Package: mode (via r-universe)

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Title Solve Multiple ODEs **Version** 0.1.14 **Description** Solve multiple ODEs in parallel. License MIT + file LICENSE **Encoding** UTF-8 **Roxygen** list(markdown = TRUE) RoxygenNote 7.2.0 URL https://github.com/mrc-ide/mode BugReports https://github.com/mrc-ide/mode/issues **Imports** R6, cpp11, dust (>= 0.12.9), glue, pkgbuild (>= 1.2.0), pkgload Suggests callr, decor, dde, mockery, testthat (>= 3.0.0) Config/testthat/edition 3 SystemRequirements C++11 Remotes mrc-ide/dust Repository https://mrc-ide.r-universe.dev RemoteUrl https://github.com/mrc-ide/mode RemoteRef main RemoteSha 3f920b62d5857815c858f6399789a427dcdf8ddb

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Description

Create a mode model from a C++ input file. This function will compile the mode support around your model and return an object that can be used to work with the model.

Usage

```
mode(filename, quiet = FALSE, workdir = NULL, skip_cache = FALSE)
```

Arguments

filename	The path to a single C++ file
quiet	Logical, indicating if compilation messages from pkgbuild should be displayed. Error messages will be displayed on compilation failure regardless of the value used.
workdir	Optional working directory to use. If NULL uses a temporary directory. By using a different directory of your choosing you can see the generated code.
skip_cache	Logical, indicating if the cache of previously compiled models should be skipped If TRUE then your model will not be looked for in the cache, nor will it be added to the cache after compilation.

Value

A generator object based on your source files

mode_control

Create a mode_control object.

Description

Create a mode control object for controlling the adaptive stepper. The returned object can be passed into a mode model on initialisation.

Usage

```
mode_control(
  max_steps = NULL,
  atol = NULL,
  rtol = NULL,
  step_size_min = NULL,
  step_size_max = NULL,
  debug_record_step_times = NULL
)
```

mode

mode_control

Arguments

max_steps	Maxmimum number of steps to take. If the integration attempts to take more steps that this, it will throw an error, stopping the integration.					
atol	The per-step absolute tolerance.					
rtol	The per-step relative tolerance. The total accuracy will be less than this.					
step_size_min	The minimum step size. The actual minimum used will be the largest of the absolute value of this step_size_min or .Machine\$double.eps. If the integration attempts to make a step smaller than this, it will throw an error, stopping the integration.					
step_size_max	The largest step size. By default there is no maximum step size (Inf) so the solver can take as large a step as it wants to. If you have short-lived fluctuations in your rhs that the solver may skip over by accident, then specify a smaller maximum step size here.					
debug_record_step_times						
	Logical, indicating if we should record the steps taken. This information will be available as part of the statistics() output					

Value

A named list of class "mode_control"

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