

```
gokul@gokul-ThinkPad-T460s: /mnt/EA2E89782E893F17/AS1ET/53/DS/EXP_6 STACK$ gcc stack.c
gokul@gokul-ThinkPad-T460s: /mnt/EA2E89782E893F17/AS1ET/53/DS/EXP_6 STACK$ ./a.out
Enter the maximum size of the stack (up to 100): 20
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): 5
Stack is empty.
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): 2
Enter the item to push: 3
Pushed 3 onto the stack.
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): 2
Enter the item to push: 4
Pushed 4 onto the stack.
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): 5
Stack contents:
4
3
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): 4
Top item is 4.
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): 3
Popped 4 from the stack.
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): █
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): 5
Stack contents:
3
```

```
Stack Menu:
1. Initialize Stack
2. Push
3. Pop
4. Peek
5. Display Stack
6. Clear Console
7. Exit
Enter your choice (1-7): 7
Exiting the program.
gokul@gokul-ThinkPad-T460s: /mnt/EA2E89782E893F17/AS1ET/53/DS/EXP_6 STACK$ █
```