ComS 311
Recitation 3, 2:00 Monday
Homework 4

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Algorithm 1 Define G² from G using paths of length 2, excluding cycles.

Require: G is provided as an adjacency list'.
  Assume G is stored in "G"

  Create empty adjacency list named "G2"

  #For every vertex...
  for all list in G **do**
    start = current vertex
    G2.add(start)

    #For every vertex this points to...
    for all vertex in list **do**
      innerList = G.get(vertex)

      #For every vertex that that vertex points to...
      for all boof **do**

        #If this vertex is the start (u == v)
        if vertex == start **then**
          continue
        end if

        #Add this edge (of length 2) to the new graph
        G2.get(start).add(vertex)
      end for
    end for
  end for

  The runtime of this algorithm is
  1st-Loop(V) * 2nd-Loop(E) * 3rd-Loop(V): O(V²*E)

2

2)

Algorithm here...

3)

Shit here...

4)
Goddamnit