Alloy Practice
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.