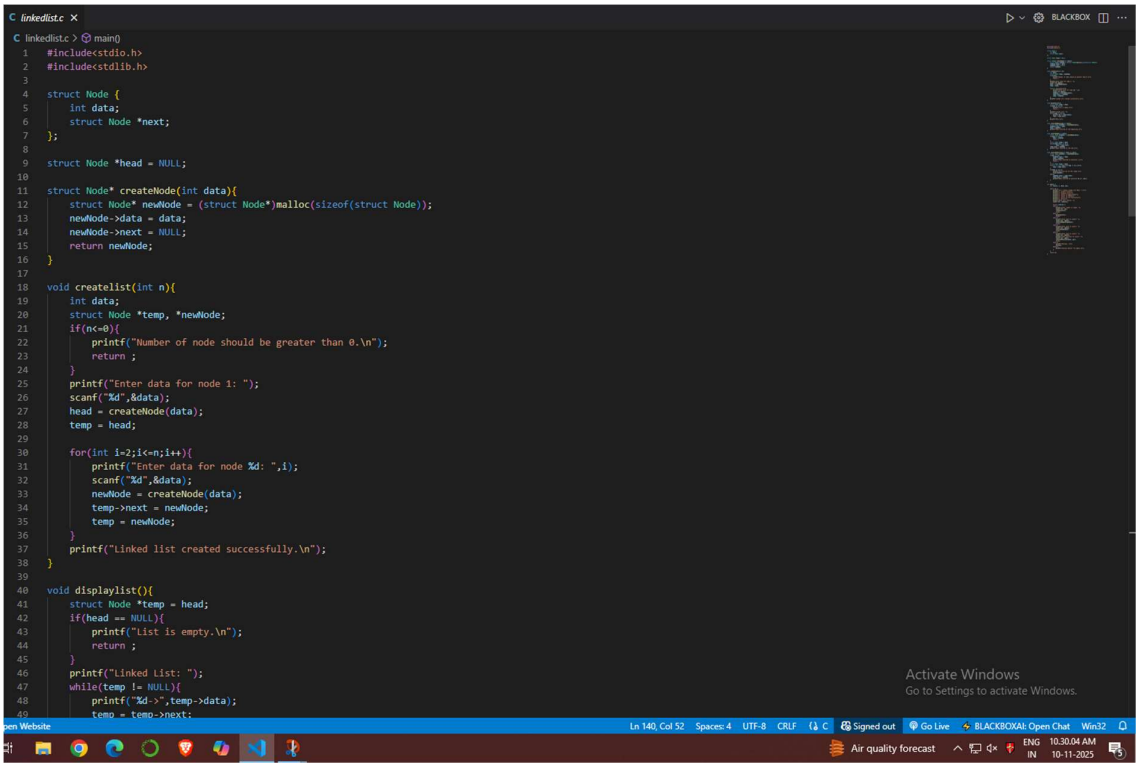
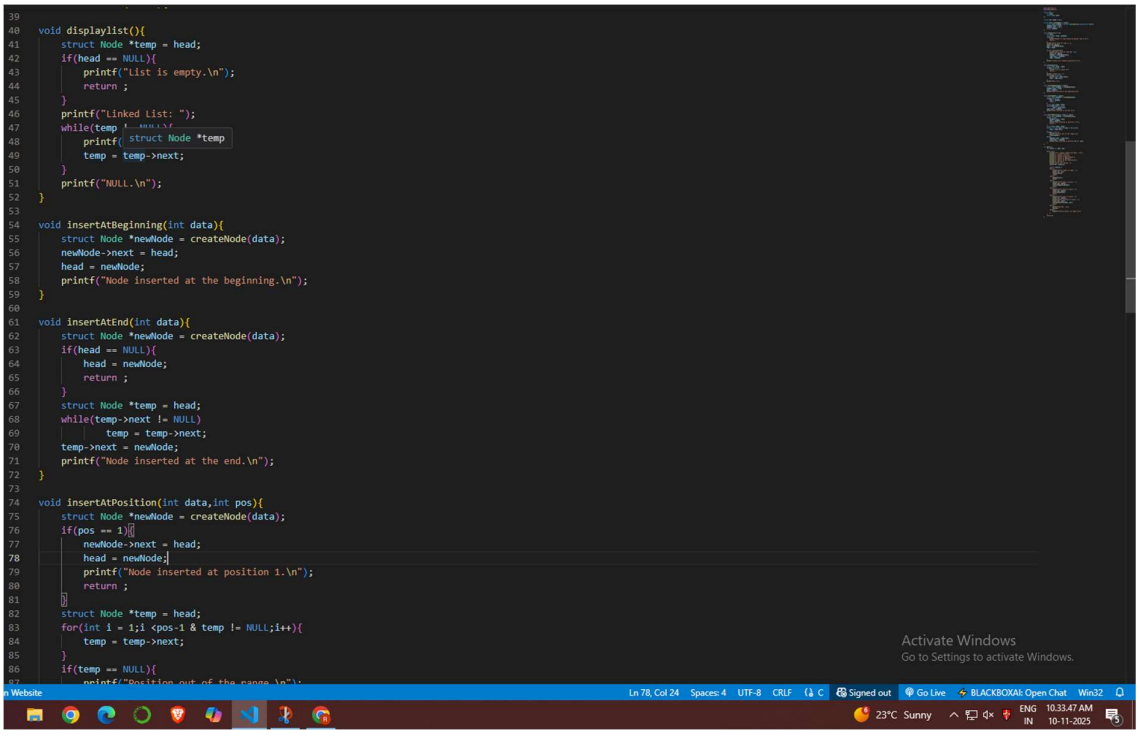


```c
#include<stdio.h>
#include<stdlib.h>

struct Node {
    int data;
    struct Node *next;
};

struct Node *head = NULL;

struct Node* createNode(int data){
    struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));
    newNode->data = data;
    newNode->next = NULL;
    return newNode;
}

void createlist(int n){
    int data;
    struct Node *temp, *newNode;
    if(n<=0){
        printf("Number of node should be greater than 0.\n");
        return ;
    }
    printf("Enter data for node 1: ");
    scanf("%d",&data);
    head = createNode(data);
    temp = head;

    for(int i=2;i<=n;i++){
        printf("Enter data for node %d: ",i);
        scanf("%d",&data);
        newNode = createNode(data);
