**/\* Program No.:**

**Aim: WAP to show the implementation of stack and its operations, ie Push,**

**Pop, and Display using arrays.**

**\*/**

#include<stdio.h>

#include<conio.h>

#define MAX 5

int stack[MAX], top=0;

void push(int value)

{

if(top == MAX)

printf("\t\tStack is full. No value can be pushed in the stack.\n");

else

stack[top++]=value;

}

int pop()

{

int return\_value=0;

if(top == 0)

printf("\n\t\tStack is empty. No value can be popped from the stack.\n");

else

return\_value=stack[--top];

return(return\_value);

}

void display()

{

int i;

printf("{");

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

printf("%d,",stack[i]);

printf("}");

}

void main()

{

int choice, value;

char option;

do

{

clrscr();

printf("\n\n\t\tStack Implementation");

printf("\n\t\t--------------------");

printf("\n\n\t1. Push into Stack");

printf("\n\t2. Pop from Stack");

printf("\n\t3. Display Stack");

printf("\n\t4. Exit");

printf("\n\n\t\tEnter your choice (1-4): ");

scanf("%d",&choice);

switch(choice)

{

case 1:

do

{

printf("\n\t\tEnter the value to be pushed: ");

scanf("%d",&value);

push(value);

printf("\t\tWant to enter more (y/n): ");

scanf("%s",&option);

}while(option=='y'||option=='Y');

break;

case 2:

do

{

printf("\n\t\tPress any key to pop a value.");

getch();

value=pop();

if(value!=0)

printf("\n\t\tValue popped is: %d\n", value);

printf("\t\tWant to pop more (y/n): ");

scanf("%s",&option);

}while(option=='y'||option=='Y');

break;

case 3:

printf("\n\t\tStack formed is:\n\n\t\t");

display();

printf("\n\n\t\t\tPress any key to continue.");

getch();

break;

case 4:

printf("\n\n\n\t\t\tPress any key to exit the program.");

break;

default:

printf("\n\n\n\t\t\tInvalid choice. Please Try again");

printf("\n\t\t\tPress any key to continue.");

getch();

break;

}

}while(choice!=4);

getch();

}

**/\***

**Name - Rohit Aggarwal**

**Roll No. - 7CS-097**

**\*/**