

Package ‘blockr.dag’

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Title A Directed Acyclic Graph Extension for 'blockr'

Version 0.1.0

Description Building on the docking layout manager provided by 'blockr.dock', this provides an extension that allows for visualizing and manipulating a 'blockr' board using a DAG-based user interface powered by the 'g6R' graph visualisation HTML widget.

License GPL (>= 3)

Encoding UTF-8

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Imports blockr.core (>= 0.1.1), blockr.dock, shiny, g6R (>= 0.5.0), jsonlite, htmltools

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URL <https://bristolmyerssquibb.github.io/blockr.dag/>

VignetteBuilder quarto

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new_context_menu_entry*Context menu functions***Description**

Functions for creating and working with context menu entries.

Usage

```
new_context_menu_entry(
  name,
  js,
  action = NULL,
  condition = TRUE,
  id = tolower(gsub(" +", " _", name))
)
is_context_menu_entry(x)
context_menu_items(x)
```

Arguments

<code>name</code>	Name of the context menu entry.
<code>js</code>	JavaScript code to execute when the entry is selected.
<code>action</code>	Action to perform when the entry is selected.
<code>condition</code>	Condition to determine if the entry should be shown.
<code>id</code>	Unique identifier for the context menu entry. Inferred from <code>name</code> if not provided
<code>x</code>	Object

Details

`new_context_menu_entry()` Creates a new context menu entry with the specified name, JavaScript code, action function, and display condition.

`is_context_menu_entry()` Tests whether an object is a valid context menu entry.

`context_menu_items()` Generic function to extract context menu items from various objects like dock extensions, boards, or lists.

The `context_menu_items.dag_extension()` method provides the following actions:

- Create link - Creates connections between workflow nodes.
- Remove block - Removes individual blocks from the workflow.
- Remove link - Removes connections between workflow nodes.

- Append block - Adds a new block after the selected node.
- Create stack - Creates a new workflow stack.
- Remove stack - Removes an entire workflow stack.
- Edit stack - Opens stack editing interface.
- Add block - Adds a new block to the canvas.

Value

`new_context_menu_entry()` A context menu entry object of class "context_menu_entry" containing condition, action, and js functions, with name and id attributes.

`is_context_menu_entry()` TRUE if x is a context menu entry, FALSE otherwise.

`context_menu_items()` A list of context menu items for the given object.

`new_dag_extension` *DAG extension*

Description

Visualizes the DAG (directed acyclic graph) underlying a board and provides UI elements to manipulate the board.

Usage

`new_dag_extension(graph = NULL, ...)`

Arguments

<code>graph</code>	A graph object (or NULL).
<code>...</code>	Forwarded to blockr.dock::new_dock_extension() .

Value

A `dag_extension` object that extends the dock extension system for visualizing and manipulating DAG workflows.

new_graph	<i>Graph object</i>
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Description

R list-based representation of a g6 graph object.

Usage

```
new_graph(nodes = list(), edges = list(), combos = list())

is_graph(x)

graph_nodes(x)

graph_edges(x)

graph_combos(x)

as_graph(x, ...)

## S3 method for class 'graph'
as_graph(x, ...)

## S3 method for class 'list'
as_graph(x, ...)
```

Arguments

nodes	Graph nodes (i.e. board blocks).
edges	Graph edges (i.e. board links).
combos	Node groups (i.e. board stacks).
x	Object to test or convert.
...	Generic consistency.

Details

- `new_graph()` Creates a new graph object with the specified nodes, edges, and combos.
- `is_graph()` Tests whether an object is a valid graph object.
- `graph_nodes()` Extracts the nodes component from a graph object.
- `graph_edges()` Extracts the edges component from a graph object.
- `graph_combos()` Extracts the combos component from a graph object.
- `as_graph()` Generic function to convert objects to graph format.

Value

`new_graph()` A `graph` object of class "graph" containing nodes, edges, and combos lists.
`is_graph()` TRUE if `x` is a graph object, FALSE otherwise.
`graph_nodes()` A list of graph nodes.
`graph_edges()` A list of graph edges.
`graph_combos()` A list of graph combos (node groups).
`as_graph()` A graph object converted from the input.

`new_toolbar_item` *Toolbar item functions*

Description

Functions for creating and working with toolbar items for the DAG interface.

Usage

```
new_toolbar_item(id, icon, js, action = NULL, tooltip = NULL)  
is_toolbar_item(x)  
toolbar_items(x)
```

Arguments

<code>id</code>	Unique identifier for the toolbar item.
<code>icon</code>	Name of an icon to show in the toolbar.
<code>js</code>	JavaScript code to execute when the entry is selected.
<code>action</code>	Action to perform when the entry is selected.
<code>tooltip</code>	Optional tooltip text for the entry.
<code>x</code>	Object

Details

`new_toolbar_item()` Creates a new toolbar item with the specified id, icon, JavaScript code, action function, and tooltip text.

`is_toolbar_item()` Tests whether an object is a valid toolbar item.

`toolbar_items()` Generic function to extract toolbar items from various objects like dock extensions, boards, or lists.

The `toolbar_items.dag_extension()` method provides the following actions:

- Zoom in - Increases the graph zoom level.
- Zoom out - Decreases the graph zoom level.

- Auto fit - Automatically fits the entire graph within the viewport.
- Layout - Reapplies the graph layout algorithm to reorganize nodes.
- Add block - Opens interface to add a new block to the workflow.
- Add stack - Creates a new workflow stack.
- Remove selected - Removes currently selected elements from the graph.

Value

`new_toolbar_item()` A toolbar item object of class "toolbar_item" containing action and js functions, with id, icon, and tooltip attributes.

`is_toolbar_item()` TRUE if x is a toolbar item, FALSE otherwise.

`toolbar_items()` A list of toolbar items for the given object.

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