degree

Degree And Degree Distribution Of The Vertices

The degree of a vertex is its most basic structural property, the number of its adjacent edges.

Usage

```
degree(
  graph,
  v = V(graph),
  mode = c("all", "out", "in", "total"),
  loops = TRUE,
  normalized = FALSE
)
```

```
degree_distribution(graph, cumulative = FALSE, ...)
```

Arguments

graph The graph to analyze.

v The ids of vertices of which the degree will be calculated.

mode Character string, "out" for out-degree, "in" for in-degree or "total" for the sum of the two. For undirected graphs this argument is ignored. "all" is a synonym of "total".

loops Logical; whether the loop edges are also counted.

normalized Logical scalar, whether to normalize the degree. If TRUE then the result is divided by $n - 1$, , where n is the number of vertices in the graph.

cumulative Logical; whether the cumulative degree distribution is to be calculated.

... Additional arguments to pass to degree, eg. mode is useful but also v and loops make sense.

Value

For `degree` a numeric vector of the same length as argument v.

For `degree_distribution` a numeric vector of the same length as the maximum degree plus one. The first element is the relative frequency zero degree vertices, the second vertices with degree one, etc.

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Examples

```
g <- make_ring(10)
degree(g)
g2 <- sample_gnp(1000, 10/1000)
degree_distribution(g2)
```