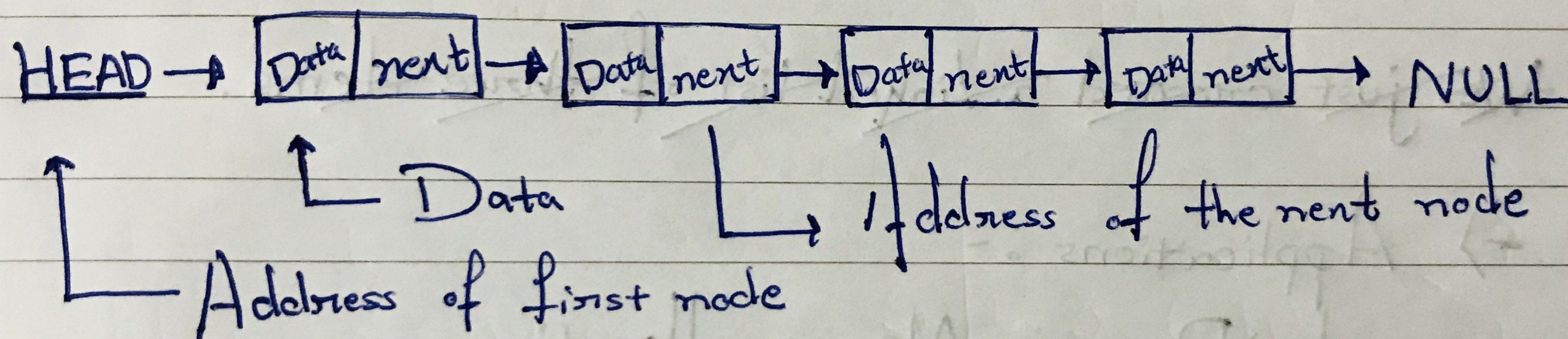


Linked List Data Structure

A Linked List is a linear data structure.

→ Here each node store the data and the address of the next node.



Representation :-

Struct node

{

int data;

struct node* next;

};

Each node consists :

- A data item

- An address of next data item (node)

} ;

→ Creating a linked^{list} of three data items :-

Struct node *head;

Struct node *one = NULL;

Struct node *two = NULL;

Struct node *three = NULL;

} Initialization of nodes

one = malloc(sizeof(struct node));

two = //

three = //

} Allocation of Memory

one → data = 1;

two → data = 2;

three → data = 3;

} Assign values to data items

one \rightarrow next = two ;
two \rightarrow next = three ;
three \rightarrow next = NULL ;

} Connect nodes

head = one \rightarrow Save address of first node in head

~~We just created a linked list of three items.~~

\rightarrow Applications :-

- \rightarrow Dynamic Memory allocation
- \rightarrow Stack / Queue implementation
- \rightarrow Hash table, Graphs

Note : In C we used structure

In Java, python we use class.