

Package ‘postcoder’

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Title Geocoding Data With UK Post Codes

Description Look up grid references for UK postcodes

Version 0.9

License GPL-3

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LazyData TRUE

Depends sp, R (>= 2.10.0)

Collate
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postcoder-package	<i>Geocoding Data With GB Post Codes</i>
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Description

Provides a postcode to map coordinates lookup facility

Details

Package: postcoder
 Title: Geocoding Data With UK Post Codes
 Description: Look up grid references for UK postcodes
 Version: 0.9
 License: GPL-3
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 LazyData: TRUE
 Depends: sp

Based on the UK Office for National Statistics Postcode Directory (ONSPD) which is released under Open Government Licence terms, this package provides functions that return Ordnance Survey National Grid references given the postcode in character format. It is capable of returning either matrices of coordinates or SpatialPointsDataFrames, the latter via the [sp](#) package.

Author(s)

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References

<http://www.ons.gov.uk/ons/guide-method/geography/products/postcode-directories/-nspp-/index.html>

Examples

```
pcodes <- c("EN5 1NE", "DH1 3BD", "LE1 6JJ")
postcode.lookup.vec(pcodes, result='coords')
```

all.postcodes

All of the postcode information used in the look up operation

Description

The postcode lookup table used

Usage

```
all.postcodes()
```

Details

A data frame containing all of the postcodes, and related data

Value

Data frame with postcode information (see note)

Note

The format of the postcode data frame is

- `postcode`: The postcode, stripped of spaces
- `largeuser`: Is the postcode a designated 'large user'
- `easting`: OS National Grid easting
- `northing`: OS National Grid northing
- `quality`: Quality of location indicator, see ONS documentation

Examples

```
head(all.postcodes())
```

osng.proj4string	Proj4 string for postcode coordinates
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Description

The proj4 string for OS National Grid coordinates

Usage

```
osng.proj4string()
```

Details

The proj4 string used to specify the Ordnance Survey National Grid 'proj4' string allowing the locations to be transformed to other projections and Longitude/Latitude form via the `rgdal` package.

Value

The proj4 string used to represent the OS National Grid coordinates

Examples

```
osng.proj4string()
```

postcode.lookup.df *Data frame postcode geocoding function*

Description

Postcode geocoding for a column of postcodes in a data frame

Usage

```
postcode.lookup.df(dframe, pc.col, result = "SPDF",
  append = TRUE)
```

Arguments

dframe	The data frame				
pc.col	Column number or name where the postcode is recorded				
result	Format of result <table> <tbody> <tr> <td>'SPDF'</td> <td>SpatialPointsDataFrame</td> </tr> <tr> <td>'coords'</td> <td>Matrix of coordinates</td> </tr> </tbody> </table>	'SPDF'	SpatialPointsDataFrame	'coords'	Matrix of coordinates
'SPDF'	SpatialPointsDataFrame				
'coords'	Matrix of coordinates				
append	A logical variable requesting whether postcode data should be appended to input data frame (TRUE) or returned on its own (FALSE).				

Details

Look up postcodes supplied in a character column in a data frame, returning geographical locations in matrix form or as a SpatialPointsDataFrame

Value

Either a `c(length(pcode), 2)` matrix of GB National Grid coordinates or a `SpatialPointsDataFrame` object containing locations depending on `result` parameter.

Note

For the SPDF result, a non-matching postcode cannot appear in the returned object as every point must have a well defined reference. Therefore only matching postcodes appear in the returned object. To trace which input postcodes have been matched, the row names of the matching input data rows are copied on to the output object. If there are no row names in the put data, the output row names are the matching input row numbers.

Examples

```
dframe <- data.frame(place=c("Barnet", "Durham", "Nowhere", "Leicester"),
  postcode=c("EN5 1NE", "DH1 3BD", "GR8 8TN", "LE1 6JJ"))
postcode.lookup.df(dframe, "postcode", result='SPDF')
```

postcode.lookup.vec	<i>Character postcode geocoding function</i>
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Description

Postcode geocoding for single character vector

Usage

```
postcode.lookup.vec(pcode, result = "SPDF")
```

Arguments

pcode	A character vector of postcodes
result	Format of result

Details

Look up postcodes supplied in a character vector, returning geographical locations in matrix form or as a SpatialPointsDataFrame

Value

Either a `c(length(pcode), 2)` matrix of GB National Grid coordinates or a `SpatialPointsDataFrame` object containing locations

Note

For the SPDF result, a non-matching postcode cannot appear in the returned object as every point must have a well defined reference. Therefore only matching postcodes appear in the returned object. To trace which input postcodes have been matched, the numbers of the matching input data rows are copied on to the output object, as row names.

Examples

```
pcodes <- c("EN5 1NE", "dud postcode", "DH1 3BD", "LE1 6JJ")
postcode.lookup.vec(pcodes, result='coords')
```

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