Package 'ieeeround'

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Title Functions to Set and Get the IEEE Rounding Mode

Description A pair of functions for getting and setting the IEEE rounding mode for floating point computations.

URL https://github.com/jandom-devel/ieeeround

License GPL (>= 2)

SystemRequirements A C library with the fesetround/fegetround functions.

OS_type unix

NeedsCompilation yes

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`ieeeround` *The ieeeround package*

Description

These functions get and set the rounding mode for the floating point operations.

Usage

```
fegetround()
fesetround(rounding.mode = FE.TONEAREST)

FE.DOWNWARD
FE.UPWARD
FE.TOWARDZERO
FE.TONEAREST
```

Arguments

rounding.mode	The rounding mode to set. It should be one of FE.DOWNWARD, FE.UPWARD, FE.TOWARDZERO or FE.TONEAREST.

Details

The rounding mode determines how the result of floating-point operations is treated when the result cannot be exactly represented in the significand. Various rounding modes are provided: round to nearest (the default), round up (towards positive infinity), round down (towards negative infinity), and round towards zero.

fesetround(rounding.mode) sets the rounding mode and returns 0 if it was successfull, 1 otherwise.

fegetround() returns the current rounding mode.

Author(s)

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The fenv.3 Linux manpage maintainers

Examples

```
fesetround(FE.UPWARD)
x <- 1/5
fesetround(FE.DOWNWARD)
y <- 1/5
print(x-y > 0)
fesetround(FE.TONEAREST)
```

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