

# LIN 177 Homework 2

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1.

```
2. speaks(anne,    english).
   speaks(anne,    french).
   speaks(anne,    german).
   speaks(carol,   english).
   speaks(david,   english).
   speaks(david,   spanish).
   speaks(jacques, english).
   speaks(jacques, french).
   speaks(nguyen,  english).
   speaks(nguyen,  french).
   speaks(nguyen,  spanish).
   speaks(nguyen,  vietnamese).

   trilingual(Person, [Lang1, Lang2, Lang3]) :-
       speaks(Person, Lang1),
       speaks(Person, Lang2),
       speaks(Person, Lang3),
       Lang1 @< Lang2,
       Lang2 @< Lang3.
```

3. (a) This fact is ill-formed as the second argument is two atoms separated by a space.  
(b) This fact is ill-formed as the functor name starts with an uppercase letter.  
(c) This fact is ill-formed as the fact lacks a period.  
(d) This fact is ill-formed as the functor name starts with a number.  
(e) This fact is ill-formed as the functor name starts with a number.

```
4. english(['Chomsky'], noun).
   english([ate],       verb).
   english([balloon],   adjective).
   english([balloon],   noun).
   english([balloon],   verb).
   english([large],     adjective).
   english([large],     adverb).
   english([large],     noun).
   english([red],       adjective).
   english([red],       noun).
   english([some],      adjective).
   english([some],      adverb).
```

```
english([some],      pronoun).  
english([space],     noun).  
english([space],     verb).  
english([surprisingly], adverb).  
english([too],       adverb).  
english([us],        pronoun).  
english([will],      noun).  
english([will],      verb).
```

- 5.
- ```
spanish([nino], [noun], [boy], [masculine, singular]).  
spanish([nina], [noun], [girl], [feminine, singular]).  
spanish([ninos], [noun], [boys], [masculine, singular]).  
spanish([ninas], [noun], [girls], [feminine, singular]).  
spanish([alto], [adjective], [tall], [masculine, singular]).  
spanish([alta], [adjective], [tall], [feminine, singular]).  
spanish([altos], [adjective], [tall], [masculine, singular]).  
spanish([altas], [adjective], [tall], [feminine, singular]).
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