r_{13} : $cheapest(X), gardenSize(X, Z), cheapest(Y),$
$gardenSize(Y, W), W > Z \Rightarrow \neg largestGarden(X)$

r_{14} : $largestGarden(X) \Rightarrow rent(X)$

r_{15} : $largestGarden(X), size(X, Z), largestGarden(Y),$
$size(Y, W), W > Z \Rightarrow \neg rent(X)$

$r_{11} > r_{10},\ r_{13} > r_{12},\ r_{15} > r_{14}$

Rule r_{10} says that every acceptable apartment is cheapest by default. However, if there is an acceptable apartment cheaper than X, rule r_{11} (which is stronger than r_{10}) fires and concludes that X is not cheapest.

Similarly, rules r_{12} and r_{13} select the apartments with the largest garden among the cheapest apartments. And of these, rules r_{14} and r_{15} select the proposed apartments to be rented, based on apartment size.

In our example, apartments a_3 and a_5 are cheapest. Of these a_5 has the largest garden. Note that in this case the apartment size criterion does not play a role: r_{14} fires only for a_5, and rule r_{15} is not applicable. Thus a selection has been made, and Carlos will soon move in.

5.11 Rule Markup Language (RuleML)

RuleML is a long-running effort to develop markup of rules on the web. It is actually not one language but a family of rule markup languages, corresponding to different kinds of rule languages: derivation rules, integrity constraints, reaction rules, and so on. The kernel of the RuleML family is Datalog, which is function-free Horn logic.

RuleML is quite experimental in studying various features of rule languages that are far from being standardized (e.g. nonmonotonic rules). The idea is that these efforts may feed into future standards, in the same way that RuleML results were an important building block in the development of RIF.