Computer Engineering Department

Muğla Sıtkı Koçman University

CENG 2010 Programming Language Concepts, Spring 2021
HOMEWORK
DUE DATE: 24.05.2021 - 23:59
20% OF THE OVERALL GRADE

Send your code and video via DYS
This is an individual work. No team work is allowed.
Similarity check will be applied to submitted codes.

WE LEARN RACKET!!!

Racket is a general-purpose, multi-paradigm PL based on the Scheme dialect of Lisp. It is known as a language-oriented programming language and frequently used by various institutions for PL design and implementation. It is also used for scripting, Computer Science education and research purposes. Racket is a great PL used for Programming language theory (PLT) which deals with the design, implementation, analysis, characterization, and classification of programming languages and of their individual features.

For more details, visit: https://en.wikipedia.org/wiki/Racket_(programming_language) and https://racket-lang.org/ .

First of all, please download Racket: https://download.racket-lang.org/ and install DrRocket or if you prefer, initially try an online editor, e.g.: https://onecompiler.com/racket/.

Here is a very simple Intro for you:

```
#lang racket
"Hello, World!"
```

Or

```
#lang typed/racket

(: fact (Integer -> Integer))
(define (fact n)
  (if (zero? n) 1 (* n (fact (- n 1)))))
```

In this homework your task is to get familiar with Racket and using its features (for introductory help, check: http://htdp.org/2020-8-1/Book/index.html).

Therefore, you are asked to write a simple interpreter for postfix arithmetic expression (e.g. (xy+) or (xy- qwe+ / g +*)) in Racket. Remember that an interpreter is a program that takes another program to execute / evaluate the contents of it.

Feel free to create your own data types, use different data structures to ease your task.

You are asked to record a max-5-min. video where you explain what you learnt from this task and how you implemented your interpreter. Then, upload your code and video to DYS in time.

GOOD LUCK!!

Asst. Prof. Dr. Gizem Kayar
03.05.2021