RACKET - LANG

racket's extensive library gets your projects off ground quickly.

web applications   maths statistics

database   full list →

racket runs on linux, macos, and windows. develop deploy on one, develop to all three.

package system   standalone binaries

gui framework   foreign interface

racket's crown jewel is its macro system, which lets you freely extend the language.

intro to macros   racket syntax model

macros in depth   making new languages

racket is a mature lgpl project that's actively developed and maintained.

racket repositories   the plt group

main repository   racket mailing list

drracket is a graphical ide that's integrated with racket's vast documentation.

drracket tutorial   drracket tools

drracket guide   scribble

SCHEME   racket started life as a scheme implementation, but then grew

LISP   into new areas.

the racket manifesto   how to program racket

racket essentials   using r6rs scheme.

racket is a general-purpose programming language as well as the world's first ecosystem for language-oriented programming. make your dream language, or use one of the dozens already available, including these –

```racket
# lang racket

(require 2htdp/image) ; draw a picture
(let sierpinski ([n 8])
    (cond
        [(zero? n)   (triangle 2 'solid red')]
        [else  (define t sierpinski (-n 1)))
            (freeze (above t (beside t t )))]))
```

the 2htdp/image library provides easy-to-use functions for making images.

```racket
# lang typed/racket

;; using higher-order occurrence typing
(define-type SrN (U string Number))
(: tog ((Listof SrN) -> string))
(define (tog L)
    (apply string-append (filter string? L)))
(tog (list 5 "hello " ½ "world" (sqrt -1)))
```

typed racket's "gradual" typing lets you add types after you've been working in untyped mode

```racket
# lang racket/gui
(def
(define f (new frame% [label "Guess"]))
(define n (random 5)) (send f show #t)
(define ((check i) btn evt)
    (message-box "." (if (= i n) "Yes" "No")))
(for ([i (in-range 5)])
    (make-object button% (~a i) f (check i)))
```

racket's gui language and libraries makes cross-platform applications easy.

NSF national science foundation ———
DARPA defence advanced research project agency
FIPSE fund for the improvement of post secondary education
us department of education
exxon foundation
CORD, partners of the academy of information technology
microsoft, mozilla, google