Lab 09: Advanced Recursion

Spring 2018

1 Question 1

Rewrite the following `(sum-up lon)` using recursion.

```lisp
(define (sum-up lon)
  (foldr + 0 lon))
```

2 Question 2

Write a function `(sort-vowel los)` that returns a list of strings produced by sorting `los` from the string containing the least vowels to the one containing the most vowels. For example:

```lisp
(sort-vowel (list "aaa" "lol" "qwq")) => (list "qwq" "lol" "aaa")
```

(You are expected to use `insert` as a helper function.)

3 Question 3

Rewrite the following `(unknown-fn1 ls)` using recursion.

```lisp
(define (unknown-fn1 ls)
  (foldr string-append ""
    (map (lambda (x)
            (substring x (- (string-length x) 1)))
        (filter string? ls)))))
```