Package 'vectorbitops'

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Title Vector Bitwise Operations

Version 1.1.2

Description A tool for fast, efficient bitwise operations along the elements within a vector. Provides such functionality for AND, OR and XOR, as well as infix operators for all of the binary bitwise operations.

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Suggests spelling, testthat (>= 3.0.0)

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NeedsCompilation yes

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Infix Bitwise Operators

Infix operators for bitwise operations.

Description

Basic infix wrapper around the base::bitw_OP_ operations.

Usage

```
a %|% b

a %&% b

a %^% b

a %<<% n

a %>>% n
```

Arguments

a, b	Integer vectors. Numerics are coerced to integers.
n	Non-negative integer vector of values up to 31.

Value

An integer vector of length of the longer of the arguments, or zero if one of the arguments is zero-length. NA input makes NA output.
%|%: A vector of pairwise ORed values.
%&%: A vector of pairwise ANDed values.
%^%: A vector of pairwise XORed values.
%<<%: A vector of the values on the LHS pairwise left-shifted by the RHS value.
%>>%: A vector of the values on the LHS pairwise right-shifted by the RHS value.

Examples

```
1 %|% 2
1 %&% 2
1 %^% 2
1 %<<% 2
8 %>>% 2
```

Vector Bitops *Bitwise Operations along a Vector*

Description

Functions to apply the same bitwise operation sequentially down a vector of integers. A fast way to AND or OR everything together when a single value is required.

Usage

```
bit_vector_AND(vec)

bit_vector_OR(vec)

bit_vector_XOR(vec)
```

Arguments

vec	A vector of integers. Numeric vectors will be coerced to int.

Value

A single integer, the result of applying the operation in question along the vector. Input that cannot be coerced to int returns NA. An empty vector returns 0.

`bit_vector_AND`: A single integer, the result of ANDing each entry in the input vector together.

`bit_vector_OR`: A single integer, the result of ORing each entry in the input vector together.

`bit_vector_XOR`: A single integer, the result of XORing each entry in the input vector together.

Examples

```
bit_vector_AND(c(1,3,5,7,9))
bit_vector_OR(c(1,2,4,8,16))
bit_vector_XOR(c(1,2,3,4,5))
```

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