612415196 - Krishna Warfade

Assignment-5 : Linked List

Mis : 612 415 196

Initial list = { } , head = list (i.e NULL)

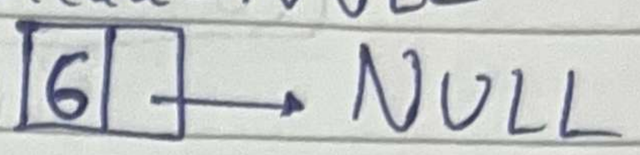
Algorithm to insert element :-

1st occurence : (6)

Start : head = NULL

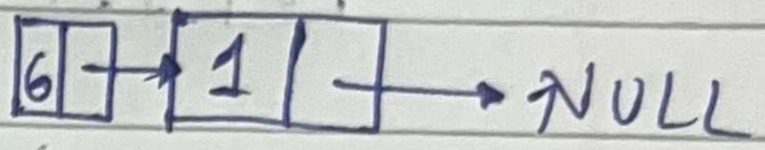
Set ~~head~~ insert → data = 6

head → next = NULL

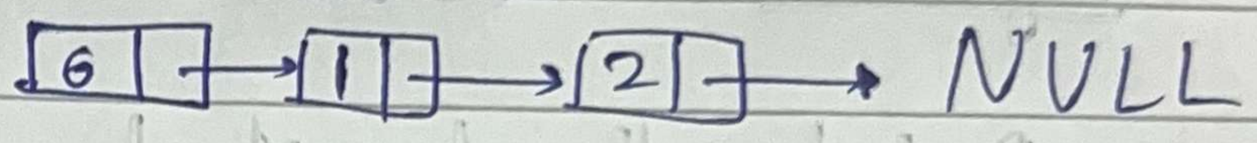


(1) : (First occur.)

