Pseudo Code for Simple Inventory System Simulation





// Demands are specified and given.   
// One-pass Algorithm.

StaticDeterministicSISSimulation

1 

2 

3 **for** **to****inc**

4 

5;

6 **if** 

7 

8 **else**

9 

10 **if** 

11 

12 **else**

13 

14 

15 **end**



// Demands are stochastically determined in advance.

StaticStochasticSISSimulation

1 

2 StaticDeterministicSISSimulation

3 **end**

// Stochastic demands are dynamically generated.

DynamicStochasticSISSimulation

1 

2 

3 **while** 

4 ;

5;

6 

7 **if** 

8 ;

9 **if** 

10 

11 **else**

12 

13 ;

14 

15 **end**



// Stochastic demands are dynamically generated, as well as the delivery lag is stochastically determined when an order is placed.

DynamicStochasticSISwDeliveryLagSimulation

1 ;

2 

3 **while** 

4 ;

5 **if**  //previous order

6

7 l ← l - d

8 Level\_Plot( i, l )

9

10

11

12

13

14

15

16

17

18

19

20 lag ← Uniform(0,1)

21 Level\_Plot( i + lag, o - d)

22

23 o ← 0

24

25 **else** // no previous order

26

27 l ← l - d

28 Level\_Plot( i, l )

29

30

31 if l < s //place an order

32 o ← S - l

33

34

35

36

37

38

39

40

41 

42 **end**



// The interarrivals of demands are stochastically simulated and each arrival decreases the inventory by 1. The order delivery lags are also dynamically simulated.

SISwDeliveryLagAndReleasticDemandSimulation

1 

2 

3 

4 **while** 

5

6 if o != 0 //demand event

7 ← + t

8 l ← l -1

9 Level\_Plot( t, l)

10

11 if l < s //reorder

12 ← lag + t

13 o ← S - l

14

15 else //supply event

16 ← ∞

17 l ← l + o

18 o ← 0

19

20 if < //chose the nearest event

21 t ←

22 else

23 t ←