Assignment

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

struct shop{
      int shopID;
      char shopName[50];
      struct shop * next;

   };
   struct shop * head = NULL;

void addShopEnd(){
    struct shop * newShop = (struct shop *)
                        malloc(sizeof(struct shop));

    printf("Enter Shop ID: ");
    scanf("%d", &newShop->shopID);
    printf("Enter Shop Name: ");
    scanf("%s", newShop->shopName);

    newShop->next = NULL;
    if(head == NULL){
          head = newShop;
    }
    else{
       struct shop * temp = head;
       while(temp->next != NULL){
              temp = temp->next; }
       temp->next = newShop;
}   }
```

```
void insertAfterID() {
    int id;
    printf("Enter the shop ID after which
            to insert:");
    scanf("%d", &id);

    struct shop *temp = head;
    while (temp != NULL && temp->shopID != id)
    {
        temp = temp->next;

    }
    if (temp == NULL){
        printf("Shop ID not found! \n");
        return;
    }
    struct shop *newShop = (struct shop*)
                  malloc(sizeof(struct
                         shop));

    printf("Enter new shop ID:");
    scanf("%d", &newShop->shopID);
    printf("Enter new shop name:");
    scanf("%s", &newShop->shopName);

    newShop->next = temp->next;
    temp->next = newShop;

};
```

```
void removeShop(){
    int id;
    printf("Enter shop ID to remove:");
    scanf("%d", &id);
    struct shop *temp=head, *prev=NULL;
    if(temp!=NULL && temp->shopID==id){
        head=temp->next;
        free(temp);
        printf
          return;
    }
    while(temp!=NULL && temp->shopID!=id)
    {
        prev=temp;
        temp=temp->next;
    }
    if (temp==NULL){
        printf("Shop not found!\n");
        return;
    }
    prev->next=temp->next;
    free(temp);
}
void searchShop(){
    char name[50];
    printf("Enter shop name to search:");
    scanf("%s", name);
struct shop *temp = head;
 while (temp != NULL) {
     if ( strcmp (temp -> shopName , name) ==0)
      {
       printf (" shop found! -> ID : %d,
           Name : %s \n", temp -> shopID,
           temp -> shopName );
           return;
       }
      temp = temp -> next;
   }
  printf (" shop not found !\n");
}

void displayShops() {
    struct shop * temp = head;
    if (temp ==NULL){
        printf ("\n shops not found ");
        return;
     }
   printf ("\n shops in the corridor : \n");
   while ( temp != NULL) {
        printf (" shop ID : %d, shop
                Name : %s \n", temp -> shopID,
            temp -> shopName );
       temp = temp -> next;
    }
 }
```

```
int main(){
  int choice;
  printf(" \n---shopping menu--\n");
  printf("1. Add shop at End \n
        2. Insert shop after a shop ID \n
        3. Remove shop \n 4. search
         shop by name \n 5. Display
       all shops \n 6. Exit \n");

   while(1){
     printf(" Enter your choice: ");
     scanf(" %d", &choice);
     switch(choice) {
       case 1: addshopEnd();
              break;
       case 2: insertAfterID();
              break;
       case 3: removeShop();
              break;
       case 4: searchShop();
              break;
       case5: displayShops();
              break;
       case6: return 0;
      default: printf("Invalid choice!
                please try again.\n");

    }
  }
}
```

Output:

```
--- Shopping complex Menu ---
1. Add Shop at end
2. Insert shop after a shop ID
3. Remove shop
4. Search shop by name
5. Display All shops
6. Exit
Enter your choice:1
 Enter shop ID: 101
  Enter shop name: Bakery
 Enter your choice:1
 Enter yourshop ID:102
  Enter shop name: Mobile

  Enter your choice:1
   Enter shop ID: 103
    Enter shop name: Fashion

  Enter your choice:5
   Shop ID: 101, Shop Name: Bakery
   Shop ID: 102, Shop Name: Mobile
   Shop ID: 103, Shop Name: Fashion

   Enter your choice: 2
 Enter the shop ID after which to insert: 102
  Enter new shop ID: 104
   Enter new shop name: Toys
Enter your choice : 4
Enter shop name to search: Toys
Shop found! -> ID : 104, Name: Toys

Enter your choice:3
Enter shop ID to remove: 102

Enter your choice: 5
Shops in the corridor:
 Shop ID: 101 , Shop Name: Bakery
 Shop ID: 104 , Shop Name: Toys
 Shop ID: 103, Shop Name : Fashion
```