whether expr is a quoted expression (with quote()); this is useful if you want to save an expression in a variable

Value

amVennDiagramOutput returns an output element that can be included in a Shiny UI definition, and renderAmVennDiagram returns a shiny.render.function object that can be included in a Shiny server definition.

Examples

```
if(require("shiny") && interactive()) {

library(amVennDiagram5)
library(shiny)

sets <- list(A = 1:20, B = 15:38, C = c(0:5, 20, 30:40))
```

```
diagram  <- makeVennData(sets)

ui <- fluidPage(
  sidebarLayout(
    sidebarPanel(
      radioButtons(
        "theme", label = "Theme",
        choices = c(
          "default",
          "dark",
          "dataviz",
          "frozen",
          "kelly",
          "material",
          "moonrise",
          "spirited"
        )
      )
    ),
    mainPanel(
      amVennDiagramOutput("diagram", height = "95vh")
    )
  )
)

server <- function(input, output, session) {

  output[["diagram"]] <- renderAmVennDiagram({
    amVennDiagram(
      diagram, theme = input[["theme"]]
    )
  })

}

shinyApp(ui, server)

}
```

---

makeVennData *Venn diagram data from a list of sets*

Description

Make data for usage in amVennDiagram.

Usage

```
makeVennData(sets)
```

Arguments

sets	a named list of vectors representing some sets

Value

A list suitable for usage in amVennDiagram.

Examples

```
sets <- list(A = 1:20, B = 10:30, C = 15:35)
dat <- makeVennData(sets)
amVennDiagram(dat, theme = "spirited")
```

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