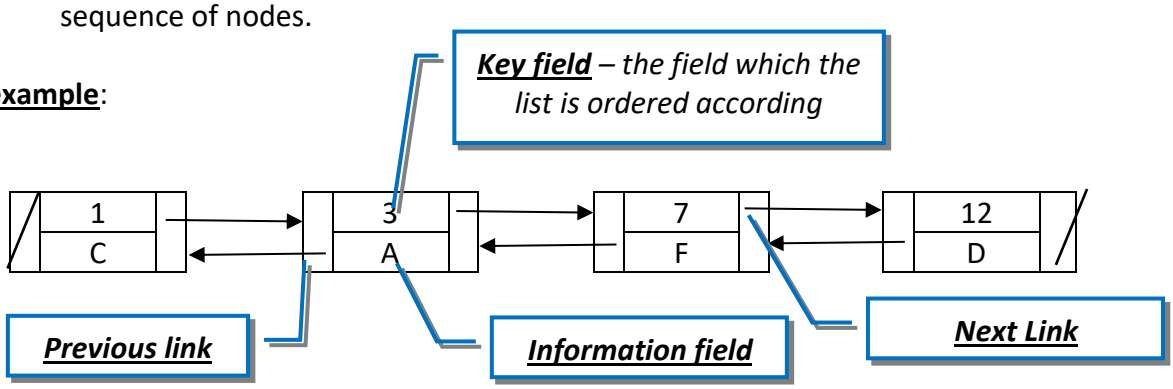
Sheet 7

A **doubly sorted linked list** is a linked data structure that consists of a set of sequentially linked nodes. Data in the list should be sorted according specific key. Each node contains:

- a data entry field that contain a key and information,
- and two pointers that are references to the previous and to the next node in the sequence of nodes.

For example:



You are required to:

1. Write the type definition of a doubly sorted linked list node in C.
2. Define the doubly linked list to be, simply, a pointer to a node.
3. Write a C function to initialize the list.
4. Write a C function to insert an element.
5. Write a C function to delete an element of specific key after retrieving its information.
6. Write a C function to destroy the list.

Remember to use appropriate names for types and variables. It is expected that you define the pre-conditions and post-conditions for every function of the above.