

Package ‘CheckDigit’

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Type Package

Title Calculate and verify check digits

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Suggests testthat

Description A set of functions to calculate check digits according to various algorithms and to verify whether a string ends in a valid check digit

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URL <https://github.com/fascinatingfingers/CheckDigit>

NeedsCompilation no

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CheckDigit-package *R package to calculate and verify check digits*

Description

The CheckDigit package provides a set of functions to calculate check digits according to various algorithms and to verify whether a value ends in a valid check digit.

Details

The following algorithms have been implemented:

Verhoeff The Verhoeff algorithm is appropriate for numerical data and detects all single-digit substitutions (x to y) and adjacent digit transpositions (xy to yx). In addition, the Verhoeff check digit can detect most twin errors (xx to yy), jump twin errors (xyx to zyz), jump transpositions (xyz to zyx), and phonetic errors ('sixty' to 'sixteen').

References

Verhoeff, J. "Error Detecting Decimal Codes", Mathematical Centre Tract 29, The Mathematical Centre, Amsterdam, 1969.

AppendCheckDigit *Append a check digit to a value*

Description

Append a check digit to a value

Usage

```
AppendCheckDigit(x, method)
```

Arguments

x	character vector of values requiring a check digit
method	a character value naming the check digit algorithm to use

Details

See [CheckDigit-package](#) for a list of available methods.

Value

character vector similar to x but with a check digit appended to each value

See Also

[VerifyCheckDigit](#), [CheckDigit-package](#)

Examples

```
AppendCheckDigit('1234', 'Verhoeff') # 12340
```

VerifyCheckDigit	<i>Verify whether a value ends with a valid check digit</i>
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Description

Verify whether a value ends with a valid check digit

Usage

```
VerifyCheckDigit(x, method)
```

Arguments

x	character vector of values to verify
method	a character value naming the check digit algorithm to use

Details

See [CheckDigit-package](#) for a list of available methods.

Value

logical vector the same length as x

See Also

[AppendCheckDigit](#), [CheckDigit-package](#)

Examples

```
VerifyCheckDigit('12340', 'Verhoeff') # TRUE
VerifyCheckDigit('21340', 'Verhoeff') # FALSE
VerifyCheckDigit('13240', 'Verhoeff') # FALSE
VerifyCheckDigit('12430', 'Verhoeff') # FALSE
VerifyCheckDigit('12304', 'Verhoeff') # FALSE
```

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