        temp->next = newNode;
        temp = newNode;
    }
    printf("Linked list created successfully.\n");
}

void displaylist(){
    struct Node *temp = head;
    if(head == NULL){
        printf("List is empty.\n");
        return ;
    }
    printf("Linked List: ");
    while(temp != NULL){
        printf("%d->",temp->data);
        temp = temp->next;
```

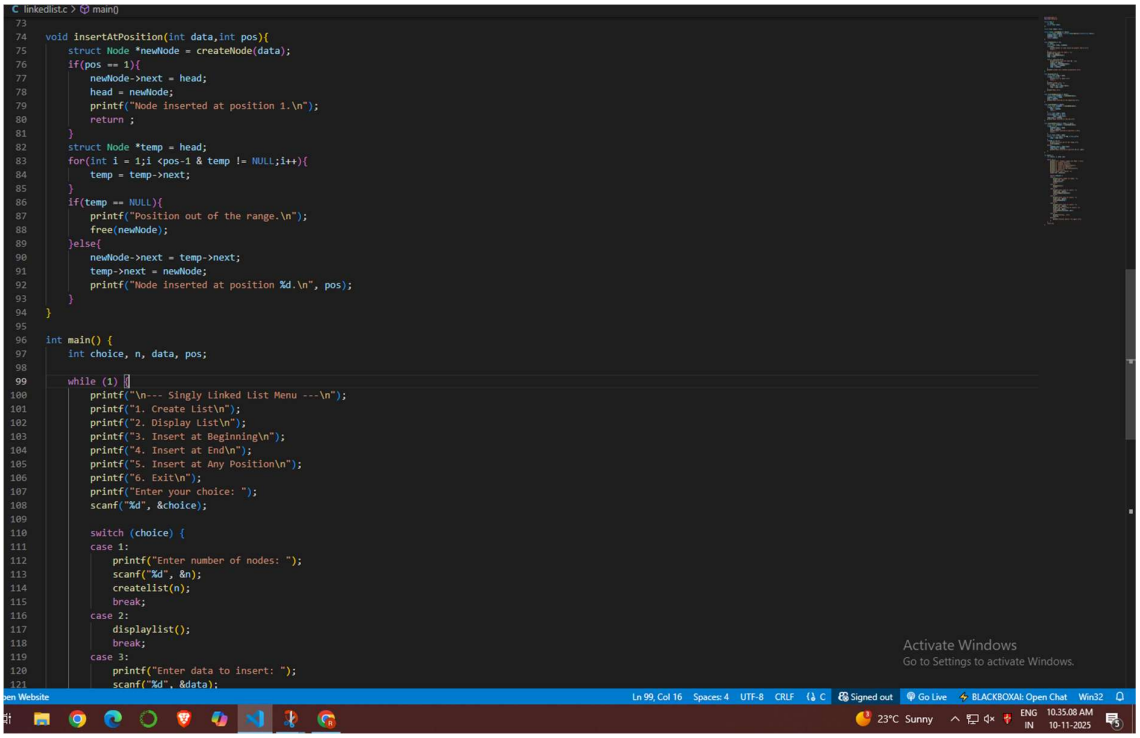






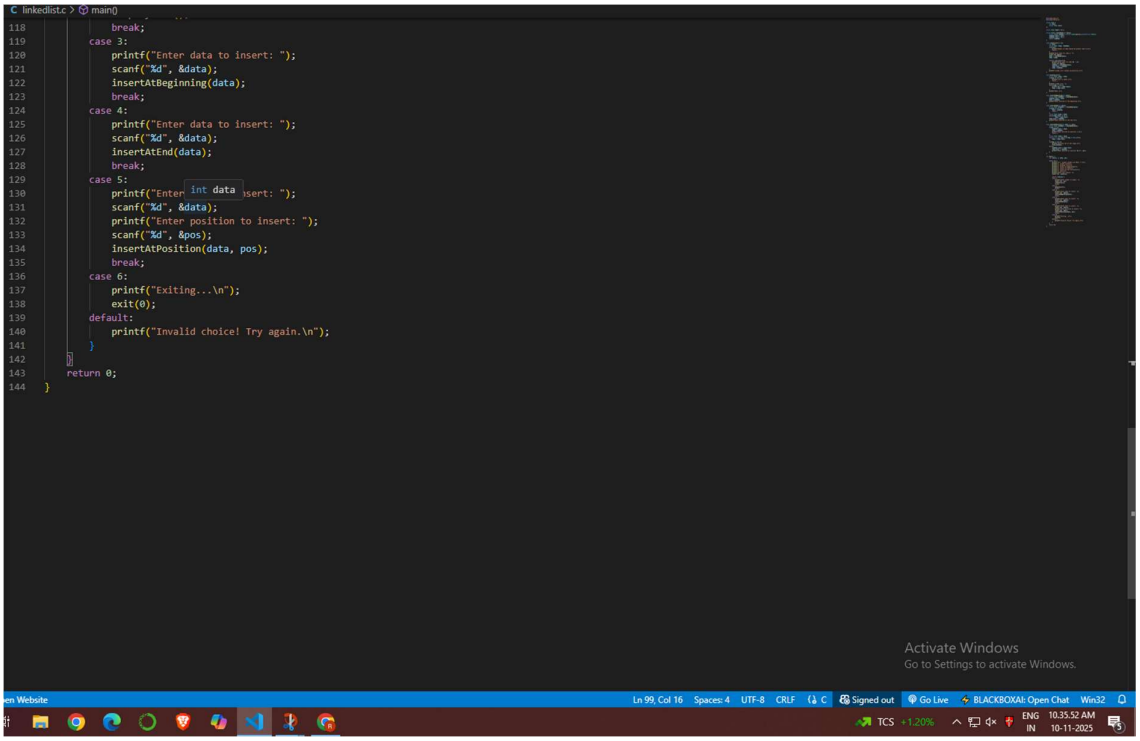
```c
void displaylist(){
    struct Node *temp = head;
    if(head == NULL){
        printf("List is empty.\n");
        return ;
    }
    printf("Linked List: ");
    while(temp != NULL)
        printf("%d->",temp->data);
        temp = temp->next;
    }
    printf("NULL.\n");
}

void insertAtBeginning(int data){
    struct Node *newNode = createNode(data);
    newNode->next = head;
    head = newNode;
    printf("Node inserted at the beginning.\n");
}

void insertAtEnd(int data){
    struct Node *newNode = createNode(data);
    if(head == NULL){
        head = newNode;
        return ;
    }
    struct Node *temp = head;
    while(temp->next != NULL)
        temp = temp->next;
    temp->next = newNode;
    printf("Node inserted at the end.\n");
}

void insertAtPosition(int data,int pos){
    struct Node *newNode = createNode(data);
    if(pos == 1){
        newNode->next = head;
        head = newNode;
        printf("Node inserted at position 1.\n");
        return ;
    }
    struct Node *temp = head;
    for(int i = 1;i <pos-1 & temp != NULL;i++){
        temp = temp->next;
    }
    if(temp == NULL){
```

Activate Windows
Go to Settings to activate Windows.

