```
; 2018 Fall : Homework solution No. 6

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Problem 1: prev, make-prev
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   a.   (define prev
          (let ((now 'first-call))
            (lambda (value)
              (begin (let ((pre now))
                (set! now value) pre)))))

   b.   (define (make-prev now)
          (lambda (value)
            (begin (let ((pre now))
              (set! now value) pre))))



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Problem 2:    ex 3.10
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(0). let expr. -> lambda
        (define (make-withdraw initial-amount)
                (lambda (balance)
                        (lambda (amount)
                                .....
                )
                initial-amount)




(1) (define (make-withdraw initial-amount)
           ......
           )
           +----------------------------------------------------------+
global     |   make-withdraw ----|                                    |
env        |                     |                                    |
           +---------------------+------------------------------------+
                                 |      ^
                                 V      |
                                O O-----+
                                 |
                                 V
                        parameter : initial-amount
                        body : ...


(2) (define W1 (make-define 100))
        .....
        )

           +----------------------------------------------------------+
global     |   make-withdraw -------------------------------+         |
env        |   W1 -----+                                    |         |
           +-----------+------------------------------------+---------+
                        |        ^                          |      ^
                        |        |                          |      |
                        |    initial-amount : 100           |      |
                        |        ^                          V      |
                        |        |                         O O-----+
                        |    balance : 100                  |
                        |        ^                          V
                        V        |                         parameter
                       O O-------+                         body
                        |
                        V
                  parameter : amount
                  body : (if .....)
```

```
 (3) (W1 50)
           +---------------------------------------------------------+
global     |   make-withdraw ------------------------------+         |
env        |   W1 -----+                                   |         |
           +-----------+-----------------------------------+---------+
                       |         ^                         ...
                       |         |
                       |    initial-amount : 100
                       |         ^
                       |         |
                       |      balance : 100
                       |         ^      ^
                       V         |      |
                      O O--------+   amount : 50
                       |                (if ....)
                       V
                parameter : amount
                body : (if .....)

                                ||
                                |/

           +---------------------------------------------------------+
global     |   make-withdraw ------------------------------+         |
env        |   W1 -----+                                   |         |
           +-----------+-----------------------------------+---------+
                       |         ^                         ...
                       |         |
                       |    initial-amount : 100
                       |         ^
                       |         |
                       |      balance : 50
                       |         ^
                       V         |
                      O O--------+
                       |
                       V
                parameter : amount
                body : (if .....)
```

```
(4) (define W2 (make-withdraw 100))

           +-----------------------------------------------------------------+
global     |   make-withdraw --------------------------------------------+   |
env        |   W2 -----------------------------------------+             |   |
           |   W1 -----+                                   |             |   |
           +-----------+-----------------------------------+------+------+---+
                       |         ^                         |      ^      ....
                       |         |                         |      |
                       |    initial-amount : 100           |    initial-amount : 100
                       |         ^                         |      ^
                       |         |                         |      |
                       |      balance : 50                 |    balance : 100
                       |         ^                         |      ^
                       V         |                         V      |
                      O O--------+                        O O-----+
                       |                                   |
                       V                                   |
                parameter : amount   <---------------------+
                body : (if .....)
```