**Interview Questions: Stacks and Queues (ungraded)**

**总分：{TOTALPOINTS}**

**1.第 1 个问题**

**Queue with two stacks. Implement a queue with two stacks so that each queue operations takes a constant amortized number of stack operations.**

***Note: these interview questions are ungraded and purely for your own enrichment. To get a hint, submit a solution.***

1

**Correct**

*Hint*: If you push elements onto a stack and then pop them all, they appear in reverse order. If you repeat this process, they're now back in order.

**1/1 分**

**2.第 2 个问题**

**Stack with max. Create a data structure that efficiently supports the stack operations (push and pop) and also a return-the-maximum operation. Assume the elements are real numbers so that you can compare them.**

1

**Correct**

*Hint:* Use two stacks, one to store all of the items and a second stack to store the maximums.

**1/1 分**

**3.第 3 个问题**

**Java generics. Explain why Java prohibits generic array creation.**

1

**Correct**

*Hint:* to start, you need to understand that Java arrays are *covariant* but Java generics are not: that is, String[] is a subtype of Object[], but Stack<String> is not a subtype of Stack<Object>.