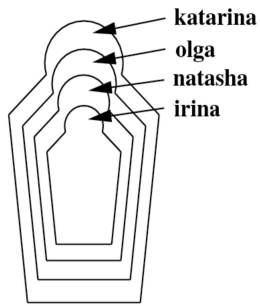




## Homework 07<sup>1</sup>

**Deadline: Monday April 13th 2pm**

Do you know these wooden Russian dolls (Matryoshka dolls) where the smaller ones are contained in bigger ones? Here is a schematic picture:



First, write a knowledge base using the predicate `directlyIn/2` which encodes which doll is directly contained in which other doll. For example, `directlyIn(katarina, olga)` should be evaluated true, while `directlyIn(katarina, natasha)` should be false. Then, define a recursive predicate `in/2`, that tells us which doll is (directly or indirectly) contained in which other dolls. For example, the query `in(katarina, natasha)` should evaluate to true, while `in(olga, katarina)` should fail.

Submit a Prolog source file named `hwk07.pl` (with the KB) using Blackboard.

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<sup>1</sup> From “Learn Prolog Now” (page 64).