

İstanbul Bilgi University

Department of Computer Engineering

Fall 2019-2020

CMPE 100: Introduction to Computing

Worksheet02

1. Make sure DrRacket is installed and running on your computer. If you are using your own laptop, install the program from <http://racket-lang.org/>
2. Choose language: Beginning Student. Then activate teachpacks: image.rkt and universe.rkt. Run DrRacket.
3. Click DrRacket program menu, Help–Help Desk/Racket Documentation.
4. Run the followings and make sure you understand the value expressions:
 - (+ 2 3) ; sum integer with integer
 - (+ (/ 4 2) (- 5 3)) ; nested arithmetics
 - (* 1/2 -3) ; multiply a rational with an integer
 - (* 3+2i 2.1) ; multiply a complex number with a real number
 - (sqrt 2) ; produces an “inexact” number
 - (string-length “abc”) ; produce length of given string
 - (+ 2 (* string-length “abc” 5))
 - (< 2 3) ; a logical output value
 - (and (< 2 3) (> 2 1)) ; a logical operation between logical values
 - (even? 2)
 - (number? 42)
 - (number? “hello”)
 - (not (> 3 2))
 - (or (= 3 3) (> 10 5))
 - (string=? “hello” “world”)
 - (string-append “cmpe” (number->string 100))
 - (* (string-length (number->string 42)) (string->number “5”))
5. Express the following as a Racket expression: $\frac{\sqrt{4*2^3}}{|-2|}$