from collections import deque

class MyStack:

def \_\_init\_\_(self):

"""

Initialize your data structure here.

"""

self.queue = deque()

def push(self, x: int) -> None:

"""

Push element x onto stack.

"""

tmp = deque([x])

tmp.extend(self.queue)

self.queue = tmp

def pop(self) -> int:

"""

Removes the element on top of the stack and returns that element.

"""

return self.queue.popleft()

def top(self) -> int:

"""

Get the top element.

"""

return self.queue[0]

def empty(self) -> bool:

"""

Returns whether the stack is empty.

"""

return len(self.queue) == 0