Danyar Issenov ADA-2301M Home WORK 2

x	0	12
y	1	0 1

$y = x + b$

sum of squared residuals = sum of square of observed - predicted

$SSR = \text{Sum of } (\text{observed} - (x+b))^2$

$\frac{d}{db} SSR = 2(1-(b+0))\cdot(-1) + 2(0-(b+1))(-1) + 2(1-(b+2))(-1) = 6b + 2$

put random value, $b = 0$ $\quad \frac{dSSR}{db} = 2$

learning Rate $= 0,1 \Rightarrow$ Step size $= 2 \times 0,1 = 0,2$

next $b = 0 - 0,2 = -0,2$

		Step size	next b
$\frac{dSSR}{db} = 6\cdot(-0,2) + 2 = 0,8$		0,08	-0,28
$\frac{dSSR}{db} = 6(-0,28) + 2 = 0,32$		0,032	-0,312
$\frac{dSSR}{db} = 6(-0,312) + 2 = 0,128$		0,0128	-0,3248
$\frac{dSSR}{db} = 6(-0,3248) + 2 = 0,0512$		0,00512	-0,32992
$\frac{dSSR}{db} = 6(-0,32992) + 2 = 0,02048$			

calculation continued back way forward

but my stop point is at $b = -0,32992$,

learning rate $= 0,1$

more points will be shown in a code!