Amtiri

AMTIRI SCRIPT

Values and types

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Values and types

Error default

`evl` · `evl(value: any, default: any)`

Substitutes a default when evaluating a value raises an error, instead of letting the whole script fail. This is the guard for a variable that has never been written, which nvl cannot catch.

Parameters

Name	Type	Description
`value`	`any`	The expression to evaluate.
`default`	`any`	What to use instead when it fails.

Returns `any`: The value, or the default when it errored.

Examples

```
evl(NEVER_WRITTEN, 0) # 0
evl(LEVEL, 0) # 42.5
evl(REGISTERS[9], -1) # -1
```

Infinite default

`ivl` · `ivl(value: double, default: any)`

Substitutes a default when a value came out infinite - the guard to pair with a division whose divisor can reach zero.

Parameters

Name	Type	Description
`value`	`double`	The number to test.
`default`	`any`	What to use instead when it is infinite.

Returns `any`: The value, or the default when it is infinite.

Examples

```
ivl(LEVEL / 0, -1) # -1
ivl(LEVEL / 2, -1) # 21.25
```

Length

`length` · `length(value: any)`

How many items a list or record holds, or how many characters a text has. Yields null for anything else.

Parameters

Name	Type	Description
`value`	`any`	The list, record or text to measure.

Returns `int`: The item or character count, or null.

Examples

```
length(TAG) # 5
length(REGISTERS) # 4
length(SETPOINTS) # 2
length(LEVEL) # null
```

Not-a-number default

`inn` · `inn(value: double, default: any)`

Substitutes a default when a value is not a number: NaN, which is what a square root of a negative reading produces, or anything that is not numeric at all, such as text or null.

Parameters

Name	Type	Description
`value`	`double`	The number to test.
`default`	`any`	What to use instead when it is not a number.

Returns `any`: The value, or the default when it is not a number.

Examples

```
inn(sqrt(-1), 0) # 0
inn("abc", 0) # 0
inn(LEVEL, 0) # 42.5
```

Null default

`nvl` · `nvl(value: any, default: any)`

Substitutes a default when a value is null. It cannot guard a variable that has never been written: reading one is an error before nvl sees it, so use evl for that.

Parameters

Name	Type	Description
`value`	`any`	The value to test.
`default`	`any`	What to use instead when value is null.

Returns `any`: The value, or the default when it is null.

Examples

```
nvl(null, "none") # "none"
nvl(LEVEL, 0) # 42.5
nvl(NEVER_WRITTEN, 0) # error
```

To decimal

`to_double` · `to_double(value: any)`

Converts a value to a decimal number.

Parameters

Name	Type	Description
`value`	`any`	The value to convert.

Returns `double`: The decimal number.

Examples

```
to_double("12.5") # 12.5
to_double(COUNT) # 3.0
```

To text

`to_string` · `to_string(value: any)`

Converts a value to its text form.

Parameters

Name	Type	Description
`value`	`any`	The value to convert.

Returns `string`: The text form.

Examples

```
to_string(COUNT) # "3"
to_string(LEVEL) # "42.5"
to_string(PUMP_ON) # "true"
```

To whole number

`to_int` · `to_int(value: any)`

Converts a value to a whole number, truncating any decimals.

Parameters

Name	Type	Description
`value`	`any`	The value to convert.

Returns `int`: The whole number.

Examples

```
to_int(LEVEL) # 42
to_int("7") # 7
to_int(-2.7) # -2
```

Type of

`type_of` · `type_of(value: any)`

The name of a value's underlying type, for diagnosing a script that is receiving something other than what it expects.

Parameters

Name	Type	Description
`value`	`any`	The value to inspect.

Returns `string`: The type name, or null when the value is null.

Examples

```
type_of(LEVEL) # "Double"
type_of(COUNT) # "Integer"
type_of(START) # "LocalDateTime"
type_of(null) # null
```

This page describes Amtiri Script 5.5.0 as shipped with Data Orchester engine 6.22.0 and Site 1.27.0.