

Sieve:

Schema annotations & global invariants

```
@AddRemoveSet CREATE TABLE MovieTable (  
    PRIMARY KEY (movie_id),  
    @TrackDeltas tickets_remaining INT,  
    ...  
) ENGINE=InnoDB
```

```
forall(m in MovieTable) :- m.tickets >= 0
```

Indigo:

Global invariants, post-condition annotations

```
@Invariant("forall(Movie : m) :- tickets(m) >= 0")  
public interface MovieTickets {  
    @PostCondition_Decrements("tickets(m, 1)")  
    void sellTicket(Movie m);  
}
```

Quelea:

Visibility annotations

$$\forall (a : \text{sellTicket}). \text{sameobj}(a, \eta) \Rightarrow a = \eta \vee \text{vis}(a, \eta) \vee \text{vis}(\eta, a)$$