(SGD-~~MAG~~) Assignment - 8A. 7A
+Momentum

Iteration - I

Time	Day-1 (x)	Day-2 (y)
	5551.82208	4932 1.26380
	4983.17184	4775.53968

Step 1:- $\eta = 0.1$, epochs = 2, m = 1, c = -1, $\nabla = 0 \Rightarrow$,
$V_m = 0$ & $V_c = 0$

Step 2: set iteration = 1

Step 3: set sample : = 1

Step 4: $y = (1)(5551.82208) - 1 = 5550.82208$

Step 5:- $\frac{\partial E}{\partial m} = (4931.26380 - 1(5551.82208) + 1)$

5551.82208

$\frac{\partial E}{\partial M} = 34396 77.338750$

$\frac{\partial E}{\partial c} = -(4931.26380 - 1(5551.82208) + 1)$

$= 619.55828$

Step 6:- $V_m = 0.9(0) - (0.1)(34396 77.338750)$

$= -343967.733375$

$V_c = -6195583$

Step 7 : $M = 1 + (-343967.733875)$

$= -343966.733875$

$C = 1 + (-61.955853) = -62.95583$

Iteration 12. Sample-2.

Step 1 :- $4 = (-343966.734)(4983.17184)$

$+ (-62.95583)$

$= -1714045405.72$

Step 2: $\frac{\partial E}{\partial M} = -((4775.53968 - (-343966.734)$

$(4983.17184) - (-62.95583))$

(4983.17184)

$= -8541406595607.112$

$\frac{\partial E}{\partial C} = -1714050181.261$

Step 3:

$V_m = 0.9(-343967.434) - (0.1)(-8541406595 - 607.112)$

$= -8541409691 31.67$

$V_c = 0.9(-61.95583) - (0.1)(-1714050 1 - 81.261)$

$= -1714050 73.88634$

Step 4:- $M = -343966.734 \cdot 8541409691 31.67$

$M = -85414131309 8.4$

$C = -62.95583$

~~St.~~ Iteration = 2.

Sample = 1

Step 1:- $Y = (-854141313098.4)(5551.82208) + (-62.95583)$

$= -4.742040601 4E15$

Step 2:- $\frac{\partial E}{\partial m} = -(4931.26380 + 4.7420406014E15)(5551.82208)$

$= -2.6326965 7156 E19$

$\frac{\partial E}{\partial c} = -4.742040601 56 E15$

Step 3:- $V_m = (0.9)(-854140969131.67) - (0.1)(2.632696)$

$= 2.63269 58e18$

$V_c = (0.9)(-171405 0783.88634) - (0.1)(-4.742040 6)$

$= 4.74203906E14$

step 4:-

$M = -85414131309 8.4 + 2.632695E18$

$= 2.632694$

$C = -62.95583 + 4.74203906E14$

$= 4.74203906e14$

step 5:- sample = 2

step 10: $Y = (2.632694)(4983.1718) + 4.742039$

$= 1.31191$

step 2:- $\frac{\partial E}{\partial M} = -((-4775.53968 - (2.632694 \; 95 e18)(4983.1718) - 4.74203))(4983.1718)$

$= -(4775.539 - 1.31191)(4988.1718)$

$= -6.537508$

$\frac{\partial E}{\partial C} = -(4775.53968 - 1.3119)$

$= -1.3119$

Step 3:-

$V_M = (0.9)(2.6326) - 0.1(-6.5375)$

$= 6.53751$

$V_C = (0.9)(4.74203) - (0.1)(-1.3119)$

$= 1.3119$

Step 4:- $M = 2.6326 + 6.5375$

$= 6.53751$

$C = 4.7420390 + 1.311917$

$= 1.3119188$