CandidateEntity =  $(V_1, V_2, V_3, ..., V_n)$ 

Step1:Select entities from CandidateEntity Step 2: Delete node v1 and starting in order and find a path between two from v2 and v3 entities that can be connected via k-hop

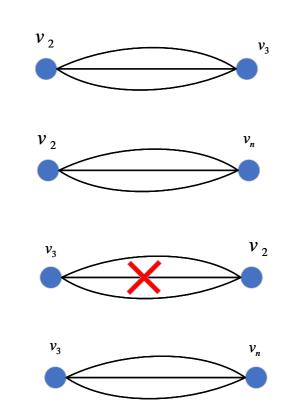
v1 can match v2 and v3 through k

 $v_1$ 

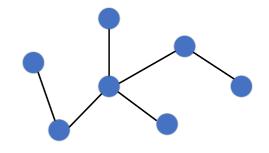
hop path

 $v_2$ 

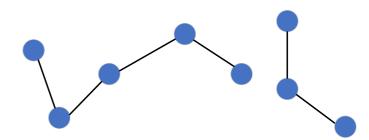
 $v_3$ 



Step 3: Split the path into triples to remove duplication and rebuild into subgraphs



Step 4: Calculate the average PageRank of all paths in the subgraph and sort These paths



Step 5: Take the top n paths that contain the most candidate entities