Program for stack using linked list

```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;
 Printf("\n Stack using Linked List \n");
 Printf(" _____ ");
 While(1){
 Printf("\n\n *** MENU *** \n\n");
 Printf(" ~~~~~~~~~~~");
 Printf("\n1. Push\n2. Pop\n3. Display\n4. Search\n5. 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;
```

```c
Case 3: display(); break;

Case 4: search(); break;

Case 5: exit(0); break;

Default: printf("\n Invalid 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 \n", 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",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 which to be searched:");
 Scanf("%d",&item);
```

```
While (ptr!=NULL)

{

If(ptr->data == item)

{

Printf("item found at location %d \n ",i+1);

 Flag=1;

}

I++;

Ptr = ptr -> next;

}

If(flag==0)

{

Printf("Item not found\n");

}

}

}
```

OUTPUT

```
Stack using Linked List
_____


 *** MENU ***

~~~~~~~~~~~
1. Push
2. Pop
3. Display
4. Search
5. Exit
Enter your choice: 1
Enter the value to be insert: 10

Insertion is Success


 *** MENU ***

~~~~~~~~~~~
1. Push
2. Pop
3. Display
4. Search
5. Exit
Enter your choice: 3
10

 *** MENU ***

~~~~~~~~~~~
1. Push
2. Pop
3. Display
4. Search
5. Exit
Enter your choice:
|
```