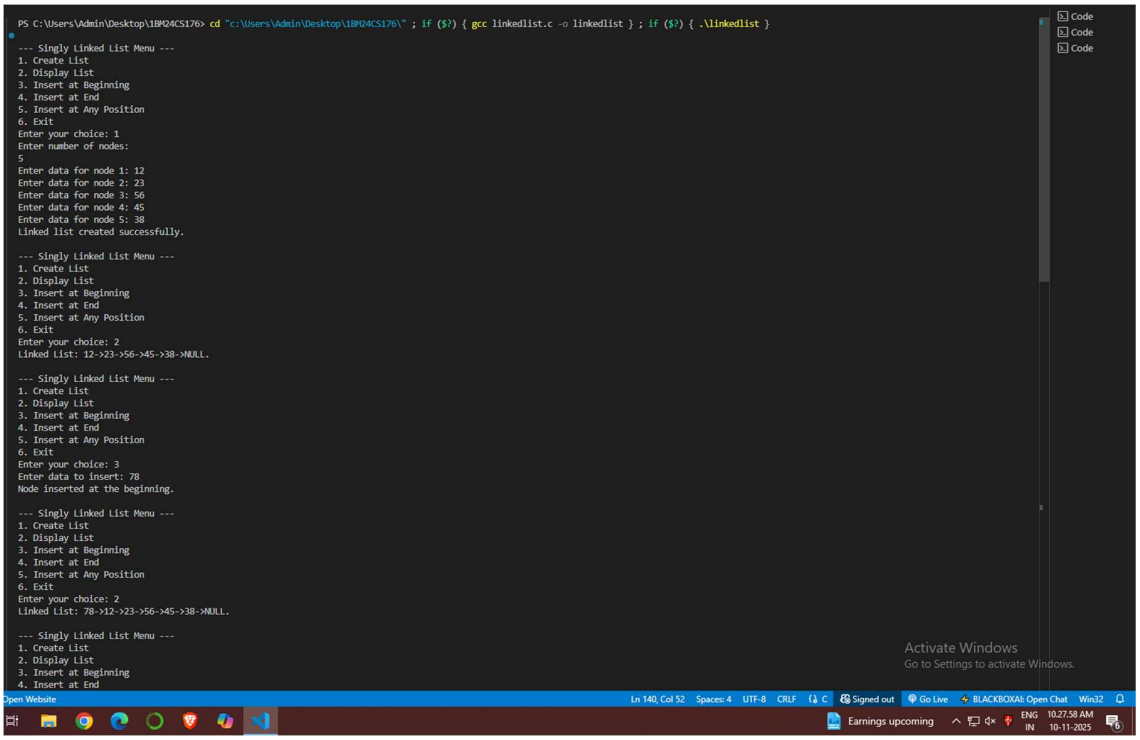


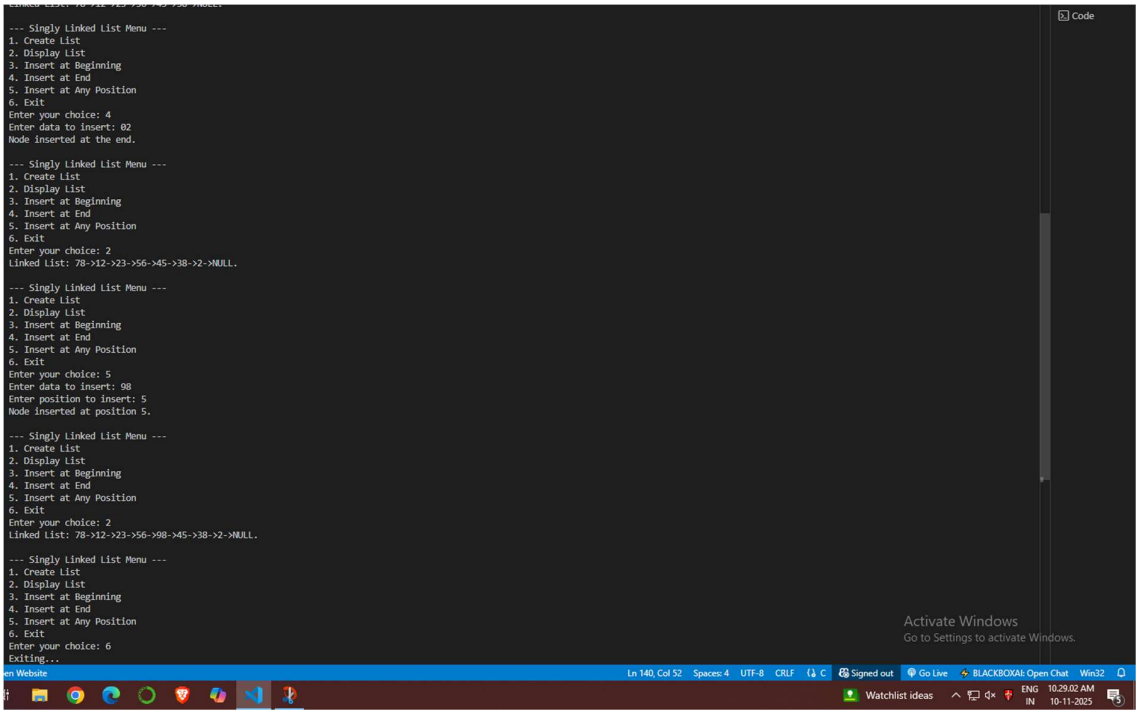
```c
void insertAtPosition(int data,int pos){
    struct Node *newNode = createNode(data);
    if(pos == 1){
        newNode->next = head;
        head = newNode;
        printf("Node inserted at position 1.\n");
        return ;
    }
    struct Node *temp = head;
    for(int i = 1;i <pos-1 & temp != NULL;i++){
        temp = temp->next;
    }
    if(temp == NULL){
        printf("Position out of the range.\n");
        free(newNode);
    }else{
        newNode->next = temp->next;
        temp->next = newNode;
        printf("Node inserted at position %d.\n", pos);
    }
}

int main() {
    int choice, n, data, pos;

    while (1) {
        printf("\n--- Singly Linked List Menu ---\n");
        printf("1. Create List\n");
        printf("2. Display List\n");
        printf("3. Insert at Beginning\n");
        printf("4. Insert at End\n");
        printf("5. Insert at Any Position\n");
        printf("6. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
        case 1:
            printf("Enter number of nodes: ");
            scanf("%d", &n);
            createlist(n);
            break;
        case 2:
            displaylist();
            break;
        case 3:
            printf("Enter data to insert: ");
            scanf("%d", &data);
```





```c
            break;
        case 3:
            printf("Enter data to insert: ");
            scanf("%d", &data);
            insertAtBeginning(data);
            break;
        case 4:
            printf("Enter data to insert: ");
            scanf("%d", &data);
            insertAtEnd(data);
            break;
        case 5:
            printf("Enter int data sert: ");
            scanf("%d", &data);
            printf("Enter position to insert: ");
            scanf("%d", &pos);
            insertAtPosition(data, pos);
            break;
        case 6:
