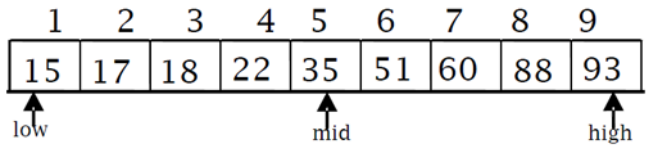
1. Briefly describe logic and storage structure in data structure
2. What are the two storage structures in List? Explain their (dis)advantages.
3. Write a function for Fibonacci series： $F(0)=0, F(1)=1, F(n)=F(n-1)+F(n-2)$
4. Present Linked List definition, implement search and delete functions.
5. Use Big O to analyze the time complexity：

```
for(int i = 0; i < n; i++)
    for(int j = i; j < n; j++)
        k++;
```

6. Please show your proof： $\sum_{i=1}^{N} i^2 = \frac{N(N+1)(2N+1)}{6}$
7. Design an algorithm to search for k in the ordered array with time complexity of O(logN). Same for a linked list? Write functions to maintain this list and analyze its time complexity. (efficiency counts)

```
int BinSearch(int array[],int arrayLength, int K) {}
```



8. a. Write a non-recursive procedure to reverse a singly linked list in O(N) time.
   b. Write a procedure to reverse a singly linked list in O(N) time using constant extra space.