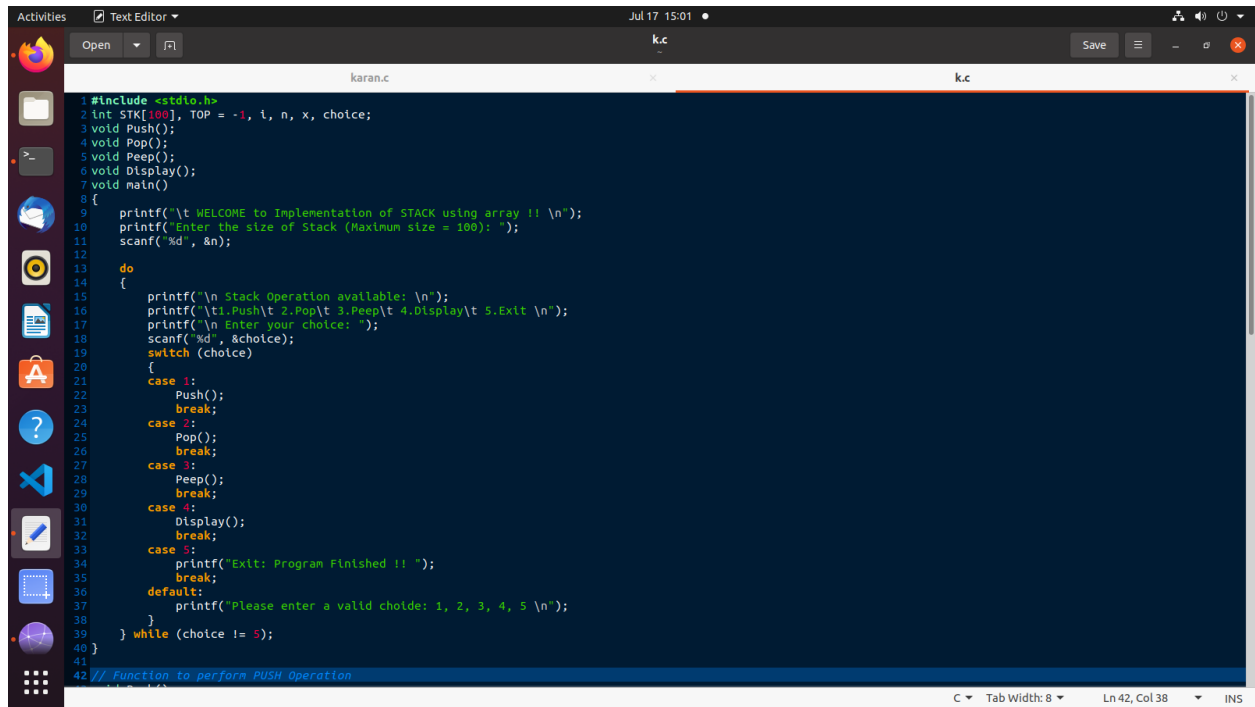


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Roll number - 52  
SY IT



The screenshot shows a Linux desktop environment with a terminal window open. The terminal window has a title bar with 'Activities', 'Text Editor', and 'Jul 17 15:01'. The main content of the terminal is a C program named 'karan.c'. The program implements a stack using an array. It includes a header file <stdio.h>, defines an array STK of size 100, and declares functions for Push, Pop, Peep, and Display. The main function starts with a welcome message, prompts the user to enter the size of the stack (maximum 100), and then enters a loop where it displays available operations (Push, Pop, Peep, Display, Exit) and processes user choices using a switch statement. The program ends when the user enters 5 (Exit).

```
1 #include <stdio.h>
2 int STK[100], TOP = -1, n, x, choice;
3 void Push();
4 void Pop();
5 void Peep();
6 void Display();
7 void main()
8 {
9     printf("\t WELCOME to Implementation of STACK using array !! \n");
10    printf("Enter the size of Stack (Maximum size = 100): ");
11    scanf("%d", &n);
12
13    do
14    {
15        printf("\n Stack Operation available: \n");
16        printf("\t 1.Push\t 2.Pop\t 3.Peep\t 4.Display\t 5.Exit \n");
17        printf("\n Enter your choice: ");
18        scanf("%d", &choice);
19        switch (choice)
20        {
21            case 1:
22                Push();
23                break;
24            case 2:
25                Pop();
26                break;
27            case 3:
28                Peep();
29                break;
30            case 4:
31                Display();
32                break;
33            case 5:
34                printf("Exit: Program Finished !! ");
35                break;
36            default:
37                printf("Please enter a valid choide: 1, 2, 3, 4, 5 \n");
38        }
39    } while (choice != 5);
40 }
41
42 // Function to perform PUSH Operation
```

