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Batch: 1

ADS Lab-1 Write-Up

```
struct node {
  int data;
  struct node *xnp;
};
typedef struct node *NODE;
NODE XOR ( NODE p, NODE q) {
    return (NODE)((uintptr_t)(p) ^ (uintptr_t)(q));
}
void insertfront( NODE head, int ~~data~~ item) {
    NODE p = (NODE) malloc (sizeof (struct node));
    p-> data = ~~data~~ item;
    p-> xnp = head;
    if ( head != NULL) {
        head -> xnp = XOR ( p, head -> xnp );
    head = p;
}
void insertend (NODE head, int item) {
    NODE p = (NODE) malloc ( sizeof (struct node));
    p-> data = item;
    p-> xnp = NULL;
    if (head == NULL)
        head = p;
    else {
        NODE curr = head;
        NODE prev = NULL, x;
```

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```
while ( curr->xnp != prev ) {
        x = curr;
        curr = XOR (curr -> xnp , prev);
        prev = x;
}
curr -> xnp = XOR ( curr-> xnp , p)
  p -> xnp  = curr ;
 }
{
```