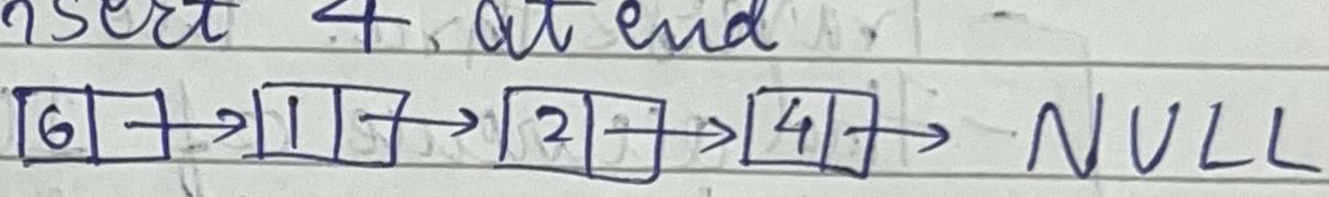
insert data = 1



(2) : insert data = 2



(4) : insert 4 at end

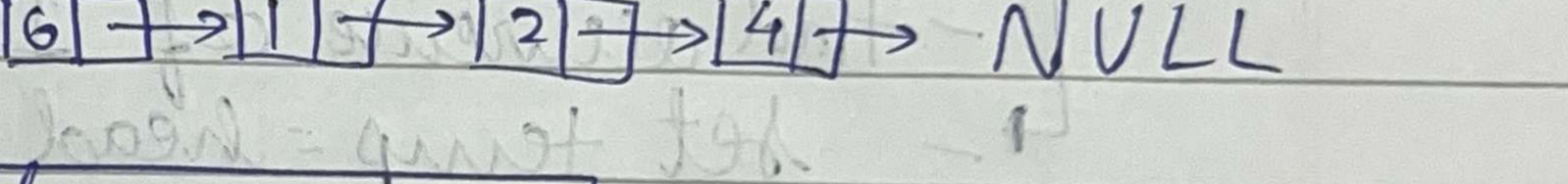


(1) : 2nd accurence

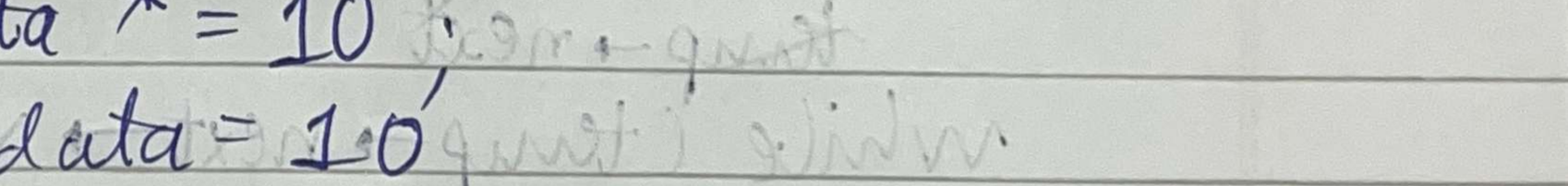
data *= 10 ;

data = 10

insert at end

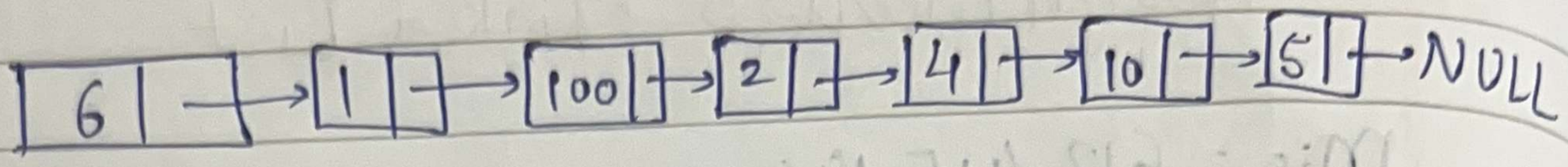


(5) : insert 5 at end



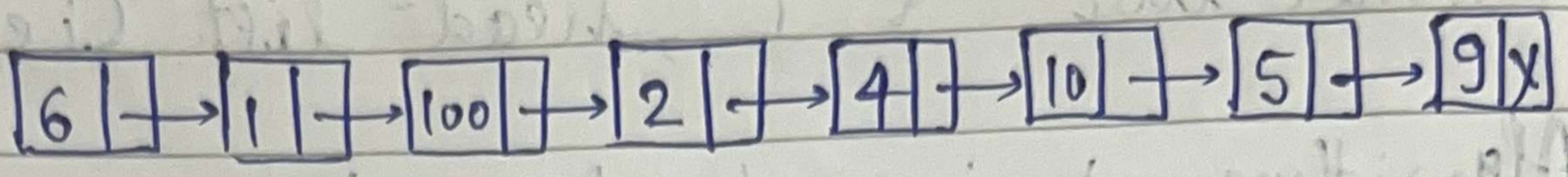
(1) : 3rd accurence d = d * 100

insert after first occ. of 1



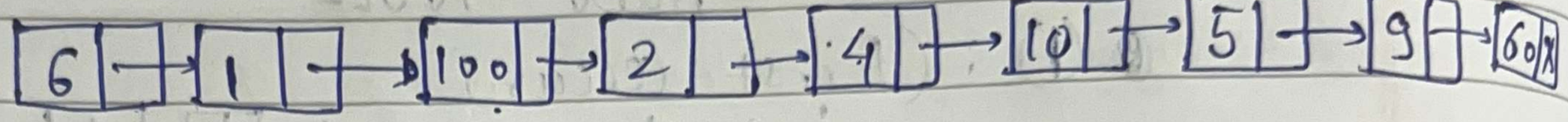
(9)

Insert data = 9 at end



(6) 2nd Accurence

Insert d = d * 10 at end



Algorithm to delete element :-

- Delete the largest element i.e 100
  - Traverse thro. the whole list
  - Find accurence of 100 & delete
  - set temp = head

while (temp → value != largest)

