ABHAVA.V
1BM18CS001
Batch-1

ADS Lab-1

-> XOR Linked List

· Program:

```
struct node
{
    int data;
    struct node * link;
};
typedef struct node * NODE;

NODE XOR (NODE a, NODE b)
{
    return (NODE) ((uintptr_t(a) ^ (uintptr_t) (b));
}
void insert_end(int data)
{
    NODE newnode = (NODE) malloc (sizeof (struct node));
    newnode->data = data;
    newnode->link = NULL;
    if (head == NULL)
        head = newnode;
    else
    { NODE curr = head;
      NODE prev = NULL;
      NODE x;
```

ABHAYAN
1BM18CS001

```
while (curr -> link != prev)
{
        x = curr;
        curr = XOR (curr -> link, prev);
        prev = x;
}
curr -> link = XOR(curr -> link, new node);
newnode -> link = curr;
}
}
void insert_beg (int data)
{
    NODE newnode = (NODE) malloc( sizeof (struct node) );
    newnode -> data = data;
    newnode -> link = NULL;
    if (head == NULL)
    {
        head = newnode;
    }
    else
    {
        new node -> link = head;
        head -> link = XOR (head -> link, newnode);
        head = newnode;
    }
}
```