***DATA STUCTURES AND ALGORITHM***

***LAB-6***

Object: Code a menu based program of Stack of Linear List which have the following options:

1. Push
2. Pop
3. Display
4. Exit

**Code:**

#include<iostream>

#include<conio.h>

using namespace std;

#define MAX\_SIZE 20

void main()

{

int item, choice, i, arr\_stack[MAX\_SIZE], top = 0, exit = 1;

do

{

cout<<"STACK Program";

cout<<"\n1.Push \n2.Pop \n3.Display \n4.exit";

cout<<"\nEnter Your Choice: ";

cin>>choice;

switch(choice)

{

case 1:

if(top==MAX\_SIZE)

cout<<"\nStack is Full!!"<<endl<<endl;

else

{

cout<<"\nEnter The Value to be Pushed: ";

cin>>item;

cout<<"\nPosition: "<<top<<", Pushed Value: "<<item<<endl<<endl;

arr\_stack[top++]=item;

}

break;

case 2:

if(top==0)

cout<<"\nStack is Empty!!"<<endl<<endl;

else

{

--top;

cout<<"\nPosition: "<<top<<", Popped Value: "<<arr\_stack[top]<<endl<<endl;

}

break;

case 3:

cout<<"\nStack Size: "<<top;

for(i=(top-1);i>=0;i--)

cout<<"\nPosition: "<<i<<", Value: "<<arr\_stack[i]<<endl<<endl

;

break;

default:

exit=0;

break;

}

}

while (exit);

getch();

}

**Output:**





