For the first exercise, I think that the LLULIST (Linked List Unsorted) will be appropriate to complete this task. The LLULIST allows the user fast removal of the recently added items, in this application will be useful because names are subsequently removed before adding more names. Also, the LLULIST allows us a quick traversal to the middle of the list.

In the second application, The ASLIST (Array Sorted) will be appropriate to complete this task. The ASLIST allows us for stable quantities of items to be changing infrequently. This is useful because celebrity pets that are not frequently add or remove from the database. ASLIST has fast searching times, this is helpful because search for pet names will occur many times.

Last application, I will use AULIST (Array Unsorted) this allow me for fast addition and removal item, which is helpful for added and removal titles very often. Also, the searching time is not that important, it does not need to keep a particular order. The maximum number of titles is known in advance, if we reach the maximums number memory usage is not concern.

A sorted List ADT: is a list of elements in sorted order usually from smallest to largest. The binary search algorithm is a searching algorithm that allow us to divide the search space in half at each step until we find the target number. This algorithm only applies for sorted List ADT because its efficiency is only for sorted list. Sorted List ADT enables the binary search algorithm to work quickly and accurately.

The Stack ADT: is a last in, first out that allows elements to be added and removed only from the top of the stack. The linked list stack is a specific implementation of the stack ADT. Stack ADT and Linked list stack are related is in implementation former, The similarity between the two is that they are both follow the rule LIFO.

The Queue ADT is a first in, first out (FIFO) that allow us elements to be added to the back of the queue and removed from the front. The fixed front array is a specific implementation of the Queue ADT that uses a fixed size array. The key similarity between the two is that they both follow the FIFO rules, this means that elements are added to the back of the queue and removed from the front. However Fixed Front array queue is limited in size by the size of it underlying array, while Queue ADT has not this limitation.