

Doubly linked list

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```
#include <bits/stdc++.h>
```

```
#include <iotypes.h>
```

```
void insertBeg(Node **head, int data)
```

```
{
```

```
Node *new_node = new Node();
```

```
new_node → data = data;
```

```
new_node → next npx = *head;
```

```
if (*head != NULL) (*head) → npx = XOR(new_node)
```

```
(*head) → npx;
```

```
*head = new_node;
```

```
}
```

```
void insertEnd(Node **head, int data) {
```

```
Node *new_node = new Node();
```

```
if new_node → data = data;
```

```
if (*head == NULL) {
```

```
new_node → npx = *head;
```

```
*head = new_node;
```

```
}
```

```
else {
```

```
Node *curr = *head;
```

```
Node *prev = NULL;
```

```
Node *next;
```

```
while (XOR(prev, curr → npx) != NULL) {
```

```
next = XOR(prev, curr → npx);
```

```
prev = curr;
```

```
curr = next;
```

```
}
```

```
new_node → npx = curr;
```

```
curr → npx = XOR(prev, new_node);
```

```
}
```

```
}
```