University of Essex

Online

Storing Lists

Linked Lists

A linked list is a collection of data items which are not organised in sequence. Each data item in the Linked list has an associated pointer that refers to a memory location of the next data item in the linked list. It is important to mention, the pointer can refer to any location in the memory not necessarily to the consecutive memory location.

Let us examine this diagram. This diagram shows how a node can be deleted in linked list. If you set the instructions in sequence, we would say:

- Find the node you wish to delete.
- Look for the predecessor node.
- Replace the pointer of the predecessor node with the new pointer in order to refer to the new node that will be linked to the predecessor of the deleted node.

Similarly, we can insert a node by replacing the pointer value of the predecessor node with a value that refers to the new node and the pointer of the newly inserted node must refer to the next node of the linked list.