1. What is a linked list?

- First of all, linked list is a linear data structure. Both linked lists and arrays are used to store collections of data. But of course, there is a difference between them. We can describe linked lists like combination of nodes where each node contains a data field and a reference to the next node in the list. Linked lists have some properties like:

• Successive elements are connected by pointers

• The last element points to NULL

• Can grow or shrink in size during execution of a program

• Can be made just as long as required (until systems memory exhausts)

• Does not waste memory space (but takes some extra memory for pointers). It allocates memory as list grows

2. What are the different forms of linked lists?

- Singly Linked Lists

- Doubly Linked Lists

- Circular Linked Lists

- A Memory-efficient Doubly Linked List

- Unrolled Linked Lists

3. What is a linked list's purpose?

Linked lists are for collecting data. This data structure holds data in nodes. Linked lists are mainly used because of their efficiency in insertion and deletion.

4. What are the advantages of linked lists over arrays?

With linked lists, your items can be anywhere in memory. Each item stores the address of the next item in the list. That's why linked lists capture minimum space in memory and we can allocate more memory as the number of elements increase. That means there are 2 main advantages of linked list:

- they capture as little memory as possible

- they are expandable, elements can be easily inserted or removed and you have to never move your items

5. What is the purpose of a circular linked list?

In singly linked lists and doubly linked lists, the end of lists are indicated with NULL value. But circular linked lists do not have ends. While traversing the circular linked lists we should be careful; otherwise we will be traversing the list infinitely. In circular linked lists, each node has a successor. Note that unlike singly linked lists, there is no node with NULL pointer in a circularly linked list. In some situations, circular linked lists are useful.

6. How will you explain Circular Linked List?

A circular list is a special case of linked list. It is a list where the endpoints are connected. That is, the last node in the list points back to the first node. Circular linked lists can be based on both singly and doubly linked lists.