

**ICS 410 Programming Languages**

*Home Assignment 02*

Due Date: Mar 28

**Problem: 01 (50 points)**

Write scheme codes for implementing a function called mignleLists, which takes two distinct lists xs and ys as parameters, and produces a single list generated by taking elements alternately, first element from xs and then the second element from ys. However, if either of the lists xs or ys runs out, the function, mignleLists seizes the rest of elements from the next list. Therefore, elements of the generated list and the elements of the two parameter lists taken together have exact same elements.

Sample run:

-> (mingleLists '(5 2 7) '(p q r)) (5 p 2 q 7 r)

-> (mingleLists '(5 2 7) '(p q r x y z)) (5 p 2 q 7 r x y z)

-> (mingleLists '(5 2 7 3 4 6) '(p q r)) (5 p 2 q 7 r 3 4 6)

**Problem: 02 (50 points)**

Write scheme codes for implementing quicksort  algorithm. Compare and discuss the code readability between implementations in C and scheme.

**Submission Guidelines**

1. Submition guideline: submit a pdf file
   1. yourID\_simulation.pdf (showing your scheme codes, work simulation snapshots etc. for each problem)