Note: The pseudocode segments shown below implement both union by rank and path compression.

Make-Set(x) // x : pointer to element.
1. parent[x] = x // x is the root of a new tree.
2. rank[x] = 0

Find(x) // x : pointer to element.
1. if (parent[x] != x)
   then parent[x] = Find(parent[x])
2. return parent[x]

Union(x, y) // x, y : pointers to elements. (It is assumed // that x and y are in different sets.)
1. Link(Find(x), Find(y)) // Procedure Link given below.

Link(x, y) // x, y : Pointers to roots of two different trees.
1. if (rank[x] > rank[y])
   then parent[y] = x // Ranks don’t change here.
   else
     1.1 parent[x] = y
     1.2 if (rank[x] = rank[y])
         then rank[y] = rank[y] + 1