Package 'checkstring'

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Title Common String Format Validation

Version 0.1.0

Description Validates common string formats including financial identifiers (ISIN, CUSIP, SEDOL, FIGI, IBAN, LEI), publication identifiers (ISBN, ISSN, DOI, ORCID), and general formats (email, UUID, URL, semver), with check digit verification where applicable.

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URL https://m-muecke.github.io/checkstring/, https://github.com/m-muecke/checkstring

BugReports https://github.com/m-muecke/checkstring/issues

Depends R (>= 4.1.0)

Suggests curl, testthat (>= 3.0.0)

Config/testthat/edition 3

Encoding UTF-8

RoxygenNote 7.3.3

NeedsCompilation no

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Repository CRAN

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Contents

`assert_empty_dots` *Assert that dots are empty*

Description

Assert that dots are empty

Usage

```
assert_empty_dots(...)
```

Arguments

`...`	(any) Ellipsis arguments to check.

Value

`NULL` invisibly if empty, otherwise throws an error.

Examples

```
assert_empty_dots()
```

is_base64 *Check if an argument is a base64 string*

Description

Check if an argument is a base64 string

Usage

```
is_base64(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid base64 string, FALSE otherwise.

Examples

```
is_base64("SGVsbG8gV29ybGQ=")
```

is_base64url *Check if an argument is base64url string*

Description

Check if an argument is base64url string

Usage

```
is_base64url(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid base64url string, FALSE otherwise.

Examples

```
is_base64url("SGVsbG8gV29ybGQ")
```

is_bic *Check if an argument is a BIC/SWIFT code string*

Description

Check if an argument is a BIC/SWIFT code string

Usage

```
is_bic(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid BIC/SWIFT code string, FALSE otherwise.

References

https://en.wikipedia.org/wiki/ISO_9362 https://knowledge.xmldation.com/support/iso20022/general_rules/bic

Examples

```
is_bic("DEUTDEFF")
```

is_cuid2 *Check if an argument is a CUID2 string*

Description

Check if an argument is a CUID2 string

Usage

```
is_cuid2(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid CUID2 string, FALSE otherwise.

Examples

```
is_cuid2("ckopqwooh000001la8mbi2im9")
```

`is_cusip` *Check if an argument is a valid CUSIP string*

Description

Validates CUSIP format including Luhn-variant check digit verification.

Usage

```
is_cusip(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid CUSIP string, FALSE otherwise.

References

https://en.wikipedia.org/wiki/CUSIP

Examples

```
is_cusip("037833100")
```

is_doi *Check if an argument is a DOI string*

Description

Check if an argument is a DOI string

Usage

```
is_doi(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid DOI string, FALSE otherwise.

References

https://www.doi.org/the-identifier/what-is-a-doi/

Examples

```
is_doi("10.1038/nphys1170")
```

is_email *Check if an argument is a email address string*

Description

Check if an argument is a email address string

Usage

```
is_email(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid email address string, FALSE otherwise.

Examples

```
is_email("user@example.com")
```

`is_figi` *Check if an argument is a valid FIGI string*

Description

Validates FIGI (Financial Instrument Global Identifier) format including Luhn check digit verification.

Usage

```
is_figi(x)
```

Arguments

x	(any) Object to check.

Value

`TRUE` if `x` is a valid FIGI string, `FALSE` otherwise.

References

https://en.wikipedia.org/wiki/Financial_Instrument_Global_Identifier https://www.openfigi.com/about/overview

Examples

```
is_figi("BBG000BLNNH6")
```

`is_hex` *Check if an argument is a hexadecimal string*

Description

Check if an argument is a hexadecimal string

Usage

```
is_hex(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid non-empty hexadecimal string, FALSE otherwise.

Examples

```
is_hex("deadbeef")
```

---

is_hostname *Check if an argument is a hostname string*

Description

Check if an argument is a hostname string

Usage

```
is_hostname(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid hostname string, FALSE otherwise.

References

https://en.wikipedia.org/wiki/Hostname

Examples

```
is_hostname("example.com")
```

is_iban *Check if an argument is a valid IBAN string*

Description

Validates IBAN format including MOD-97-10 check digit verification (ISO/IEC 7064).

Usage

```
is_iban(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid IBAN string, FALSE otherwise.

