CS220 Programming Principles

Homework No. 6

Due: December 10, 2018 10:30AM (30 points)

Direction: Test your program with Dr.Racket interpreter. Write your solution (program, text, or figures only) on "paper" by hand. Submit your written report at the class. You don't need to submit your files online. Don't forget your name on the report.

1. **[5]** a. Define a one-parameter procedure **prev** that returns as its value the argument that was passed to it the previous time it was called. The first time **prev** is called it should return the symbol **first-call**.

   ```
   (prev 'a)
   first-call
   (prev 3)
   a
   (prev (+ 1 5))
   3
   ```

   [5] b. Define a procedure **make-prev** that can be used to create the procedure **prev** described in part a. **Make-prev** should take as an argument the value that should be returned by the first call to **prev**. That is, if we

   ```
   (define prev (make-prev 'first-call ))
   ```

   prev should behave as shown above.

2. **[20]** Exercise 3.10 on page 248 of the text book.