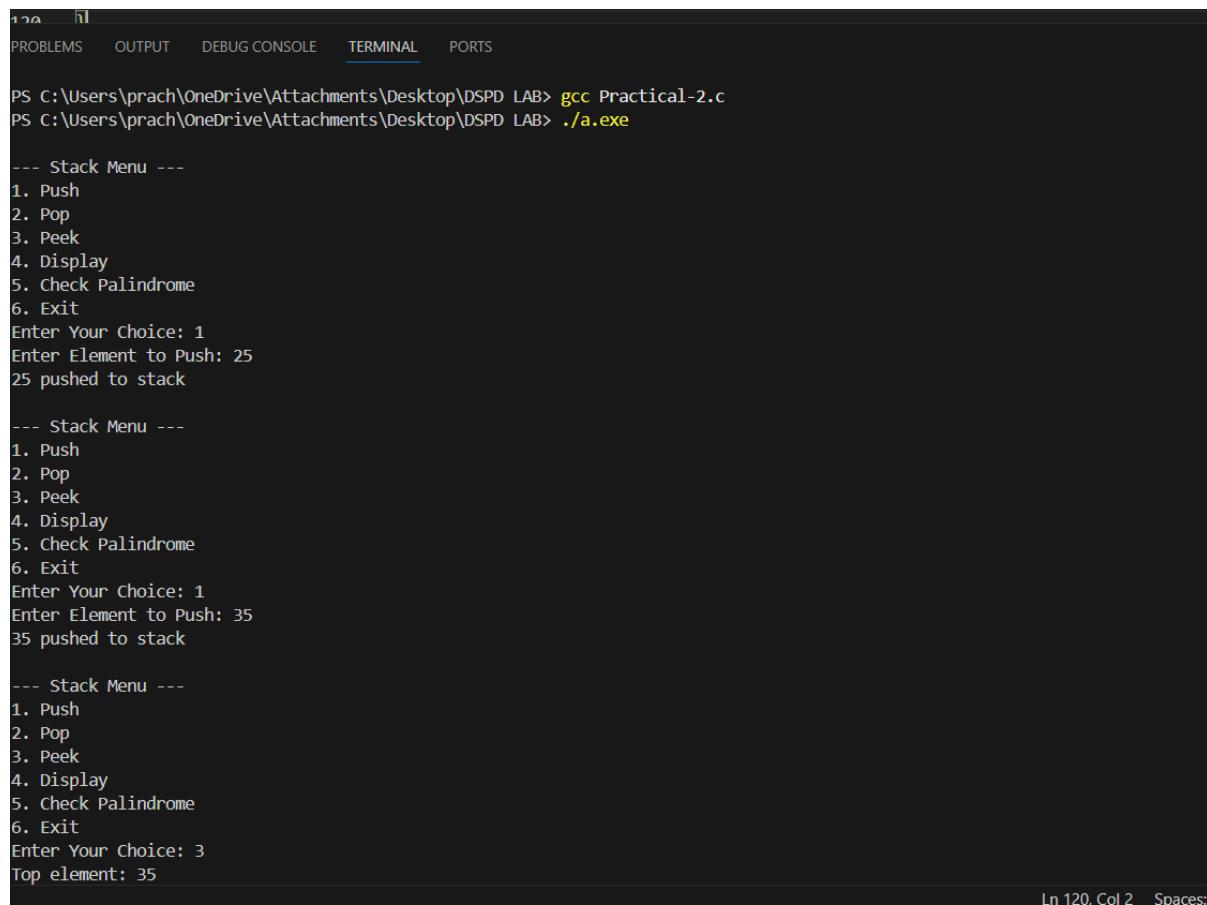


DATA STRUCTURE AND PROGRAM DESIGN LAB – 02

2. Design, Develop and Implement a menu driven Program in C for the following operations on STACK of Integers (Array Implementation of Stack with maximum size MAX)

- a. Push an Element on to Stack
- b. Pop an Element from Stack
- c. Demonstrate how Stack can be used to check Palindrome
- d. Demonstrate Overflow and Underflow situations on Stack
- e. Display the status of Stack
- f. Exit

Support the program with appropriate functions for each of the above operations.



The screenshot shows a terminal window with the following content:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\prach\OneDrive\Attachments\Desktop\DSPD LAB> gcc Practical-2.c
PS C:\Users\prach\OneDrive\Attachments\Desktop\DSPD LAB> ./a.exe

--- Stack Menu ---
1. Push
2. Pop
3. Peek
4. Display
5. Check Palindrome
6. Exit
Enter Your Choice: 1
Enter Element to Push: 25
25 pushed to stack

--- Stack Menu ---
1. Push
2. Pop
3. Peek
4. Display
5. Check Palindrome
6. Exit
Enter Your Choice: 1
Enter Element to Push: 35
35 pushed to stack

--- Stack Menu ---
1. Push
2. Pop
3. Peek
4. Display
5. Check Palindrome
6. Exit
Enter Your Choice: 3
Top element: 35
```

In 120, Col 2 Spaces:

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Enter Your Choice: 3

Top element: 35

--- Stack Menu ---

1. Push
2. Pop
3. Peek
4. Display
5. Check Palindrome
6. Exit

Enter Your Choice: 4

Stack elements: 35 25

--- Stack Menu ---

1. Push
2. Pop
3. Peek
4. Display
5. Check Palindrome
6. Exit

Enter Your Choice: 2

Popped element: 35

--- Stack Menu ---

1. Push
2. Pop
3. Peek
4. Display
5. Check Palindrome
6. Exit

Enter Your Choice: 5

Enter String To Check Palindrome: racecar

'racecar' is a Palindrome.

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

6. Exit
Enter Your Choice: 2
Popped element: 35

--- Stack Menu ---
1. Push
2. Pop
3. Peek
4. Display
5. Check Palindrome
6. Exit
Enter Your Choice: 5
Enter String To Check Palindrome: racecar
'racecar' is a Palindrome.

--- Stack Menu ---
1. Push
2. Pop
3. Peek
4. Display
5. Check Palindrome
6. Exit
Enter Your Choice: 6
Exiting...
PS C:\Users\prach\OneDrive\Attachments\Desktop\DSPD LAB> []