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CMPT 435 - Assignment #4

1)

- a) Array
- b) Linked List
- c) Stack
- d) Hash Table

2)

a)

- i) Loop through arr1 such that all items in arr1 are stored in the hash set
- ii) Loop through arr2 and compare the values stored in the hash set
- iii) **Output:** B[] is/isn't a subset of A[]

b) **Input:** hash set

```
for ( int i = 0; i < n1; i++ ) {  
    if ( !hs.contains( arr1[i] ) ) { Output: hs.add( arr1[i] ) }    // O(n)  
}  
for ( int i = 0; i < n2; i++ ) {  
    if ( !hs.contains( arr2[i] ) ) { Output: return false }    // O(1)  
}  
return true
```

Output: B[] is/isn't a subset of A[]

c) $O(n) = n$

3) **Input:** linked list

```
while( temp != null ) {  
    if( temp.next != null && temp.next.data < min.data ) {  
        Output: min = temp.next, prev = temp  
    }  
    temp = temp.next  
}  
if( min != head ) { Output: prev.next = min.next }  
else { Output: head = head.next }
```