**Lab Session – Week 5 Homework**

Starting with the flight grammar [labquestionsexamples.txt], add the CFG rules to parse at least three of the following sentences:

I prefer a flight through Houston

Jack walked with the dog

John gave the dog a bone

I want to book that flight

Note that I have left the “.” off the end of each sentence. First try using the rd\_parser defined from the flight grammar to parse the sentence and then add words and/or add rules to the grammar. The first sentence is the easiest and the last sentence is probably the hardest.

When you try the first sentence, you will get an error that the grammar does not cover some of the input words, so you must add lexical rules that add the words to the appropriate categories. But if there are not enough grammar rules, the rd\_parser just quits with no parse trees, and you must add rules.

You may want to add new types of rules. For example, in the last sentence, you should introduce a new type of phrase to handle “want to book”. There are a couple of difference ways to do this, but do not make “to book” be a prepositional phrase. In this case, it is probably better to treat the word “to” as a special case, instead of as a preposition.

You may want to use the Stanford demo parser to get ideas of parse structure, but note that their parse structures may be more complex than we need for our examples.

**Homework:**

Submit a report summary that includes the revised grammar you developed and the example parses for each sentence. Include any observations and lessons learned in your report. In addition to the report summary, upload a copy of the python code you developed as part of this lab.