

Harsh Chandra

IBM CS032

A2

```
Node insert-front(Node head, int ele)
```

```
{
```

```
    Node p = createNode();
```

```
    p->data = ele;
```

```
    if (head == NULL)
```

```
    {
```

```
        p->next = NULL;
```

```
        return p;
```

```
    }
```

```
    p->next = head
```

```
    head->next = head->next ^ p;
```

```
    return p;
```

```
}
```

```
Node insert-rear(Node head, int ele)
```

```
{
```

```
    Node p = createNode();
```

```
    p->data = ele;
```

```
    if (head == NULL)
```

```
    {
```

```
        p->next = NULL;
```

```
        return p;
```

```
    }
```

```
    }
```

```
    if (head->next == NULL)
```

```
    {
```

```
        head->next = head->next ^ p;
```

```
        p->next = head;
```

```
        return head;
```

```
    }
```

```
Node prev = head;
Node nextp = head->next;
while (prev != nextp->next)
{
    Node q = nextp->next ^ prev;
    prev = nextp;
    nextp = q;
}
nextp->next = nextp->next ^ p;
p->next = nextp;
return head;
}
```