16-9-20 Lab 1 :- WAP to implement a memory efficient doubly linked list

```
#include <bits/stdc++.h>
using namespace std;

class node
{ public:
  int data;
  Node *npx;
};

node *XOR (node *a, node *b)
  { return (node*) ((uintptr_t) (a) ^ (uintptr_t) (b));
    }

void insert (node *head, int data)
{

    node *new_node = new node();
      new_node->data = data;
    new_node->npx = head;

  if (head != NULL)
    head->npx = XOR(new_node, head->npx);

  head = new_node;
}
void print (node head)
 {
    node *curr = head;
    node *prev = NULL;
    node * next;
```

```
while (curr != NULL)
{
    cout << curr->data << " ";
    next = XOR (prev, curr->npx);
    prev = curr;
    curr = next;
}
}
```