            printf("Exiting...\n");
            exit(0);
        default:
            printf("Invalid choice! Try again.\n");
        }
    }
    return 0;
}
```


PS C:\Users\Admin\Desktop\1BM24CS176> cd "c:\Users\Admin\Desktop\1BM24CS176\" ; if ($?) { gcc linkedlist.c -o linkedlist } ; if ($?) { .\linkedlist }
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 1
Enter number of nodes:
5
Enter data for node 1: 12
Enter data for node 2: 23
Enter data for node 3: 56
Enter data for node 4: 45
Enter data for node 5: 38
Linked list created successfully.
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 2
Linked List: 12->23->56->45->38->NULL.
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 3
Enter data to insert: 78
Node inserted at the beginning.
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 2
Linked List: 78->12->23->56->45->38->NULL.
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
Activate Windows
Go to Settings to activate Windows.
Code
Code
Code
Ln 140, Col 52
Spaces: 4
UTF-8
CRLF
C
Signed out
Go Live
BLACKBOXAI: Open Chat
Win32
Earnings upcoming
ENG
IN
10.27.58 AM
10-11-2025


--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 4
Enter data to insert: 02
Node inserted at the end.
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 2
Linked List: 78->12->23->56->45->38->2->NULL.
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 5
Enter data to insert: 98
Enter position to insert: 5
Node inserted at position 5.
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 2
Linked List: 78->12->23->56->98->45->38->2->NULL.
--- Singly Linked List Menu ---
1. Create List
2. Display List
3. Insert at Beginning
4. Insert at End
5. Insert at Any Position
6. Exit
Enter your choice: 6
Exiting...
Activate Windows
Go to Settings to activate Windows.
Code
Ln 140, Col 52
Spaces: 4
UTF-8
CRLF
C
Signed out
Go Live
BLACKBOXAI: Open Chat
Win32
Watchlist ideas
ENG
IN
10.29.02 AM
10-11-2025