***DS LAB- STACKS USING POINTERS***

***Mallika Prasad***

***1BM19CS081***

#include <stdio.h>

#include<conio.h>

#define stack\_size 5

int top= -1;

void push(int item, int s[], int \*top)

{

if(\*top==stack\_size-1)

{

printf("stack overflow\n");

return;

}

\*top=\*top+1;

s[\*top]=item;

}

int pop(int s[], int \*top)

{

int item\_deleted;

if(\*top==-1)

{

printf("stack underflow cannot delete\n");

return 0;

}

item\_deleted=s[\*top];

\*top=\*top-1;

return item\_deleted;

}

void display(int top, int s[])

{

int i;

if(top==-1)

{

printf("stack is empty\n");

return;

}

printf("contents of the stack\n");

for(i=0;i<=top;i++)

{

printf("%d\n",s[i]);

}

}

void main()

{

int item,s[11];

int item\_deleted;

int choice;

clrscr;

for(;;)

{

printf("\n1-push\n2-pop\n3-display\n4-exit\n");

printf("enter the choice:");

scanf("%d",&choice);

switch(choice)

{

case 1: printf("enter item to be inserted\n");

scanf("%d",&item);

push(item,s,&top);

break;

case 2:item\_deleted=pop(s,&top);

if(item\_deleted!=0)

printf("\n item deleted is %d\n", item\_deleted);

break;

case 3:display(top,s);

break;

default:exit(0);

}

}

getch();

}