DLL

```
void insert(int new_data) {
    struct Node *new_node = (struct Node*)malloc(sizeof(struct Node));
    new_node -> data = new_data;
    new_node -> next = NULL;
    new_node -> prev = NULL;
    if (head == NULL)
        head = new_node;
    else {
        new_node -> next = head;
        head -> prev = new_node;
        head = new_node;
    }
}
```

```
void delete(int pos) {
    struct Node *temp = head;
    if (head == NULL) {
        printf("Empty List");
    }
    else {
        for(int i = 0; i < pos; i++) {
            temp = temp -> next;
        }
        temp -> prev -> next = temp -> next;
        temp -> next -> prev = temp -> prev;
        free(temp);
    }
}
```

```
void delete(int val) {
    struct Node *ptr = head;
    struct Node *temp;
    while(ptr -> data != val) {
        ptr = ptr -> next;
    }
    temp = ptr -> prev;
    if (ptr == NULL) {
        printf("Not found");
    }
    else if (ptr == head) {
        if (ptr -> next == NULL) {
            head == NULL;
            free(ptr);
            printf("Deleted");
        }
        else {
            ptr -> next -> prev = head;
            head = ptr -> next;
            free(ptr);
            printf("Deleted");
        }
    }
    else if(temp -> next -> next == NULL) {
        temp -> next = NULL;
        printf("Deleted");
    }
```

```
void display () {
struct Node *temp = head;
if (temp == NULL) {
   printf (" Empty List ");
}
else {
   While(temp != NULL) {
    printf ("\n %d ", temp→data);
    temp = temp→next;
   }
  }
}
```

```
else {
 temp → next = ptr → next;
 ptr → next → prev = temp;
 free(ptr);
 printf(" Deleted ");
 }
}
```