Alloy Practice #1
Food Database

1. *FoodDB.als* is the skeleton specification for a simple food and recipe database, with visualization theme *FoodDB.thm*:
   - The one **FDB** (**F**ood **D**ata **B**ase) contains a set of **foods**, each of which can be either a **BasicFood** or a **Recipe**.
   - **BasicFood** and **Recipe** are subsignatures of an abstract signature **Food**.
   - **BasicFood**s are simple atoms in our universe.
   - **Recipe**s, however, have **ingredients** (a set of **Food**s – **BasicFood**s or sub-**Recipe**s).
     i. **Recipe**s not in the **FDB** foods have an empty set of **ingredients**.
     ii. **Recipe**s in the **FDB** foods must have *at least two* **Food**s in their **ingredients**.
     iii. All **ingredients** for a **Recipe** in the **FDB foods** are also the **FDB foods**.
     iv. No **Recipe** is an **ingredient** of itself (either directly or indirectly).
2. The skeleton contains four **fact**s and an **assert**ion (with comments). Fill in the five bodies with appropriate predicates, check that the assertion holds, and run the provided predicate to see example solutions.

If you decide to do this practice exercise, submit your static model with the name ***FoodDB.als*** to the ***Alloy Practice*** drop box by noon on Thursday, 20 February.

NOTE: You *must* submit *at least one* of the three practice activities by the due date and time to receive any activity credit. You *may* submit as many as all three.

NOTE: Anything you submit by the end of the day on Monday, 17 February, will be quickly examined and returned with any relevant comments by noon on Thursday, 20 February, so you can use these to study for the exam on Friday, 21 February.

NOTE: Instructor solutions will become available on myCourses in the Content area around noon on Thursday, 20 February.