Assignment - 2 ) Find global min. point and value for function f(x,y) = n2+y2+10 (manual calculations for two & step-1: n=-1, y=1, n=0.1, epochs=2 Step-2: iter = 1 Step-3: + 2t = 2x = 02(-1) = -2  $\frac{\delta f}{\delta y} = 2y = 2(1) = 2$ Stepu: An = - not = -0,1 (-2) = 0,2 Ay = - n 28 = -0.1(2) = = 0.2 864-5: N= n+on = +1+0,2 = -0.8 y= y+ by = 11+0,2 = 0.8 step-6: iter= iter+1 = 1+1=2 Step 7: if (iter > epochs) 2>2 go to ment step false. (step3) else go to step 3

Step-3:  $\frac{8f}{8n} = 2n = 2(-0.8) = -1.6$ 

1

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Step-4: Dx =- 7 26 = - 0.1 (-1.6) = 0.16. Jumpiles
000+ 04 = -986 = -0.1 (1.6) = -0.16
 Step-5: n= Dx+n = -0.8+0.16= -0.64
 y=y+10 = 0.8-0.16 = 0.64
Step-6: iter=iten+1=2+1=3
                         1 = wati 15-193/2
 step-7: if (iter > epoch) 3>2 (True)
            ment step
         else = (1) = = 16 = 36
             step3
8tep-8: " n° = -6:640 - - 1611- 1 1 11112
      y= 0.64 - 36 N- 105
       & (M14) = N2+42+10
        = (-0.64)2+ (0.64)2+10
        8 0 = = 0, 4 + 0, 4 + 10, 4
       $ (MIS) = 10.8
1 + 1 = 1 + satt = sati date
                    Cycle d. if (1980 > chocky)
    6 4 6
              do to thought spok
   add.
   (Egsti)
                 egota of the selfs
         2-1-3 (200) & = = 38
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