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SYIT-70

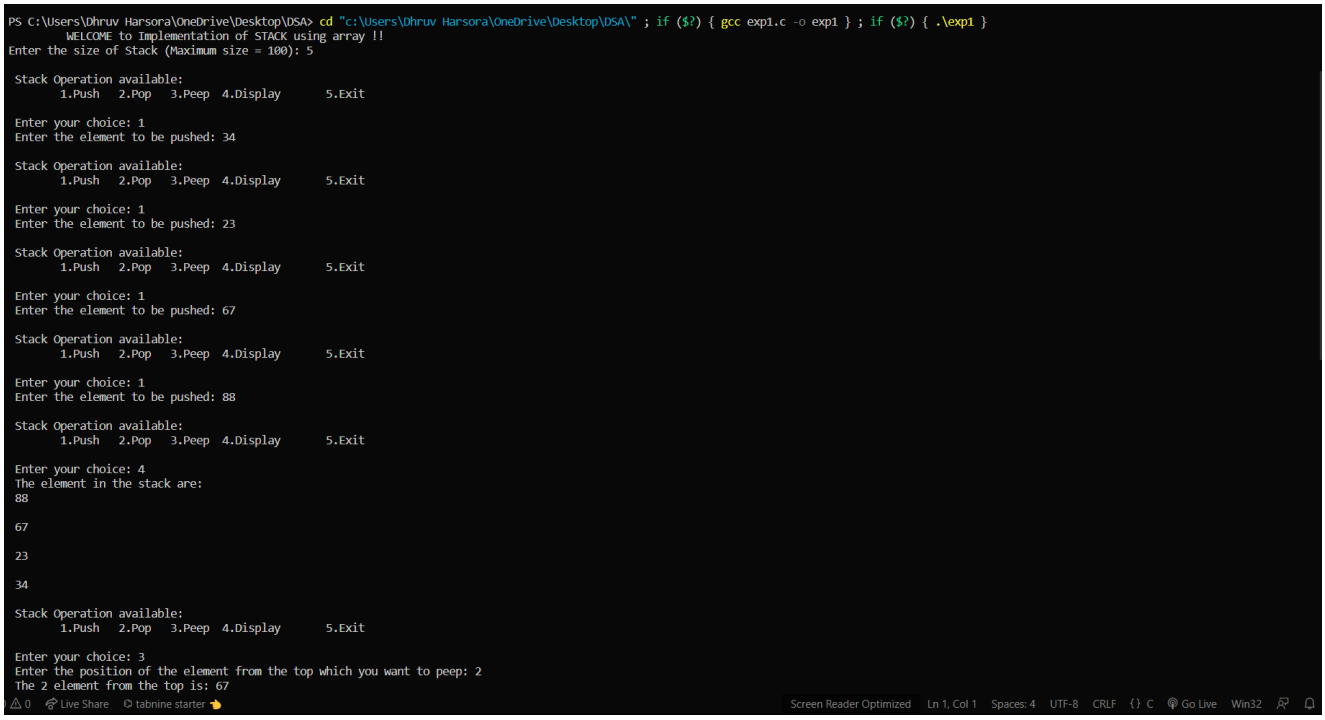
```
#include <stdio.h>
int STK[100], TOP = -1, i, n, x, choice;
void Push();
void Pop();
void Peep();
void change();
void Display();
void main()
{
printf("\t WELCOME to Implementation of STACK using array !! \n");
printf("Enter the size of Stack (Maximum size = 100): ");
scanf("%d", &n);
do
{
printf("\n Stack Operation available: \n");
printf("\t1.Push\t 2.Pop\t 3.Peep\t 4.Display\t 5.Exit \n");
printf("\n Enter your choice: ");
scanf("%d", &choice);
switch (choice)
{
case 1:
Push();
break;
case 2:
Pop();
break;
case 3:
Peep();
break;
case 4:
Display();
break;
case 5:
printf("Exit: Program Finished !! ");
break;
default:
printf("Please enter a valid choice: 1, 2, 3, 4, 5 \n");
}
} while (choice != 5);
}
// Function to perform PUSH Operation
```

```
void Push()
{
if (TOP >= n - 1)
{
printf(" Stack Overflow \n");
}
else
{
printf(" Enter the element to be pushed: ");
scanf("%d", &x);
TOP++;

STK[TOP] = x;
}
}
// Function to perform POP Operation
void Pop()
{
if (TOP < 0)
{
printf(" Stack Underflow \n");
}
else
{
printf(" The popped element is: %d \n", STK[TOP]);
TOP--;
}
}
// Function to perform PEEP Operation
void Peep()
{
printf(" Enter the position of the element from the top which you want to peep: ");
scanf("%d", &i);
if (TOP - i + 1 < 0)
{
printf(" Stack Underflow on Peep \n");
}
else
{
printf(" The %d element from the top is: %d \n", i, STK[TOP - i + 1]);
}
}
// Function to DISPLAY the Stack
void Display()
```

```
{
if (TOP < 0)
{
printf(" Stack is empty \n");
}
else
{
printf(" The element in the stack are:");
for (i = TOP; i > -1; i--)
{
printf("\n %d \n", STK[i]);
}
}
}
```

Output :-



```
Stack Operation available:
       1.Push   2.Pop   3.Peep  4.Display       5.Exit

Enter your choice: 2
The popped element is: 88

Stack Operation available:
       1.Push   2.Pop   3.Peep  4.Display       5.Exit

Enter your choice: 2
The popped element is: 67

Stack Operation available:
       1.Push   2.Pop   3.Peep  4.Display       5.Exit

Enter your choice: 4
The element in the stack are:
23

34

Stack Operation available:
       1.Push   2.Pop   3.Peep  4.Display       5.Exit

Enter your choice: 5
Exit: Program Finished !!
PS C:\Users\Dhruv Harsora\OneDrive\Desktop\DSA>
```