***DS LAB-WEEK 2-STACK USING ARRAYS***

***PROGRAM AND OUTPUT at the end***

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#include<stdio.h>

void push();

void pop();

void display();

int stack[100],choice,n,top,x,i;

int main()

{

top=-1;

printf("\nEnter the size of stack(max=100):");

scanf("%d",&n);

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

do

{

printf("\n Enter operation number to be performed:");

scanf("%d",&choice);

switch(choice)

{

case 1:

{

push();

break;

}

case 2:

{

pop();

break;

}

case 3:

{

display();

break;

}

case 4:

{

printf("\nexit");

break;

}

default:

{

printf ("\ninvalid Choice");

}

}

}

while(choice!=4);

return 0;

}

void push()

{

if(top>=n-1)

{

printf("\nStack Overflow");

}

else

{

printf("Enter a value to be pushed:");

scanf("%d",&x);

top++;

stack[top]=x;

}

}

void pop()

{

if(top<=-1)

{

printf("\nStack underflow/empty");

}

else

{

printf("\n\t The deleted element is %d",stack[top]);

top--;

}

}

void display()

{

if(top>=0)

{

printf("\n The elements in the stack: \n");

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

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

}

else

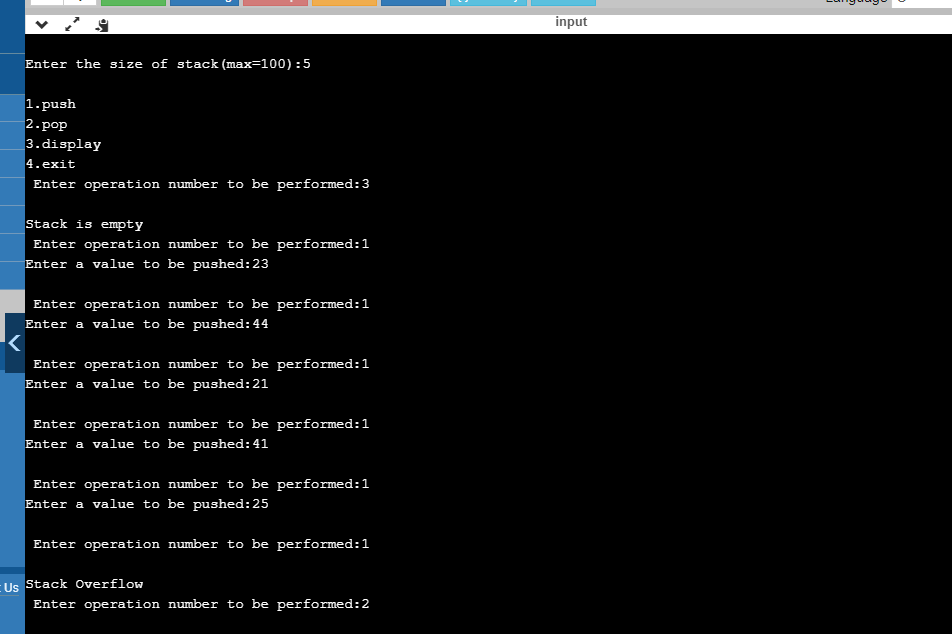
{

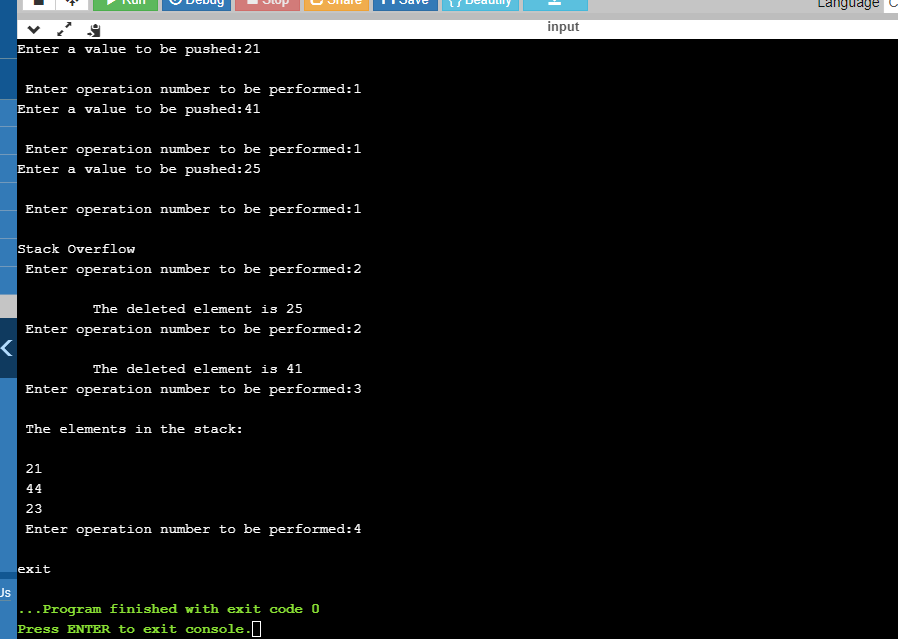
printf("\nStack is empty");

}

}

***OUTPUT***

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