CMPUT 325 LEC B1 - Winter 2021 - NON-PROCEDURAL PROG LANGUAGES

FL Example Programs

An FL program that defines a function that counts the number of elements in a given list:

```
(
```

```
  (count (L) =   (if  (null L)
                      0
                      (+ 1 (count (rest L)))))
)
```

An FL program that defines reverse which uses append:

```
   (
     (reverse (X) =  (if (null X)
                         nil
                         (append (reverse (rest X))
                                 (cons (first X) nil))))

     (append (X Y) = (if (null X)
                         Y
                         (cons (first X) (append (rest X) Y))))
   )
```

An FL program that defines a higher order function which takes a function as an input parameter

```
   (
     (mapcar (F L) = (if (null L)
                          nil
                         (cons (F (first L)) (mapcar F (rest L)))))

     (plus1 (X) = (+ X 1))
   )
```

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◄ Quiz (part of Assignment 2, due March 1st)

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Allowable Built-in Lisp Functions ►

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