LAB PROGRAM – 1

#include<stdio.h>

#include<stdlib.h>

#define N 3

int top=-1, stack[N];

void push();

void pop();

void display();

void push()

{

int a;

if(top==N-1)

{

printf("\n Stack overflow");

}

else

{

printf("\nEnter the element to be added : ");

scanf("%d",&a);

top=top+1;

stack[top]=a;

}

}

void pop()

{

if(top==-1)

{

printf("\nStack undeflow");

}

else

{

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

top = top-1;

}

}

void display()

{

int i;

if(top==-1)

{

printf("The stack is empty");

}

else

{

printf("\nThe stack is - \n");

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

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

}

}

void main()

{

int choice;

for(;;)

{

printf("\n\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_");

printf("\n1)Push \n2)Pop \n3)Display \n4)Exit");

printf("\nEnter your choice (1-4) : ");

scanf("%d", &choice);

switch(choice)

{

case 1: push();

break;

case 2: pop();

break;

case 3: display();

break;

case 4: exit(0);

}

}

}

OUTPPUT :

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 1

Enter the element to be added : 20

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 1

Enter the element to be added : 22

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 1

Enter the element to be added : 24

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 3

The stack is -

24

22

20

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 1

Stack overflow

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 2

The deleted element is : 24

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 2

The deleted element is : 22

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 2

The deleted element is : 20

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 2

Stack undeflow

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 3

The stack is empty

\_\_\_\_\_\_\_\_\_\_\_STACK OPERATIONS\_\_\_\_\_\_\_\_

1)Push

2)Pop

3)Display

4)Exit

Enter your choice (1-4) : 4

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(program exited with code: 0)

Press return to continue