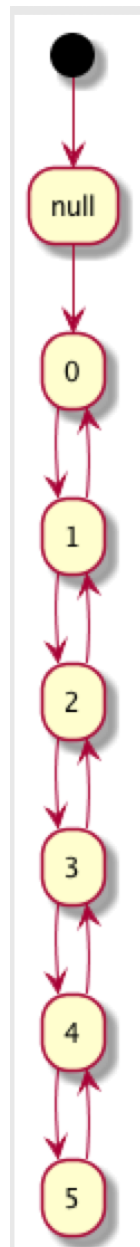


Ans-1)

In the PC_Seq, we can see clearly that at put 6, buffer is full so the consumer has to get atleast one item from the buffer so that producer can put item in the buffer.

Ans-2)



We are using the count variable in DropBox class to see the count of the number of elements in the data array. For every put operation, the count increments by 1 and for every get operation, the count decrements by 1.

The smallest set of field in class DropBox that we would track inorder to prove that the dropbox is full is 'count' field since when count reaches 5, we know that data array is full.