# polygonNeighbors

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## R topics documented:

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| polygonNeighbors | *Find the neighboring regions of each region in a shapefile.* |
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### Description

Find the neighboring regions of each region in a shapefile. Outputs a dataframe with each region and optionally a matrix and plot of adjacencies.

### Usage

```
polygonNeighbors(shp, id = NULL, nb.matrix = FALSE, plot = FALSE)
```

### Arguments

| | |
|---|---|
| shp | A `SpatialPolygonsDataFrame` |
| id | The name of the variable in `shp@data` to find adjacencies for. |
| nb.matrix | Whether to output the adjacency matrix as well. |
| plot | Whether to plot the adjacencies (for checking). |

### Value

Returns a `list` with a `data.frame` of each adjacency and optionally the adjacency matrix and/or a plot of the adjacencies.

## Examples

```
# Get a shapefile of US States:
file <- "http://www2.census.gov/geo/tiger/GENZ2015/shp/cb_2015_us_state_20m.zip"
download.file(file, "states.zip")
unzip("states.zip")
shp <- rgdal::readOGR(".", "cb_2015_us_state_20m")
shp <- shp[!(shp@data$STATEFP %in% c("02", "15", "72")),]  # Contiguous US
shp <- sp::spTransform(shp, sp::CRS("+init=epsg:26978"))
state.adj <- polygonNeighbors(shp, id = "NAME", nb.matrix = TRUE, plot = TRUE)
```

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