

Package ‘projmanr’

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Type Package

Title Project Management Tools

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Maintainer Ben Greenawald <bgreenawald@gmail.com>

Description Calculates the critical path for a series of tasks,
creates Gantt charts and generates network diagrams in order to
provide similar functionality to the basic tools offered by 'MS Project'.

License GPL (>= 2)

Encoding UTF-8

LazyData true

Imports R6 (>= 2.2.2), igraph (>= 1.0.1), ggplot2 (>= 2.2.1), tidyr
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Depends R (>= 3.3.0)

Suggests testthat

NeedsCompilation no

Author Ben Greenawald [aut, cre, cph],
Yael Grushka-Cockayne [aut, cph]

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`critical_path`*Generate the critical path for a collection of related tasks*

Description

Generate the critical path for a collection of related tasks

Usage

```
critical_path(df, gantt = F, network = F, start_date = Sys.Date())
```

Arguments

<code>df</code>	A data frame of tasks with columns ID, name, duration, id's of predecessors (as a comma separated string) in that order. Name of columns does not matter, only order. Type 'taskdata1' into the console for an example of valid data.
<code>gantt</code>	Boolean that specifies whether or not to produce a gantt chart of the results.
<code>network</code>	Boolean that specifies whether or not to produce a network diagram of the results
<code>start_date</code>	Starting date for the project. Defaults to the current date.

Value

A list of results.

- **critical_path** The id's of the critical path.
- **results** A data frame representation of the results that can be passed to the 'gantt' function.
- **gantt** Gantt chart if 'gantt' argument is true.
- **duration** The duration of the project in days.
- **end_date** The end date of the project.
- **network** Network diagram if 'network' argument true.

Examples

```
# Use provided sample data
df <- taskdata1

res <- critical_path(df)
```

gantt *Creates a Gantt chart of tasks in a project.*

Description

Creates a Gantt chart of tasks in a project.

Usage

```
gantt(df, start_date = Sys.Date())
```

Arguments

df Task input. This can either be a data frame of raw data (i.e not from the 'critical_path' function) or can be the return value from calling the 'critical path' function. If the data is raw, it must have columns "ID, name, duration, dependencies" in that order. These columns need not be named but they must be in that order. Type 'taskdata1' into the console for an example of raw data.

start_date Starting date for the project. Defaults to the current date.

Value

A gantt chart for the tasks. If data has been processed by the critical path function, then this gantt chart will color the critical path elements.

Examples

```
# Use raw example data
data <- taskdata1
# Create a gantt chart using the raw data
gantt(data)

res <- critical_path(data)

# Create a second gantt chart using the processed data
gantt(res)
```

network_diagram *Creates a network diagram of tasks in a project.*

Description

Creates a network diagram of tasks in a project.

Usage

```
network_diagram(df, use_name_as_label = FALSE)
```

Arguments

df Task input. This can either be a data frame of raw data (i.e not from the 'critical_path' function) or can be the return value from calling the 'critical path' function. If the data is raw, it must have columns "ID, name, duration, dependencies" in that order. These columns need not be named but they must be in that order. Type 'taskdata1' into the console for an example of raw data.

use_name_as_label

Boolean specifying whether to use the task name as the label for the network diagram. The default is to use the task ID.

Value

A network diagram for the tasks. If data has been processed by the critical path function, then this network diagram will color the critical path elements.

Examples

```
# Use raw example data
data <- taskdata1
# Create a network diagram chart using the raw data
network_diagram(data)

res <- critical_path(data)

# Create a second network diagram using the processed data
network_diagram(res)
```

taskdata1

Small collection of sample tasks

Description

Small collection of sample tasks

Usage

```
taskdata1
```

Format

A data frame with 8 rows and 4 variables:

id id for the task

name name of the task

duration duration of task, in days

pred id for the task's predecessors as a comma separated string

taskdata2

Larger collection of sample tasks with hanging tasks

Description

Larger collection of sample tasks with hanging tasks

Usage

taskdata2

Format

A data frame with 14 rows and 4 variables:

id id for the task

name name of the task

duration duration of task, in days

pred id for the task's predecessors as a comma separated string

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