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1BM18CS027

XOR Linked List

```
// XOR operation
struct node * XOR (struct node *a , struct node *b)
{
    return ( struct node* ( (uintptr_t(a)) ^ (uintptr_t(b)) ));
}

// Void insert_end(int data, NODE head)
{
    struct node *newnode = new (struct node);
    newnode -> data = data;
    newnode -> link = NULL;
    if (head == NULL)
    {
        head = newnode;
    }

NODE newnode = getnode( )
newnode -> data = data;
if(head == NULL)
  {  head = newnode;
  }
else{
      NODE current = head;
      NODE Prev = NULL;
      NODE x;
      while (current -> link != Prev)
      {   x = current;
          current = XOR( current -> link , Prev);
          Prev = x;
      }
      current -> link = XOR ( current -> link , newnode );
```

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```
Void insert_beginning (int data, NODE head ) {
{
    NODE newnode = getNODE ( );
    newnode -> data = data;
    newnode -> link = NULL;
    if (head == NULL)
    { head = newnode;
    }
    else
    {   newnode -> link = head;
        head -> link = XOR ( head -> link, newnode);
        head = newnode;
    }.
}
```