

Make Set (x)
 $p[x] = x$
 $\text{rank}[x] = 0$

Union(x, y)
 $\text{Link}(\text{FindSet}(x), \text{FindSet}(x, y))$

Link(x, y)

if $\text{rank}[x] > \text{rank}[y]$

then $p[y] = x$

else

$p[x] = y$

if $\text{rank}[x] = \text{rank}[y]$

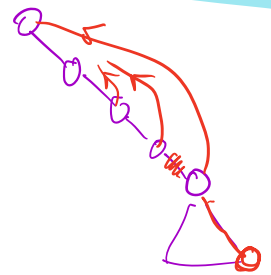
then $\text{rank}[y] = \text{rank}[y] + 1$

FindSet(x)

if $x \neq p[x]$

then $p[x] = \text{FindSet}(p[x])$

return $p[x]$



Does FindSet change anyone's rank?

Does FindSet change the number of nodes in any element's subtree? Yes

... in root's subtree? No

