

1.1 -  $\log_2(128) = 7$

1.2 -  $\log_2(256) = 8$

1.3 -  $O(\log(n))$

1.4 -  $O(n)$

1.5 -  $O(n)$

1.6 -  $O(n)$

2.1 - Linked List Because lots of inserts and a few reads.

2.2 - Linked List, Because the chefs always take the first order off of the queue. This is called sequential access.

2.3 - array: Because give you random access.

2.4 - array allow slow inserts and delete. if you're using binary search to search for username, the array needs to be stored.

2.5 - Inserting → faster than a stored array.

→ comparable to a linked list.

Searching → faster than unsorted array and linked list.

→ slower than sorted array. using binary search.

3.1 - Your computer allocates a box of memory for that function call and use the memory. The variable name is set to "maggie". The greet function is called first, and calls the greet2 function, with name = maggie.

The greet is an in complete.

The current function call is greet2 function.

After this function call completes, the greet function will resume.

3.2. Stack overflow.

