

## Example: Logical Problems

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**Who is the best player?**

**Mr. Scott, his sister, son and daughter are tennis players.**

- 1. The best player's twin and the worst player are of the opposite sex.**
  - 2. The best player and the worst player are the same age.**
- (Consequence: the best player's twin and the worst player are the same age.)**

# Best Player Solution

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person(mrscott).
person(sister).
person(son).
person(daughter).
twins(sister, mrscott).
twins(mrscott, sister).
twins(son, daughter).
twins(daughter, son).
male(mrscott).
male(son).
female(sister).
female(daughter).
opp_sex(A, B) :- male(A), female(B).
opp_sex(A, B) :- male(B), female(A).
father(mrscott).
child(son).
child(daughter).
same_age(A, B) :- not(father(A), child(B)),
                  not(father(B), child(A)).
stmt1(Best, Worst) :- twins(Best, X), opp_sex(X, Worst).
stmt2(Best, Worst) :- same_age(Best, Worst),
                      twins(Best, X), same_age(X, Worst).
soln(Best, Worst) :- person(Best), person(Worst),
                    Best \= Worst, stmt1(Best, Worst),
                    stmt2(Best, Worst).
```