main.c   ▤

```c
1    #include<stdio.h>
2    int stack[10],operation,n,top,x,i;
3    void push(void);
4    void pop(void);
5    void display(void);
6    int main()
7    {
8        top=-1;
9        printf("Enter the size of stack: \n");
10       scanf("%d",&n);
11       printf("stack operations: \n");
12       printf("1.PUSH\n");
13       printf("2.POP\n");
14       printf("3.DISPLAY\n");
15       printf("4.TERMINATE\n");
16       do
17       {
18           printf("Enter desired operation:\n");
19           scanf("%d",&operation);
20           switch(operation)
21           {
22               case 1:
23               {
24                   push();
25                   break;
26               }
27               case 2:
28               {
29                   pop();
30                   break;
31               }
32               case 3:
33               {
```

main.c

```c
32                  case 3:
33                  {
34                      display();
35                      break;
36                  }
37                  case 4:
38                  {
39                      printf("termination ");
40                      break;
41                  }
42              }
43
44
45          }
46          while(operation!=4);
47          return 0;
48  }
49  void push()
50  {
51      if(top>=n-1)
52      {
53          printf("stack is over flow\n");
54
55      }
56      else
57      {
58          printf(" Enter value to be pushed:\n");
59          scanf("%d",&x);
60          top++;
61          stack[top]=x;
62      }
63  }
64  void pop()
```

main.c

```c
64    void pop()
65    {
66        if(top<=-1)
67        {
68            printf( "Stack is under flow");
69        }
70        else
71        {
72            printf("The popped elements is %d",stack[top]);
73            top--;
74        }
75    }
76    void display()
77    {
78        if(top>=0)
79        {
80            printf("\n The elements in stack \n");
81            for(i=top; i>=0; i--)
82                printf("%d\n",stack[i]);
83            printf("Press Next operation\n");
84        }
85        else
86        {
87            printf("The stack is empty\n");
88        }
89
90    }
```

```
> clang-7 -pthread -lm -o main m
ain.c
> ./main
Enter the size of stack:
10
stack operations:
1.PUSH
2.POP
3.DISPLAY
4.TERMINATE
Enter desired operation:
1
  Enter value to be pushed:
5
Enter desired operation:
1
  Enter value to be pushed:
4
Enter desired operation:
3


  The elements in stack
4
5
Press Next operation
Enter desired operation:
2
The popped elements is 4Enter de
sired operation:
4
>
```