Q3). We can put all the keys into a bit vector A, where every "1" digit represents a number in the dynamic set. If the i^{th} element is not in the set, then $A[i]=0$, otherwise $A[i]=1$. Since this can be accessed directly by a table, the dictionary runtime is $O(1)$.

Question 4)

- To represent a dynamic data set we will be using a doubly linked list where we can have keys to map the doubly linked list.

- To use INSERT to append element to the head of the list, which will take O(1) time as mentioned.

- Using the SEARCH. Search will return the first element, a node in the doubly linked list and takes O(1) time complexity

- Finally, DELETE, will remove any element from the doubly linke list utilizing the pointer, pointing to either the next node, or the Previous node.