**/\*Stack using Linked List\*/**

**#include<stdio.h>**

**#include<conio.h>**

**#include<stdlib.h>**

**struct node**

**{**

**int info;**

**struct node \*next;**

**};typedef struct node node;**

**node \*start;**

**void push\_via\_linked\_list();**

**void pop\_via\_linked\_list();**

**void display();**

**node \*create\_node();**

**void display()**

**{**

**node \*p,\*q,\*r;**

**if(start==NULL)**

**{**

**printf("\nNo Such element to Display,Stack underflow\n");**

**}**

**else**

**{**

**p=start;**

**while(p!=NULL)**

**{**

**printf("\n[Info->%d|Address\_of\_next\_node->(%x)]-->>](address of this node->(%x))---->>>>",p->info,p->next,p);**

**p=p->next;**

**}**

**}**

**}**

**void pop\_via\_linked\_list()**

**{**

**node \*p,\*q,\*r;**

**if(start==NULL)**

**{**

**printf("\nStack Underflow\n");**

**}**

**else**

**{**

**p=start;**

**printf("\nThe value extracted from the stack is: %d\n",p->info);**

**start=start->next;**

**}**

**display();**

**}**

**void push\_via\_linked\_list()// basically insertion at the beginning of the linked list**

**{**

**node \*p,\*q,\*r;**

**p=create\_node();**

**if(start==NULL)**

**{**

**start=p;**

**}**

**else**

**{**

**p->next=start;**

**start=p;**

**}**

**display();**

**}**

**node \*create\_node()//creates a node.**

**{**

**node\*p ;**

**p=(node\*)malloc(sizeof(node));**

**printf("\nEnter the info:");**

**scanf("%d",&p->info);**

**p->next=NULL;**

**return p;**

**}**

**void main()**

**{**

**start = NULL;**

**int choice;**

**char ch;**

**system("cls");**

**start:**

**printf("\nPress 1 for PUSH(),\nPress 2 for POP(),\nPress 3 for Display,\nPress 4 for Exit the program");**

**printf("\nEnter choice:");**

**scanf("%d", &choice);**

**switch(choice)**

**{**

**case 1:printf("\nPUSH()-->>");**

**push\_via\_linked\_list();**

**break;**

**case 2:printf("\nPOP()-->>");**

**pop\_via\_linked\_list();**

**break;**

**case 3:printf("\nDisplay()-->>");**

**display();**

**break;**

**case 4:printf("\nExiting the process...");**

**exit(0);**

**break;**

**default:printf("\nEnter the correct choice. :(");**

**}**

**printf("\nIf you want to repeat the process press Y or y");**

**printf("\n-->>");**

**ch=getch();**

**if(ch=='y' || ch=='Y')**

**{**

**goto start;**

**}**

**printf("\n \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*End of the process\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");**

**printf("\n:)");**

**}**

**/\* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*OUTPUT\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**Press 1 for PUSH(),**

**Press 2 for POP(),**

**Press 3 for Display,**

**Press 4 for Exit the program**

**Enter choice:1**

**PUSH()-->>**

**Enter the info:12**

**[Info->12|Address\_of\_next\_node->(0)]-->>](address of this node->(adba13f0))---->>>>**

**If you want to repeat the process press Y or y**

**-->>**

**Press 1 for PUSH(),**

**Press 2 for POP(),**

**Press 3 for Display,**

**Press 4 for Exit the program**

**Enter choice:1**

**PUSH()-->>**

**Enter the info:23**

**[Info->23|Address\_of\_next\_node->(adba13f0)]-->>](address of this node->(adba1410))---->>>>**

**[Info->12|Address\_of\_next\_node->(0)]-->>](address of this node->(adba13f0))---->>>>**

**If you want to repeat the process press Y or y**

**-->>**

**Press 1 for PUSH(),**

**Press 2 for POP(),**

**Press 3 for Display,**

**Press 4 for Exit the program**

**Enter choice:1**

**Enter choice:3**

**Display()-->>**

**[Info->23|Address\_of\_next\_node->(adba13f0)]-->>](address of this node->(adba1410))---->>>>**

**[Info->12|Address\_of\_next\_node->(0)]-->>](address of this node->(adba13f0))---->>>>**

**If you want to repeat the process press Y or y**

**-->>**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*End of the process\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**:)**

**\*/**