Assignment - 2

Solution:

* 0 1 2 3 4 5 6 7 8 9
  + It is possible. Because each element is root.
* 7 3 8 3 4 5 6 8 8 1
  + 3 is parent root. 1 is child root of 3. And 1 is parent root of 9. In weighted quick union 9 should be child root of 3 but here it is 1. So this is not a weighted quick union with path compression.
* 6 3 8 0 4 5 6 9 8 1
  + 6 is parent root. 0 is child root of 6. 3 is child root of 0. In weighted quick union 3 should be child root of 6 but here it is 0. So this is not a weighted quick union with path compression.
* 0 0 0 0 0 0 0 0 0 0
  + This is possible because all have a single parent node 0.
* 9 6 2 6 1 4 5 8 8 9
  + This is possible because all the roots have a single child root. And weighted union is applied.
* 9 8 7 6 5 4 3 2 1 0
  + Not possible. Here all parent and child roots are cyclic.