Rake Ruby task runner

CONCEPTS

A Rakefile is plain Ruby. A task runs its prerequisites first, once per run, then its block. Use do...end, not braces, so prerequisites bind correctly.

Rakefile Ruby DSL
↓ load
Task graph tasks + prereqs
↓ resolve
Prerequisites each runs once
↓ then
Task block Ruby code

Rake resolves prerequisites before running a task

Rake looks for Rakefile, rakefile, Rakefile.rb or rakefile.rb in the current directory, then in parent directories. Tasks run from the Rakefile's directory.

Only tasks with a desc appear in rake -T. Use rake -T -A or rake -P to see the rest. Quote task arguments in zsh: rake 'build[x]'.

RUN

rake
Run the default task

rake *<task> <task>*
Run several tasks in order

rake *<ns>*:*<task>*
Run a namespaced task

rake -n *<task>*
Dry run: print tasks without executing

rake -j *<N>*
Run up to N tasks concurrently

rake -f *<file>*
Use another Rakefile

rake -N
Do not search parent directories

rake *<NAME>*=*<value>*
Set an ENV variable for the run

bundle exec rake *<task>*
Run with the bundled gem versions

INSPECT

rake -T
List tasks that have a desc

rake -T *<pattern>*
List tasks matching pattern

rake -T -A
List all tasks, including undocumented

rake -D *<task>*
Show the long description of tasks

rake -P
List tasks with prerequisites

rake -W *<task>*
Show where a task is defined

rake -V
Print the Rake version

DEBUG AND OUTPUT

rake -t
Trace invoke and execute, with backtraces

rake --backtrace
Show full backtraces on errors

rake -v
Echo shell commands run by FileUtils

rake -q
Do not echo FileUtils commands

rake -s
Quiet, and no in directory message

DEFINE TASKS

task :*<name>* **do ... end**
Define a task

task *<name>*: **%w[***<a> <b>***]**
Task with prerequisites

task default: :*<name>*
Set the default task

desc '*<text>***'**
Describe the next task for -T

namespace :*<ns>* **do ... end**
Group tasks under a prefix

task :*<name>*, **[:***<a>*, **:***<b>***] do |t, args|**
Task with named arguments

DEFINE TASKS (cont.)

args.with_defaults(*<a>*: *<v>***)**
Default values for arguments

task :*<name>* **⇒ :environment**
Load Rails app first (Rails)

Rake::Task[:*<name>***].invoke**
Call a task once from Ruby

task :*<name>*, **[:***<a>***] ⇒ [:***<pre>***]**
Arguments plus prerequisites

multitask :*<name>* **⇒ %w[***<a> <b>***]**
Run prerequisites in parallel

FILES AND HELPERS

file '*<out>***' ⇒ %w[***<src>***] do |t|**
Rebuild when a source is newer

directory '*<path>***'**
Create a directory (and parents) on demand

rule '.o' ⇒ '.c' do |t|
Pattern rule for generated files

t.name / t.source
Target name / rule source in a block

t.prerequisites
Prerequisite names in a block

FileList['*<glob>***']**
Lazy list of files by glob

sh '*<cmd>***'**
Run a shell command, fail the task on error

cp / mv / rm_rf / mkdir_p
FileUtils helpers available in tasks

require 'rake/clean'
Add clean and clobber tasks

CLEAN.include('*<glob>***')**
Files removed by rake clean

Rake::TestTask.new do |t| ... end
Define a test task

rake *<task>*[*<a>*,*<b>*]
Pass arguments on the command line

rake 'name[a b,c]'
Quote arguments that contain spaces