**Code: -**

class Stack:

    def \_\_init\_\_(self, cap):

        self.cap = cap

        self.top = -1

        self.a = [0] \* cap  # Initialize list with capacity

    def push(self, x):

        if self.top >= self.cap - 1:

            print("Stack Overflow")

            return False

        self.top += 1

        self.a[self.top] = x

        return True

    def pop(self):

        if self.top < 0:

            print("Stack Underflow")

            return 0

        popped = self.a[self.top]

        self.top -= 1

        return popped

    def peek(self):

        if self.top < 0:

            print("Stack is Empty")

            return 0

        return self.a[self.top]

    def is\_empty(self):

        return self.top < 0

# Test the stack

s = Stack(5)

s.push(10)

s.push(20)

s.push(30)

print(s.pop(), "popped from stack")

print("Top element is:", s.peek())

print("Elements present in stack:", end=" ")

while not s.is\_empty():

    print(s.peek(), end=" ")

    s.pop()

**Output: -**

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