21. #include <stdio.h>

#include <stdlib.h>

```
struct Node {
    char data;
    struct Node* next;
};

void append(struct Node** head, char data) {
    struct Node* new_node = (struct Node*)malloc(sizeof(struct Node));
    new_node->data = data;
    new_node->next = NULL;

    if (*head == NULL) {
        *head = new_node;
        return;
    }

    struct Node* temp = *head;
    while (temp->next != NULL)
        temp = temp->next;
    temp->next = new_node;
}

int length(struct Node* head) {
```

```
    int len = 0;
    while (head != NULL) {
        len++;
        head = head->next;
    }
    return len;
}

int isPalindrome(struct Node* head) {
    int len = length(head);
    char arr[len];
    int i = 0;
    struct Node* temp = head;
    while (temp != NULL) {
        arr[i++] = temp->data;
        temp = temp->next;
    }

    for (int j = 0; j < len/2; j++) {
        if (arr[j] != arr[len-j-1])
            return 0;
    }
    return 1;
}
```

```
int main() {
    struct Node* head = NULL;
    char str[] = "madam";

    for (int i = 0; str[i] != '\0'; i++) {
        append(&head, str[i]);
    }

    if (isPalindrome(head))
        printf("Linked list is palindrome\n");
    else
        printf("Linked list is not palindrome\n");

    return 0;
}
```

Output

```
Linked list is palindrome


=== Code Execution Successful ===
```