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1BM19CS404

Q1. program to implement memory efficient Doubly Linked List.

* Insert a new node at the begining :

```
void insert (Node *head, int data)
{
    Node *p = new Node();
    p->data = data;

    p->next = *head;

    if (*head != NULL)
    {
        (*head)->next = XOR (p, (*head)->
                             next);
    }

    *head = p;
}
```

* Insert a node at the end of list:

```
void insert_end (Node *head, int data)
{   Node *curr = head; Node *prev=NULL;
    if (*head == NULL)
    {
        Node *p = new Node();
        p->data = data;
        p->next = NULL;
    }
    else
    {
      while( curr != NULL)
      {
          next = XOR(prev, cur->next);
          prev = curr;
          curr = next;
      }
      curr->next = XOR(p, curr);
}
```