

5. (27 pts) You are given a set of log files that contain the click-through histories to your Web sites. You are going to write *pseudocode* for a Map/Reduce program that determines the count of each referring url to each target url. The input schema to the mapper is of the form:

`< referring url, target url >`

and tells you what URL the user came from followed by what url they landed on. Please write pseudocode that describes the steps taken by the program. It does not need to be syntactically correct. But, do **NOT** give a narrative description of what your program does.

- (a) Write the pseudocode for the mapper.

- (b) Write the pseudocode for the reducer.

- (c) Could your code use the reducer as a combiner? Justify your yes/no answer in two sentences or fewer.