

LFU Cache

	Value					Frequency					
Initial											Cache is empty, capacity = 5
Add(1)	1					0					Add 1 and set frequency to 0
Add(2)	2	1				0	0				Insert 2 before 1, as they have the same frequency 0
Add(3)	3	2	1			0	0	0			
Get(1)	1	3	2			1	0	0			Return 1 and update its frequency to 1
Get(3)	3	1	2			1	1	0			Return 3, update its frequency to 1 and move to head
Get(3)	3	1	2			2	1	0			Return 3 and update its frequency to 2
Add(4)	3	1	4	2		2	1	0	0		Insert 4 before 2, as they have the same frequency 0
Add(5)	3	1	5	4	2	2	1	0	0	0	Insert 5 before 4, cache is full
Add(6)	3	1	6	5	4	2	1	0	0	0	Insert 6 before 5 and delete 2, as 2 has least frequency and is LRU
Get(4)	3	4	1	6	5	2	1	1	0	0	Return 4, update its frequency to 1 and move it before 1
Add(7)	3	4	1	7	6	2	1	1	0	0	Insert 7 before 6, set its frequency to 0 and delete 5
Get(7)	3	7	4	1	6	2	1	1	1	0	Return 7, update its frequency to 1 and move it before 4
Get(6)	3	6	7	4	1	2	1	1	1	1	Return 6, update its frequency to 1 and move it before 7
Get(6)	6	3	7	4	1	2	2	1	1	1	Return 6, update its frequency to 2 and move it to head
Get(6)	6	3	7	4	1	3	2	1	1	1	Return 6, update its frequency to 3
Add(8)	6	3	7	4	8	3	2	1	1	0	Insert 8 to tail, set its frequency to 0 and delete 1