**YASH GUPTA**

**1BM21CS251**

**STACK IMPLEMENTATION USING ARRAYS**

**INPUT**

#include<stdio.h>

#include<stdlib.h>

#define size 3

int stack[size];

int top=-1;

void push()

{

if(top>=(size-1)){

printf("stack overflow\n");

}

else{

printf("enter the value to push\n");

int n;

scanf("%d",&n);

top++;

stack[top]=n;

}

};

int pop()

{

if(top==-1){

printf("stack underflow\n");

return;

}

else{

int n;

n=stack[top];

top--;

return n;

}

};

void display(){

if(top==-1){

printf("empty stack\n");

return;

}

else{

for(int i=(top);i>-1;i--){

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

}

}

};

int main(){

int choice;

int del;

while(1){

printf("1.PUSH\n2.POP\n3.DISPLAY\n4.EXIT\n");

scanf("%d",&choice);

switch(choice){

case 1: push();

break;

case 2:

del=pop();

printf("popped element: %d\n",del);

break;

case 3: display();

break;

case 4: exit(0);

default:printf("enter a valid choice\n");

}

}

return 0;

}

**OUTPUT**