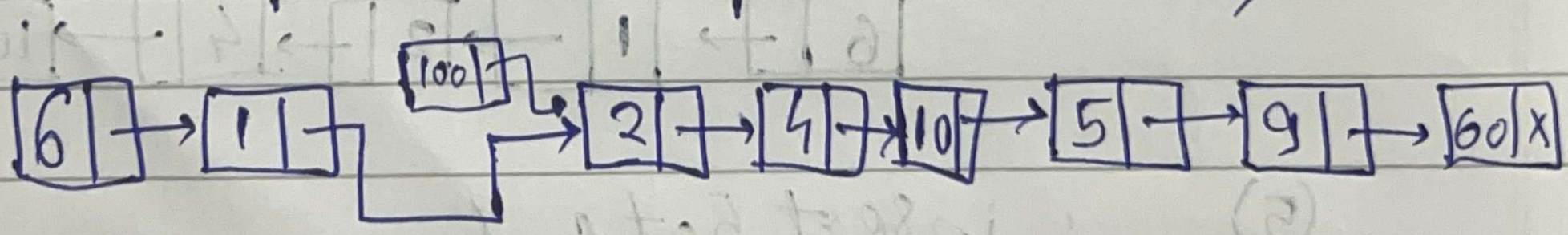
temp = temp → next;

~~temp → next~~

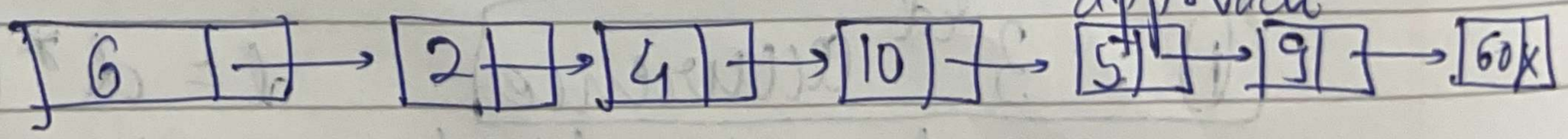
while (temp → next → value != largest)

temp = temp → next;

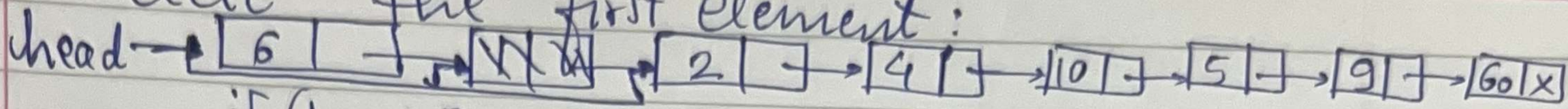
temp → next = temp → next → next;



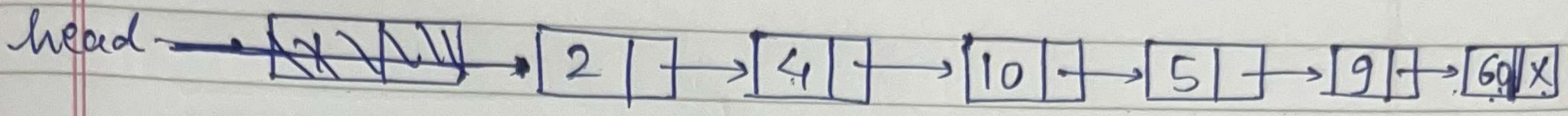
- Delete the smallest element : Similar approach



⊙ Delete the first element:



if (head != NULL)
    temp = head;
    head = head → next
    free (temp);



⊙ Delete last element:

- Traverse thru. list till last & delete last node.

Set temp = head
While (temp → next != NULL)
{
    temp = temp → next;
}
~~head~~ temp = temp → next;
Free (temp);