

## **Tutorial 5: Formal Grammar**

Consider the following sentences:

- a) Do American airlines have a flight between five a.m. and six a.m.?
- b) I would like to fly on American airlines.
- c) Please repeat that.
- d) I need to fly between Philadelphia and Atlanta.
- e) What is the fare from Atlanta to Denver?

Q1. Draw phrase structures of the sentences above.

Q2. Draw typed dependency structures of the sentences above.

Q3. Give CCG categories for the words of the sentences above and draw derivations. (**Optional**)

Q4. Parse the sentences above by using one of the following parser interfaces and correct errors, if any:

- (i) Stanford parser (<http://corenlp.run/> )
- (ii) EasyCCG parser ([http://4.easy-ccg.appspot.com/do\\_parse?sentence=](http://4.easy-ccg.appspot.com/do_parse?sentence=))
- (iii) Enju parser (<http://www.nactem.ac.uk/enju/demo.html>)  
You can choose Newspaper as Domain.