DS LAB TEST 2

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Q2.

Ans:

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

struct node {
    int cost;
    struct node *next;
    char name[100];
};
struct node* head = NULL;

void push();
void pop();
void display();
void push(int in_cost, char in_name[100]) {
    struct node *in_node = (struct node *)malloc(sizeof(struct node));
    in_node -> name = in_name;
    in_node -> cost = in_cost;
    in_node -> next = NULL;
    if (head == NULL) {
        head = in_node;
    }
    else {
        in_node -> next = head;
        head = in_node;
    }
}
```

```
void pop() {
    struct node * temp = head;
    if (head == NULL) {
    {   printf("List is Empty \n");
    }
    else {
        head = temp->next;
        temp->next = NULL;
        free(temp);
    }
}

void display() {
    struct node* ptr = head;
    if (head == NULL) {
        printf("Empty list");
    }
    else {
        while (ptr != NULL) {
            printf("%s\n", ptr->name);
            printf("%d\n", ptr->cost);
            ptr = ptr->next;
        }
    }
}
```

```
int main() {
    int a;
    int data;
    char x[100];
    do {
        printf("****MENU****");
        printf("(1) Push the Name and Cost of the item\n");
        printf("(2) Pop the item\n");
        printf("(3) Display the items\n");
        printf("(4) Exit\n");
        scanf("%d", &a);
        switch(a) {
            case 1: printf("Enter the name of item :=> \n");
                    scanf("%c", &name);
                    printf("Enter the cost of item :=> \n");
                    scanf("%d", &data);
                    push(data, name);
                    break;
            case 2: pop();
                    break;
            case 3: display();
                    break;
            case 4: exit(0);
                    break;
            default: printf("Invalid");
        }
    }
    while(a>=1 && a<=4);
    return 0;
}
```