Package 'qrage'

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Type Package

Title Tools that Create D3 JavaScript Force Directed Graph from R

Version 1.0

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Description Tools that create D3 JavaScript force directed graph from R. D3 JavaScript was created by Michael Bostock. See http://d3js.org/ and, more specifically for Force Directed Graph https://github.com/mbostock/d3/wiki/Force-Layout.

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Suggests shiny

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R topics documented:

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qrage-package   *Tools that Create D3 JavaScript Force Directed Graph from R*

Description

Tools that creating D3 JavaScript Force Directed Graph for R. D3 JavaScript was created by Michael Bostock. See http://d3js.org/ and, more specifically for Force Directed Graph https://github.com/mbostock/d3/wiki/Force-Layout.

Details

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links   *A data of the links between the nodes*

Description

A data of the links between the nodes

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nodeColor   *A data that determine the color of each nodes*

Description

A data that determine the color of each nodes

---

nodeValues   *A data that determine the relative size of each nodes.*

Description

A data that determine the relative size of each nodes.

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qrage   *Create a D3 JavaScript Force Directed Graph*

Description

Create a D3 JavaScript Force Directed Graph. D3 JavaScript was created by Michael Bostock. See http://d3js.org/ and, more specifically for Force Directed Graph https://github.com/mbostock/d3/wiki/Force-Layout.

Usage

```
qrage(links, width = 1400, height = 1000,distance=6000,nodeValue=NULL
        ,nodeColor=NULL,linkColor='#00f',arrowColor='#f00',cut=0.25,textSize=12
        ,linkWidth=c(1,10),nodeSize=c(5,20),linkOpacity=c(0.1,1))
```

Arguments

links	A data frame object with the links between the nodes. It should include the source and the target and the value for each link. The value in the links is the variable for determining the relative distance between the nodes. Distance of between the nodes becomes shorter as the value is large.
nodeColor	A data frame object that determine the color of each nodes. It should include the name and the nodeColor. Defaults to NULL.
nodeValue	A data frame object that determine the relative size of each nodes. It should include the name and the nodeValue. Defaults to NULL.
distance	Numeric that determine the distance between the links in pixels. The value of the links is converted from 0 to 100, and multiplies the reciprocal of converted value and thie argument, the result is used as the distance between nodes. Defaults to 6000.
cut	Numeric to limit the number of records links. links data frame will be limited to records that has value which bigger than value which is multiplication value this argument and the links's maximum value. Defaults to 0.25.
width	Width for the graph area in pixels. Defaults to 1400.
height	Height for the graph area in pixels. Defaults to 1000.
linkColor	Character string specifying the color you want the link lines to be. Defaults to #00f.

arrowColor	Character string specifying the color you want the link arrows to be. Defaults to #f00.
textSize	Numeric specifying the size you want the labels of node to be. Defaults to 12.
linkWidth	Width range of the link lines in pixels. Defaults to from 1 to 10.
nodeSize	Size range of the nodes in pixels. Defaults to from 5 to 20.
linkOpacity	Numeric specifying the opacity range you want the link lines to be. Defaults to from 0.1 to 1.

Examples

```
#Data to determine the connection between the nodes
data(links)

#Data that determines the color of the nodes
data(nodeColor)

#Data that determines the size of the node
data(nodeValues)

#Create graph
qrage(links=links,nodeColor=nodeColor,nodeValue=nodeValues,cut=0.1)
```

---

qrageOutput   *Create a D3 JavaScript Force Directed Graph output element*

Description

Render a renderQrage within an application page. D3 JavaScript was created by Michael Bostock. See http://d3js.org/ and, more specifically for Force Directed Graph https://github.com/mbostock/d3/wiki/Force-Layout.

Usage

```
qrageOutput(outputId,width='100%',height='400px')
```

Arguments

outputId	output variable to read the graph object from
width	Width for the graph area in pixels. Defaults to '100%'.
height	Height for the graph area in pixels. Defaults to 400px.

Examples

```
qrageOutput("d",width='100%',height='400px')
```

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renderQrage   *Force Directed Graph Output with the JavaScript*

Description

Makes a reactive version of the given function that returns a graph object of qrage. D3 JavaScript was created by Michael Bostock. See http://d3js.org/ and, more specifically for Force Directed Graph https://github.com/mbostock/d3/wiki/Force-Layout.

Usage

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

Arguments

expr   An expression that returns a graph object of qrage package.

env   The environment in which o ecaluate expr.

quoted   Is expr a quoted expression(with quote())? This is useful if you want to save an
                expression in a variable.

Examples

```
renderQrage({
  data(links)
      data(nodeColor)
      data(nodeValues)
      w <- qrage(links,nodeColor=nodeColor,nodeValue=nodeValues,cut=0.1)
      return(w)
})
```

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