

LRU_CACHE:

- DataStructure - Que linked-list, and Dictorary chosen for constant time
- Time complexity - $O(1)$

Blockchain:

- Data Structure - Linked list for constant appending $O(1)$
- Time complexity worse case $O(n)$ for search

Huffman Coding:

- DataStructure - Tree - Chosen for left and right child flexibilty
- Time complexity - Worse case $O(n\log)$ for DFS recursive function

Recursion File Search:

- Data Structure - recusions cleaner look
- Time complexity = Worse case $O(n\log)$

Active Directory :

- Data Structure - recusions cleaner look
- Time complexity = Worse case $O(n\log)$