pd2 hw31 2021-11-04 Ivan Chen
worked with no one; advised by no one

rulesToRacketBy

capability / Racket can…	sample Racket code that uses the capability	Why would a programmer use this?	form of the language	steps that Racket takes as it implements or provides the capability

…bind a value to a symbol	`(define mySymbol`
	`  (+ 2.14 1.0)`
	`)`
		To store a value to be used later. This prevents having to recalculate the same thing multiple times.	`(define` ***`mySymbol`***
			`  ***(+ 2.14 1.0)***`
			`)`
				1. Check if the symbol mySymbol is in the symbol table
				2. Since the symbol mySymbol is not in the symbol table
				3. Prepare to add slot with symbol mySymbol
				4. Evaluate the expression for the value
				5. Set the symbol mySymbol to identify as the value and store them in the symbol table

…retrieve a value that was previously bound to a symbol	`(display mySymbol)`	To get the value stored with an identified, the symbol, to be used in procedures.	`(display` *`mySymbol`*`)`	1. Check if the symbol mySymbol is in the symbol table 2. Since the symbol mySymbol is in the symbol table 3. Get the value associated with this symbol 4. Replace the symbol in the expression with its value

…evaluate an expression	`(- 1.39492`
	`  (expt 3.52 3)`
	`)`			

…build a procedure	`(define averageoftwo`
	`  (lambda (a b)`
	`  (/ (+ a b) 2)`
	`  )`
	`)`			

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…invoke a procedure	`(display`
	`  (averageoftwo`
	`  194`
	`  926`
	`  )`
	`)`			

…produce dots of light in the interactions window, to represent a value in a form that a human can read	`(display "Hello World!!!")`	To show the user the output of the computer program.	*`(display "Hello World!!!")`*	omitted for this capability, since that implementation is hidden inside how DrRacket works, and outside the scope of this course