1. **Given the following information: Please draw a picture to explain the process.**

Job List:	
Job Number	Memory Requested
Job A	690K
Job B	275K
Job C	760K

Memory Block List:	
Memory Block	Memory Block Size
Block 1	900K (low-order memory)
Block 2	910K
Block 3	300K (high-order memory)

   a. **Use the first-fit algorithm to indicate which memory blocks are allocated to each of the three arriving jobs.**

Job	記憶體需求	分配的記憶體區塊	區塊大小	工作大小	內部碎片
Job A	690K	Block 1	900K	690K	210K
Job B	275K	Block 3	300K	275K	25K
Job C	760K	Block 2	910K	760K	150K

可用空間合計: 900K + 300K + 910K = 2110K

用量合計: 690K + 275K + 760K = 1725K

總內部碎片 : 210K + 25K + 150K = 385K

b. Use the best-fit algorithm to indicate which memory blocks are allocated to each of the three arriving jobs.

Job	記憶體需求	分配的記憶體區塊	區塊大小	工作大小	內部碎片
Job A	**690K**	**Block 1**	**900K**	**690K**	**210K**
Job B	**275K**	**Block 3**	**300K**	**275K**	**25K**
Job C	**760K**	**Block 2**	**910K**	**760K**	**150K**

總內部碎片 **: 210K + 25K + 150K = 385K**

用量合計: 690K + 275K + 760K = 1725K

可用空間合計: 900K + 300K + 910K = 2110K

2. **Next-fit is an allocation algorithm that starts by using the first-fit algorithm but keeps track of the partition that was last allocated, instead of restarting the search with Block 1, it starts searching from the most recently allocated block when a new job arrives. Using the following information: Please draw a picture to explain the process.**

Job List:	
Job Number	Memory Requested
Job A	590K
Job B	50K
Job C	275K
Job D	460K

Memory Block List:	
Memory Block	Memory Block Size
Block 1	100K (low-order memory)
Block 2	900K
Block 3	280K
Block 4	600K (high-order memory)

Indicate which memory blocks are allocated to each of the three arriving jobs, and explain in your own words what advantages the next-fit algorithm could offer.

Job	記憶體需求	分配的記憶體區塊	區塊大小	工作大小	內部碎片
Job A	590K	Block 2	900K	590K	310K
Job B	50K	Block 3	280K	50K	230K
Job C	275K	Block 4	600K	275K	325K
Job D	460K	無法分配	無	無	無

可用空間合計: 900K + 280K + 600K = 1780K.

用量合計: 590K + 50K + 275K = 915K.

總內部碎片 : 310K + 230K + 325K = 865K

減少搜尋時間，簡化實現，對於系統頻繁進行記憶體分配的場景，Next-Fit 可以提高系統的效率。