Exercise 1.1:
Using the Prolog program from Slides I/3-I/6, give the answer for the following queries:

- ?-connection(frankfurt,X).
- ?-connection(X, maui).

Exercise 1.2:
Define in Prolog a predicate for multiplication. (You may want to use the predicate \texttt{add} defined on Slide I/10.) Give the output for the following queries:

- ?-mul(s(s(0)),s(s(s(0))),Z).
- ?-mul(s(s(0)),s(s(0)),s(s(s(s(s(0)))))).

Exercise 1.3:
Now use your definition from Exercise 1.2 to define the factorial function.

- Example: ? - fact(s(s(0))), F ) has the result F = s(s(s(s(s(s(0)))))).

Exercise 1.4:
Define a predicate \texttt{palindrome(L)} which checks if the list L is a palindrome, i.e. the reverse of L is identical to L .

- Example: ? - palindrome([a,b,c,b,a]) has result yes.