NLP Homework 2

Due Sunday, March 31, 11:59 PM

In this problem, you need to develop the context-free grammar that can parse all the following sentences. You will use Python environment to test your grammar to make sure that it does the job and save your Python screenshot. (45%)

[Hint: the lab instructions on POS tagging (lab 5) and Context-Free Grammar (lab 6) may be useful]
      (a) "Today is a nice day"
      (b) "Bob and Mary went to France last month again"
      (c) "You can say that again"
      (d) "Birds are not necessarily able to fly"

Besides these four sentences, list up to three different sentences that can be parsed by this grammar as well as the corresponding Python screenshot. Of the three sentences, can you generate one that does not make sense? Why can't you have such a sentence based on your grammar? (15%)

Now, assuming that the above four sentences are your mini-mini training corpus, you will write a probabilistic context-free grammar. You will use Python environments to test your grammar and save the Python screenshot. (40%)

What to submit for Homework:
Each student should submit a report that includes the grammars, the Python screenshots, and the written explanations.

How to Submit Homework:
Go to the Blackboard system and the Assignment for Homework 3 and attach your report. Your report should include:
1). Description of results in PDF format.
2). Output (included in an appendix)
3). Python processing screenshot (included in an appendix)
4). Your Python code (submit in one separate folder zipped)