**1. Data Structures**

**1.1 Arrays**

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| **Static Array**  Insert - O(n)  Delete - O(n)  Lookup - O(1)  Append - O(1) | **Dynamic Array**  Insert - O(n)  Delete - O(n)  Lookup - O(1)  Append - O(1)\*  \*O(n) in case of reallocation of memory (while other languages handles memory allocation by themselves, C programming language has realloc() function) | **String Question**  C#, Java - toCharArray()  Python - list()  JavaScript - split()  \*C - A string is by-default stored as an array of characters. Hence its characters can be directly accessed by indexing. | **Searching**  Is array sorted?   * If **Yes**, Binary Search : O(logN) * If **No;**   Will Sorting make solution efficient?   * If **Yes**, Sorting Algorithms * If **No**, Linear Search : O(n) |