Time (x)	Load (y)
0	5551.822
1	4893.172

step-1:- $\eta = 0.01$, $\gamma = 0.9$, $m_0 = 1$, $c_0 = -1$, $v_0^m = 0$, $v_0^c = 0$, epochs = 100.

step-2:- iter = 1

step-3:- sample = 1

step-4:- $\left.\frac{\partial L}{\partial m}\right|_{m=(m_0+\gamma v_0^m)} = [y_1^a - (m_0+\gamma v_0^m)]x_1^a - [(c_0+\gamma v_0^c)](x_1^a)]$

$= -[(5551.822) - (1+(0.9)(0))(0) - ((-1)+(0.9)(0))](0)]$

$= -[(5551.822) - (1+0)(0) - (-1)+(0)]$

$= -[(5551.822) - (0) + 0 + 0)$

$= -5551.822$

$\left.\frac{\partial L}{\partial c}\right|_{c=c_0+\gamma v_0^c} = -[y_1^a - (m_0+\gamma v_0^m)x_1^a - [(c_0+\gamma v_0^c)]$

$= -[(5551.822) - (1+(0.9)(0))(0) - (-1) + (0.9)(0)]$

$= -[(5551.822) + 1]$

$= -5552.822$

step-6:- $m = m + \Delta m$

$= 1 + 555.2822$

$= 556.2822$

$c = c + \Delta c$

$= -1 + 555.2822$

$= 554.2822$

step-7:- sample = sample + 1

$= 1 + 1$

$= 2$

goto step-4:-

step-4:-

$$\frac{\partial L}{\partial m} = -\left[y_i^{(q)} - (m_0 + \vartheta v_0^{m})(x_i^{(q)}) - (c_0 + \vartheta v_0^{c})(x_i^{(q)})\right]$$

$$= -\left[(4893.172) - (1 + (0.9)(0))(1)) - ((-1) + (0.9)(1))\right]$$

$$= -\left[(4893.172) - (1) - (-1 + 0.9)\right]$$

$$= -\left[4893.172 - (1) - (-0.1)\right]$$

$$= -\left[4893.172 - (1) + 0.1\right]$$

$$= -4893.272$$

$$\frac{\partial L}{\partial c} = -\left[y_i^a - (m_0 + \nu v_0^m) x_i^a - (c_0 + \nu v_0^c)\right]$$

$$= -\left[(4893.172) - (1 + (0.9)(0))(1) - ((-1) + (0.9)(0))\right]$$

$$= -\left[(4893.172) - (1+0)(1) - ((-1)+0)\right]$$

$$= -\left[(4893.172) - (1)(1) - (-1)\right]$$

$$= -4893.172$$

Step-5:- $\Delta m = \nu v_0^m - \eta \cdot \frac{\partial l}{\partial m}$

$$= (0) - (0.1)(-4893.272)$$

$$= 489.3272.$$

$$\Delta c = \nu v_0^m - \eta \cdot \frac{\partial l}{\partial c}$$

$$= (0) - (0.1)(-4893.172)$$

$$= 489.3172$$

step-6:- $m = m + \Delta m$

$$= 1 + 489.3272$$

$$= 490.3272$$

$C = C + \Delta C$

$= 1 + 489.3172$

$= 490.3172.$

Step-7:- sample = sample + 1

$= 2 + 1$

$= 3 < 2$ (false)

goto step-8.

step-8:- iter + 1

$= 2 + 1$ (false)

$= 3 \leq 2$ (stop)