Problem 7: Vacation Planning - A CLASS-BASED PROBLEM

Overview
The good news is that you have landed your first job. The bad news is that you only get one week (seven consecutive days) of vacation per year. After this winter, to preserve your sanity, you have decided to use the Faux Farmer’s Almanac to choose the dates for next year’s vacation. You will choose to take your vacation over the seven-day period with the largest number of degree days.

A [heating] degree day is a measure of how much heat is needed to keep an area at a comfortable temperature. For purposes of this problem, the number of degree days on a given day is the number of degrees that the average of the high and low temperature for the day [round down on the average] fall below the standard of 65 degrees. If the average is above 65, there are no degree days for that day.

Note: if you are lucky enough to live in a place (think tropical island) where there are no degree days, then you won’t need a vacation!

Problem
Given an almanac for next year, you are to determine the vacation time that will cause you to miss the coldest week of the year, defined in terms of degree days. In the event of a tie, you are to choose the earlier/earliest date for your vacation.

Input
The input consist of a single word of text, specifying the city name\(^1\). The city name will be at least four characters long; each character will be a letter and only the first letter will be upper case.

Output
The output is one of two sentences as shown in the examples, indicating either when your vacation should start or that you need no vacation.

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\(^1\) Note that city names may refer to a state (or country) that is not what you expect; do not rely upon the data to match your intuition at all. Some of the cities are even located in the southern hemisphere! If you wish to see the actual data, use the debugging methods to check the data on cities you test.
About the class

You must use the Almanac class in your solution to this problem. Otherwise, you will not be able to determine anything about the temperatures. All of the necessary methods are provided for you (although you may not need to use everything that is provided). Be sure to pay close attention to documentation of the class, including the pre- and post-conditions for all of the methods. Also, be aware that invoking some of the debugging aids in a final solution will automatically cause the solution to be judged as incorrect.

Example 1 (Don't miss the final period!)

Input

Olean

Output

Start your vacation on day 326.

Example 2

Input

Hilo

Output

You don't need a vacation this year.

Example 3

Input

Jamestown

Output

Start your vacation on day 270.