Introduction

Thank you for taking the time to interview with Flexistore! As you probably know, a conversational interview isn't a great way to assess a developer's ability and coding style. For this reason, Flexistore's interview process includes a "code audition" where you get the chance to show off your competency.

This isn't an exam where you'll get a grading, or a "pass" or "fail" – it's just a way for the Flexistore team to get a feel for your level of coding proficiency.

You work on the code audition at your own time on your own computer, but Flexistore developers will be available on the Flexistore Slack channel and by email if you have any questions.

You're encouraged to make use of the following resources during the audition:

- **Flexistore's slack**

   You should have received an invite. Please ask questions if any of the tasks are unclear.

   The slack channel is a great way to get to know you too.

- **All of the internet**

   But please do not let ChapGPT write the code for you.

- **Your local editor and test environment**

   Run those unit tests!

- **Any available Python modules**

   You can assume that import <module> will always succeed if the module exists in the [PyPI index](https://pypi.org).

Answer the questions on your own computer. Each question has a suggested time – please try to stick with it as well as you can. If you cannot complete a question in time, rather proceed to the next one.

When you're done with the questions, please email the completed solutions back to your correspondent at Flexistore.

Refer to this document for the full task instructions.

Question 1: Algorithms (30 min)

Write a function, `foo(L),` that returns the smallest positive integer (1 or larger) that does *not*

occur in the list `L`.

Question 2: Coding (60 min)

In this task, you must write a program that continuously writes the current Rand (ZAR) and Norwegian Krone (NOK) exchange rate to the console every 10 seconds, in the following format (In ZAR per 1 NOK):

2023-04-22 19:30:00 ZAR/NOK: R 1.73
2023-04-22 19:30:10 ZAR/NOK: R 1.74

The program must obtain the live exchange data through the OpenExchangeRates API (see https://docs.openexchangerates.org/reference/api-introduction).

Note: you will need to create a free account and get the necessary API key (all in the docs).

Question 3: Bug fixing (30 min)

The following code should function as stated in the comments, but unfortunately contains some bugs. Fix the bugs, and **create unit tests** that demonstrate that the code now functions correctly.

https://drive.google.com/file/d/1AhmqjKpwg2_ioHpH9rVNC5uXg44FTwcb/view?usp=sharing

Tip: look at the docs in the code and use that to first create unit tests that shows up the bugs.