HW5
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Describe and discuss your work in a write-up file

I completed this assignment using Python with nltk. My solution is organized into the following files and directories:

Location Description	**Purpose**
docs/	folder that contains all the documents needed for this assignment, such as the grammar.fcfg and semantics_sentances.txt
docs/grammar.fcfg	file that contains the semantics feature grammar
docs/semantics_sentences.txt	feature sentences to be parsed
source/	folder that contains all the source code
source/main.py	entry point script that reads in the files from the user and prints out the result to the console
source/folTests.py	played around more with first order logic
source/hw5Tests.py	unit tests for each sentence. this ensures that there are correct parses.
source/tests.py	went through chapter 10 of NLTK book, all the examples are done here
hw5.cmd	command file used by condor. this calls hw5.sh with the parameters of docs/grammar.fcfg, docs/semantics_sentences.txt and result
hw5.sh	file to handle calling the Python file main.py with specific parameters

Include problems you came across and how (or if) you were able to solve them, any insights, special features, and what you learned. Give examples if possible.

This assignment took me a while, I found it challenging to get my head wrapped around first order logic in context free grammars. I went through all the examples in chapter 10 of the NLTK book in the tests.py file. I found those very helpful. I also went through more examples by hand in

folTests.py.

I completed this project using test driven development with the grammar file. I would create a test with a new sentence, define the type of output I was expecting, execute it against the python unit test engine, then alter the grammar to get the result I was expecting. I found this iterative method of development effective. I've come to enjoy first order logic in context free grammars now - I think they can be very powerful.

I kept the grammar as simple as possible while maintaining the meaning. I also implemented each intransitive verb with its existence modifier, but for transitive verbs I felt like it wasn't needed because the information of the verb function combined with the arguments is a clear about what type of event is taking place.