Linear data structure

Una colección ordenada de elementos del mismo tipo que se conectan usando punteros.

Consisten en nodos donde cada nodo contiene un campo de dato y una referencia al siguiente nodo de la lista.

Single linked list, most common list among the others, can only be traversed in one direction. Each node has a data and pointer to the next node.

The size of the arrays is fixed.

Inserting a new element in an array of elements is expensive because the room must be created for the new elements and to create room existing elements must be shifted.

Advantage, dynamic size, easy insertion deletion.

Drawbacks, random access is not allowed.

Extra memory for pointers.

Delete a node.

Make the previous node point to the node after the one we want to delete.

análisis amortizado, hacer el análisis a profundidad.

Write a function that gets the length of the linked list.

Write a function that searches an element in a linked list void search t value.

Double linked list.

Is a type of linked list in which each node apart from storing its data has two links. The first link points to the previous node in the list and the second link points to the next node in the list.

Circular linked list.

The last element points to the first element, the last node next pointer points at the first node.

Stack

It’s a linear data structure which follows a particular order in which the operations are performed. It’s a data structure of ordered items such that items can be inserted and removed.

Insertion deletion happens on the same end