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).
```

```prolog
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.
```prolog
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]).
```