References

https://en.wikipedia.org/wiki/International_Bank_Account_Number

Examples

```
is_iban("GB29NWBK60161331926819")
```

is_ipv4 *Check if an argument is an IPv4 address string*

Description

Check if an argument is an IPv4 address string

Usage

```
is_ipv4(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid IPv4 address string, FALSE otherwise.

Examples

```
is_ipv4("192.168.1.1")
```

`is_isbn` *Check if an argument is an ISBN string*

Description

Validates ISBN-10 and ISBN-13 formats, including check digit verification. Hyphens and spaces are allowed as separators.

Usage

```
is_isbn(x)
```

Arguments

`x`	(any) Object to check.

Value

`TRUE` if `x` is a valid ISBN string, `FALSE` otherwise.

References

https://en.wikipedia.org/wiki/International_Standard_Book_Number

Examples

```
is_isbn("978-0-306-40615-7")
```

`is_isin` *Check if an argument is a valid ISIN string*

Description

Validates ISIN (International Securities Identification Number) format including Luhn check digit verification.

Usage

```
is_isin(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid ISIN string, FALSE otherwise.

References

https://en.wikipedia.org/wiki/International_Securities_Identification_Number

Examples

```
is_isin("US0378331005")
```

---

is_issn *Check if an argument is an ISSN string*

Description

Validates ISSN format including check digit verification.

Usage

```
is_issn(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid ISSN string, FALSE otherwise.

References

https://www.loc.gov/issn/check.html

Examples

```
is_issn("0378-5955")
```

is_lei *Check if an argument is a valid LEI string*

Description

Validates LEI (Legal Entity Identifier) format including MOD-97-10 check digit verification (ISO/IEC 7064).

Usage

```
is_lei(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid LEI string, FALSE otherwise.

References

https://en.wikipedia.org/wiki/Legal_Entity_Identifier https://www.govinfo.gov/content/pkg/CFR-2016-title12-vol8/xml/CFR-2016-title12-vol8-part1003-appC.xml

Examples

```
is_lei("7H6GLXDRUGQFU57RNE97")
```

is_mac *Check if an argument is a MAC address string*

Description

Check if an argument is a MAC address string

Usage

```
is_mac(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid MAC address string, FALSE otherwise.

Examples

```
is_mac("00:1B:44:11:3A:B7")
```

---

is_md5 *Check if an argument is an MD5 hash string*

Description

Check if an argument is an MD5 hash string

Usage

```
is_md5(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid MD5 hash string, FALSE otherwise.

Examples

```
is_md5("d41d8cd98f00b204e9800998ecf8427e")
```

---

is_nanoid *Check if an argument is a Nano ID string*

Description

Check if an argument is a Nano ID string

Usage

```
is_nanoid(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid Nano ID string, FALSE otherwise.

Examples

```
is_nanoid("V1StGXR8_Z5jdHi6B-myT")
```

`is_orcid` *Check if an argument is an ORCID string*

Description

Validates ORCID format including ISO/IEC 7064:2003, MOD 11-2 check digit verification.

Usage

```
is_orcid(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid ORCID string, FALSE otherwise.

References

https://support.orcid.org/hc/en-us/articles/360006897674-Structure-of-the-ORCID-Identifier

Examples

```
is_orcid("0000-0002-1825-0097")
```

is_sedol *Check if an argument is a valid SEDOL string*

Description

Validates SEDOL format including weighted check digit verification.

Usage

```
is_sedol(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid SEDOL string, FALSE otherwise.

References

https://en.wikipedia.org/wiki/SEDOL

Examples

```
is_sedol("0263494")
```

is_semver *Check if an argument is a semantic versioning string*

Description

Validates semantic versioning 2.0.0 format, including optional pre-release and build metadata. Uses the official recommended regex from https://semver.org/.

Usage

```
is_semver(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid semver string, FALSE otherwise.

References

https://semver.org/

Examples

```
is_semver("1.0.0")
```

`is_sha256` *Check if an argument is a SHA-256 hash string*

Description

Check if an argument is a SHA-256 hash string

Usage

```
is_sha256(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid SHA-256 hash string, FALSE otherwise.

Examples

```
is_sha256("e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855")
```

is_ulid *Check if an argument is a ULID string*

Description

Check if an argument is a ULID string

Usage

```
is_ulid(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid ULID string, FALSE otherwise.

References

https://github.com/ulid/spec

Examples

```
is_ulid("01ARZ3NDEKTSV4RRFFQ69G5FAV")
```

is_url *Check if an argument is url string*

Description

Check if an argument is url string

Usage

```
is_url(x)
```

Arguments

x	(any) Object to check.

Value

TRUE if x is a valid URL string, FALSE otherwise.

Examples

```
is_url("https://example.com")
```

`is_uuid` *Check if an argument is an UUID string*

Description

Check if an argument is an UUID string

Usage

```
is_uuid(x)
```

Arguments

`x`	(any) Object to check.

Value

`TRUE` if `x` is a valid UUID string, `FALSE` otherwise.

Examples

```
is_uuid("550e8400-e29b-41d4-a716-446655440000")
```

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