Pseudo Code for Simple Inventory System Simulation

d : Demand array given
n: Number of intervals
S:Maximum inventorylevel
s: Minimum inventory level
i : index of interval
m^+ : cumulated area of holding level
m^- : cumulated area of shortage level
m_u : cumulated order count
m_d : cumulated demands
m_o : cumulated orders
l : previous level
o: previous order
$\overline{d}$: demand average
$\overline{o}$: order average
$\overline{u}$: order count average
$\overline{l}^+$: time-averaged holding level
$\overline{l}^-$: time-averaged shortage level
Level Plot$(interval, level)$: add a point to level line

SISwDeliveryLagAndReleasticDemandSimulation( )

1. $t_p \leftarrow 1; t_d \leftarrow Exponential(1/\lambda); t_0 \leftarrow \infty; t' \leftarrow 0$
2. $o \leftarrow 0; l \leftarrow S$
3. $m^+ \leftarrow 0; m^- \leftarrow 0; m_d \leftarrow 0; m_o \leftarrow 0; m_c \leftarrow 0$
4. $while\ t_p \leq period$
5. $\quad if\ t_d > period$
6. $\quad\quad if\ l \geq 0$
7. $\quad\quad\quad m^+ \leftarrow m^+ + (t_p - t') \times l$
8. $\quad\quad else$
9. $\quad\quad\quad m^- \leftarrow m^- + (t_p - t') \times l$
10. $\quad\quad if\ l < S$
11. $\quad\quad\quad m_c \leftarrow m_c + 1$
12. $\quad\quad\quad m_o \leftarrow m_o + (S - l)$
13. $\quad\quad LevelPlot(period, max)$
14. $\quad if\ t_d < t_p \wedge t_d < t_o$
15. $\quad\quad if\ l \geq 0$
16. $\quad\quad\quad m^+ \leftarrow m^+ + (t_d - t') \times l$
17. $\quad\quad else$
18. $\quad\quad\quad m^- \leftarrow m^- + (t_d - t') \times l$
19. $\quad\quad l \leftarrow l - 1$
20. $\quad\quad LevelPlot(t_d, l)$
21. $\quad\quad t' \leftarrow l$

22. $t_d \leftarrow t_d + Exponential(1/\lambda)$
23. $m_d \leftarrow m_d + 1$
24. $else\ if\ t_o \leq t_d \wedge t_o < t_p$
25. $if\ l \geq 0$
26. $m^+ \leftarrow m^+ + \left(t_o - t^{'}\right) \times l$
27. $else$
28. $m^- \leftarrow m^- + \left(t_o - t^{'}\right) \times l$
29. $l \leftarrow l + o$
30. $LevelPlot(t_o, l)$
31. $t^{'} \leftarrow t_o$
32. $o \leftarrow 0$
33. $t_o \leftarrow \infty$
34. $else$
35. $if\ l \geq 0$
36. $m^+ \leftarrow m^+ + \left(t_p - t^{'}\right) \times l$
37. $else$
38. $m^- \leftarrow m^- + \left(t_p - t^{'}\right) \times l$
39. $if\ l < s$
40. $t_o \leftarrow t_p + Uniform(0,1)$
41. $o \leftarrow S - l$
42. $m_o \leftarrow m_o + o$
43. $m_c \leftarrow m_c + 1$
44. $LevelPlot(t_p, l)$
45. $t^{'} \leftarrow t_p$
46. $t_p \leftarrow t_p + 1$
47. end
48. $m^+ \leftarrow m^+/period; m^- \leftarrow m^-/period; m_d \leftarrow m_d/period; m_o \leftarrow m_o/period; m_c \leftarrow m_c/period$

Discuss to get the result