

```
int pop(int a[],int TOP)
{ int ele;
  if(TOP==1)
    printf("\nStack Underflow");
  else
  { ele=a[TOP];
    TOP--;
    return ele;
  }
}

void display(int a[])
{ printf("The elements are:\n");
  for(int i=0;i<=TOP;i++)
    printf("%d\n",a[i]);
}

int main()
{ int ch,ele,a[5],n=5;
  do
  { printf("\n1. PUSH\n2. POP\n3. DISPLAY\n4. EXIT\nEnter your choice:\n");
    scanf("%d",&ch);
    switch(ch)
    { case 1 :printf("Enter the element to be pushed: ");
              scanf("%d",&ele);
              push(a,ele,n);
              break;
    }
  } while(ch!=4);
}
```

Enter your choice:
1
Enter the element to be pushed: 4
1. PUSH
2. POP
3. DISPLAY
4. EXIT
Enter your choice:
1
Enter the element to be pushed: 5
1. PUSH
2. POP
3. DISPLAY
4. EXIT
Enter your choice:
1
Enter the element to be pushed: 6
Stack Overflow
1. PUSH
2. POP
3. DISPLAY
4. EXIT
Enter your choice:
2
Element : 5 is popped off the stack.
1. PUSH
2. POP
3. DISPLAY
4. EXIT
Enter your choice:

```
main.c
12 int pop(int a[],int TOP)
13 { int ele;
14   if(TOP==1)
15     printf("\nStack Underflow");
16   else
17   { ele=a[TOP];
18     TOP--;
19     return ele;
20   }
21 }
22
23 void display(int a[])
24 { printf("The elements are:\n");
25   for(int i=0;i<=TOP;i++)
26     printf("%d\n",a[i]);
27 }
28
29 int main()
30 { int ch,ele,a[5],n=5;
31   do
32   { printf("\n1. PUSH\n2. POP\n3. DISPLAY\n4. EXIT\nEnter your choice:\n");
33     scanf("%d",&ch);
34     switch(ch)
35     { case 1 :printf("Enter the element to be pushed: ");
36               scanf("%d",&ele);
37               push(a,ele,n);
38               break;
39     }
40   } while(ch!=4);
41 }
```

Element : 3 is popped off the stack.
1. PUSH
2. POP
3. DISPLAY
4. EXIT
Enter your choice:
2
Element : 2 is popped off the stack.
1. PUSH
2. POP
3. DISPLAY
4. EXIT
Enter your choice:
2
Element : 1 is popped off the stack.
1. PUSH
2. POP
3. DISPLAY
4. EXIT
Enter your choice:
2
Stack Underflow
Element : 1 is popped off the stack.
1. PUSH
2. POP
3. DISPLAY
4. EXIT
Enter your choice:
4