```
Activity -7
                                                                                                Weighted quiet union methods
          Given inputs doie 19-0, 3-4, 5-8, 7-2, 2-1, 5-7
            For solving problem we wan Consider an among
                    of in ID [10].
                                                                                                                                                                                                    11/9/10-0)
               Quick union!
                                  ID[10] 3 3 4 5 6 7 8 9 - 172
                                                                             1 2
                                                                                                                                                 6 78
                                                                                                                                  5
       For WPU(9-0)=01 20 30 4 85
                                                                                                                                              10-01 3 F 3
       For ilp U (3-4) = 0 1 2 4 14 15 6 7 8 0 - 5812
  For ile u(3-1) = 0.1 \times 44 \times 67 \times 0

For ile u(3-1) = 0.1 \times 44 \times 6 \times 6 \times 2 \times 0

For ile u(2-1) = 0.1 \times 44 \times 6 \times 6 \times 2 \times 0

For ile u(2-1) = 0.1 \times 44 \times 6 \times 6 \times 2 \times 0

For ile u(6-3) = 41 \times 4 \times 6 \times 2 \times 0

For ile u(6-3) = 41 \times 4 \times 6 \times 2 \times 10

For ile u(6-3) = 41 \times 1 \times 6 \times 2 \times 10
       For ilp U (5-8) = 0,1 2 44 8 6 7 8 0
      Quick find !
                                                                                      2 3
                                                                                    2 4 4 8 6 7 8 0 1
                                             I O COJOI
  for ilp 9-0 = 0 1
for ilp 3-4 = 0 51
for ilp 5-8 = 0 1
                                                                                          2 4 4 8 6 2 8 0 1 1 9 0 1 1 4 4 8 6 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 
for ill 7-2 = 01 =
for ilp 2-1 = 01
                                                                                          9 11 1 115 6, 1, 1, 1,
for ilp 5-7 = 0 1
for 11 0-3 = 1 1
for ill 4-2= 11
```

Weighted quick union methods By solving the problem we additionally the on size of length of ID away land P 20 4 3 w 5 6 7 8 1 IIP (9-0) ID 9 1 2 3 4 5 ID-9 1 2 3 33 4 5 6 170 = (8-3) U 11 (5-8) 0 8 F 3 8 4 H 6 10 = (8-3) U 11 IIP (3-4) IIP (5-8) ID-9 12 3 3 3 5 465 7 5 9 F) UNI 201357411 1101 8-504 Ilr (7-2) I(P(2-1) ID- 9773356759 brit som CUP(5-7)- 3 F 73 3 76 E7 15 190 = 0-1911 IDO 927 73 3 76 E7 15 120 = N-1911 Size o 181 F 1 2 18 2 1 1 5 5 1 120 = N-1911 (6-2) 0 8 5 7 7 9 3 7 65 7 150 95-F 1 517e- 1 1 5 2 1 2 1 1 5 110 9 1-5 9 11 (0-2) 0 8

```
Jaced quick-Union with path comprosion'-
 By solving the problem use addittionally takes can site
  cowary of lant of II of Du lant.
       0 1 2 3 4 5 6 7 8 9
IlP (9-0)
           2 3 4 5 6 7
       1 1 1
              IIP (3-4)
    ID-912335678
   Si 7e - 1 1 1 2 1
IIP (5,8)
   ID-9123356759
  Si7e-11121211
             3 3 5 6 7 5
IIP (7-2)
  ID-9173350
Size-1112121
                  5 6
      9773
IlP (2-1)
  size- 1 1
                 4 6
[IP (5-7)
  ID-97733
              2 1 2
  site-1111
                  7675
        7 7 9 3
TIP (0-27
 site - 1 1 1 2 1 2 1 5 1
             937675
110 (4-2)
```