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

struct Node
{
   int data;
   struct Node *next;
}*top = NULL;

void push(int);
void pop();
void display();
void search();

void main()
{
   int choice, value;
   while(1){
      printf("\nMENU\n");
      printf("1. Push  2. Pop  3. Display  4. Search
5. Exit\n");
      printf("Enter your choice: ");
      scanf("%d",&choice);
```

```
      switch(choice){
     case 1: printf("Enter the value to be insert:
");
          scanf("%d", &value);
          push(value);
          break;
     case 2: pop(); break;
     case 3: display(); break;
    case 4: search(); break;
    case 5: exit(0); break;
     default: printf("\nWrong selection\n");
      }
   }
}
void push(int value)
{
   struct Node *newNode;
   newNode = (struct Node*)malloc(sizeof(struct
Node));
   newNode->data = value;
   if(top == NULL)
      newNode->next = NULL;
   else
```

```
    newNode->next = top;
  top = newNode;
  printf("\nInsertion is Success\n");
}
void pop()
{
  if(top == NULL)
    printf("\nStack is Empty\n");
  else{
    struct Node *temp = top;
    printf("\nDeleted element: %d", temp-
>data);
    top = temp->next;
    free(temp);
  }
}
void display()
{
  if(top == NULL)
    printf("\nStack is Empty!!!\n");
  else{
    struct Node *temp = top;
    while(temp->next != NULL){
```

```
     printf("%d ",temp->data);
     temp = temp -> next;
      }
      printf("%d NULL",temp->data);
   }
}
void search()
{
    struct Node *ptr;
    int item,i=0,flag;
    ptr = top;
    if(ptr == NULL)
    {
        printf("\nEmpty List\n");
    }
    else
    {
        printf("\nEnter item to be searched:");
        scanf("%d",&item);
        while (ptr!=NULL)
        {
            if(ptr->data == item)
            {
```

```
            printf("item found at location %d
",i+1);
            flag=1;
          }
          else
          {
            flag=0;
          }
          i++;
          ptr = ptr -> next;
        }
        if(flag==0)
        {
          printf("Item not found\n");
        }
    }
}
```

Output

```
MENU
1. Push  2. Pop  3. Display  4. Search  5. Exit
Enter your choice: 1
Enter the value to be insert: 4

Insertion is Success

MENU
1. Push  2. Pop  3. Display  4. Search  5. Exit
Enter your choice: 1
Enter the value to be insert: 5

Insertion is Success

MENU
1. Push  2. Pop  3. Display  4. Search  5. Exit
Enter your choice: 1
Enter the value to be insert: 7

Insertion is Success

MENU
1. Push  2. Pop  3. Display  4. Search  5. Exit
Enter your choice: 3
7 5 4 NULL


MENU
1. Push  2. Pop  3. Display  4. Search  5. Exit
Enter your choice: 2

Deleted element: 7
MENU
1. Push  2. Pop  3. Display  4. Search  5. Exit
Enter your choice: 3
5 4 NULL
MENU
1. Push  2. Pop  3. Display  4. Search  5. Exit
Enter your choice: 4

Enter item to be searched:4
item found at location 2
```