**IMPLEMENTATION OF STACK OPERATIONS USING MENU DRIVEN PROGRAM**

**QUESTION:**

Create a menu driven program in python to implement the following operations using stack.

1. Push Operation
2. Pop Operation
3. Peek Operation
4. Display stack contents
5. Exit program

**CODE:**

def push(stack, val):

stack.append(val)

def is\_empty(stack):

return stack == []

def pop(stack):

if is\_empty(stack):

return "Underflow"

return stack.pop()

def peek(stack):

if is\_empty(stack):

return "Underflow"

return stack[len(stack) - 1]

def display(stack):

if is\_empty(stack):

return "Stack Empty"

for i in range(len(stack) - 1, -1, -1):

print(stack[i])

print()

stack = []

while True:

print("1. Push")

print("2. Pop")

print("3. Peek")

print("4. Display")

print("5. Exit")

choice = int(input("Enter your choice: "))

if choice == 1:

val = int(input("Enter value to push: "))

push(stack, val)

elif choice == 2:

print(pop(stack))

elif choice == 3:

print(peek(stack))

elif choice == 4:

display(stack)

elif choice == 5:

break

else:

print("Invalid choice")

print()

**OUTPUT:**

1. Push

2. Pop

3. Peek

4. Display

5. Exit

Enter your choice: 1

Enter value to push: 1

1. Push

2. Pop

3. Peek

4. Display

5. Exit

Enter your choice: 1

Enter value to push: 2

1. Push

2. Pop

3. Peek

4. Display

5. Exit

Enter your choice: 1

Enter value to push: 3

1. Push

2. Pop

3. Peek

4. Display

5. Exit

Enter your choice: 2

3

1. Push

2. Pop

3. Peek

4. Display

5. Exit

Enter your choice: 3

2

1. Push

2. Pop

3. Peek

4. Display

5. Exit

Enter your choice: 4

2

1

1. Push

2. Pop

3. Peek

4. Display

5. Exit

Enter your choice: 5