

Package: faroutman (via r-universe)

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Version 0.1.2

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License LGPL-3

Title Shiny Fractal Viewer

BugReports <https://github.com/shabbychef/faroutman/issues>

Description a shiny page to page around in fractals.

Depends R (>= 3.0.2)

Imports Rcpp (>= 0.12.3), shiny, shinythemes, ggplot2, dplyr, viridis, tidy, tibble, magrittr, methods

LinkingTo Rcpp

Suggests testthat

URL <https://github.com/shabbychef/faroutman>

Encoding UTF-8

Collate 'RcppExports.R' 'faroutman.r' 'fractal_app.r'

RoxygenNote 7.2.1

Repository <https://shabbychef.r-universe.dev>

RemoteUrl <https://github.com/shabbychef/faroutman>

RemoteRef HEAD

RemoteSha cf41a0f5e31f5b3585689d2358ca5c3e0aa04c9e

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faroutman *shiny fractal viewer*

Description

Shiny Fractal Viewer.

Legal Mumbo Jumbo

faroutman is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

Note

This package is maintained as a hobby.

Author(s)

Steven E. Pav <shabbychef@gmail.com>

faroutman-NEWS *News for package 'faroutman':*

Description

News for package 'faroutman'

faroutman Initial Version 0.1.0 (2021-04-01)

- first CRAN release.

fractals *Mandelbrot escape function*

Description

Compute the Mandelbrot set.
Compute the Fibonacci set.
Compute the Cosine set.
Compute the Exp set.
Compute the Burning Ship fractal set.

Usage

```
mandelbrot_esc(x, y, maxit = 128L, escape = 4)
```

```
fibonacci_esc(x, y, maxit = 128L, escape = 4)
```

```
cosine_esc(x, y, maxit = 128L, escape = 987)
```

```
exp_esc(x, y, maxit = 128L, escape = 2500)
```

```
burning_ship_esc(x, y, maxit = 128L, escape = 4)
```

Arguments

x	the real coordinates
y	the imaginary coordinates
maxit	the maximum iterations to consider
escape	the condition to determine escape, in squared distance units.

Details

Computes the iterations required to escape based on $z_n \leftarrow z_{n-1}^2 + c$ given input c .

Computes the iterations required to escape based on $z_n \leftarrow z_{n-1}^2 + z_{n-2} + c$ given input c .

Computes the iterations required to escape based on $z_n \leftarrow \cos(z_{n-1}) + c$ given input c .

Computes the iterations required to escape based on $z_n \leftarrow \exp(z_{n-1}) + c$ given input c .

Computes the iterations required to escape based on $z_n \leftarrow (|Re(z_{n-1})| + i|Im(z_{n-1})|)^2 + c$ given input c .

Author(s)

Steven E. Pav <shabbychef@gmail.com>

References

Wikipedia contributors, "Burning Ship fractal," Wikipedia, The Free Encyclopedia, https://en.wikipedia.org/w/index.php?title=Burning_Ship_fractal&oldid=1145232996 (accessed March 27, 2023).

See Also

<https://math.stackexchange.com/a/5705>

fractal_app	<i>fractal_app</i> .
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Description

A shiny app to view fractals.

Usage

```
fractal_app()
```

Value

a shiny app.

Author(s)

Steven E. Pav <shabbychef@gmail.com>

Examples

```
## Not run:  
fractal_app()  
  
## End(Not run)
```

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