Activities Text Editor Jul 17 15:01

Open k.c Save

karan.c k.c

```
38 }
39 } while (choice != 5);
40 }
41
42 // Function to perform PUSH Operation
43 void Push()
44 {
45     if (TOP >= n - 1)
46     {
47         printf(" Stack Overflow \n");
48     }
49     else
50     {
51         printf(" Enter the element to be pushed: ");
52         scanf("%d", &x);
53         TOP++;
54         STK[TOP] = x;
55     }
56 }
57
58 // Function to perform POP Operation
59 void Pop()
60 {
61     if (TOP < 0)
62     {
63         printf(" Stack Underflow \n");
64     }
65     else
66     {
67         printf(" The popped element is: %d \n", STK[TOP]);
68         TOP--;
69     }
70 }
71
72 // Function to perform PEEP Opeartion
73 void Peep()
74 {
75     printf(" Enter the position of the element from the top which you want to peep: ");
76     scanf("%d", &i);
77     if (TOP - i + 1 < 0)
78     {
79         printf(" Stack Underflow on Peep \n");
80     }
81 }
```

C Tab Width: 8 Ln 42, Col 38 INS

Activities Text Editor Jul 17 15:01

Open k.c Save

karan.c k.c

```
61 if (TOP < 0)
62 {
63     printf(" Stack Underflow \n");
64 }
65 else
66 {
67     printf(" The popped element is: %d \n", STK[TOP]);
68     TOP--;
69 }
70 }
71
72 // Function to perform PEEP Opeartion
73 void Peep()
74 {
75     printf(" Enter the position of the element from the top which you want to peep: ");
76     scanf("%d", &i);
77     if (TOP - i + 1 < 0)
78     {
79         printf(" Stack Underflow on Peep \n");
80     }
81     else
82     {
83         printf(" The %d element from the top is: %d \n", i, STK[TOP - i + 1]);
84     }
85 }
86
87 // Function to DISPLAY the Stack
88 void Display()
89 {
90     if (TOP < 0)
91     {
92         printf(" Stack is empty \n");
93     }
94     else
95     {
96         printf(" The element in the stack are:");
97         for (i = TOP; i > -1; i--)
98         {
99             printf("\n %d \n", STK[i]);
100         }
101     }
102 }
103 }
```

C Tab Width: 8 Ln 42, Col 38 INS

```
Activities Terminal Jul 17 15:01
dl0418@ltadmin: ~
dl0418@ltadmin: ~ dl0418@ltadmin: ~ dl0418@ltadmin: ~
dl0418@ltadmin:~$ gcc k.c
k.c:2:9: fatal error: conio.h: No such file or directory
 2 | #include<conio.h>
  |
compilation terminated.
dl0418@ltadmin:~$ gcc k.c
dl0418@ltadmin:~$ ./a.out
WELCOME to Implementation of STACK using array !!
Enter the size of Stack (Maximum size = 100):
5
Stack Operation available:
1.Push 2.Pop 3.Peep 4.Display 5.Exit
Enter your choice: 1
Enter the element to be pushed: 1
Stack Operation available:
1.Push 2.Pop 3.Peep 4.Display 5.Exit
Enter your choice: 2
The popped element is: 1
Stack Operation available:
1.Push 2.Pop 3.Peep 4.Display 5.Exit
Enter your choice: 
```