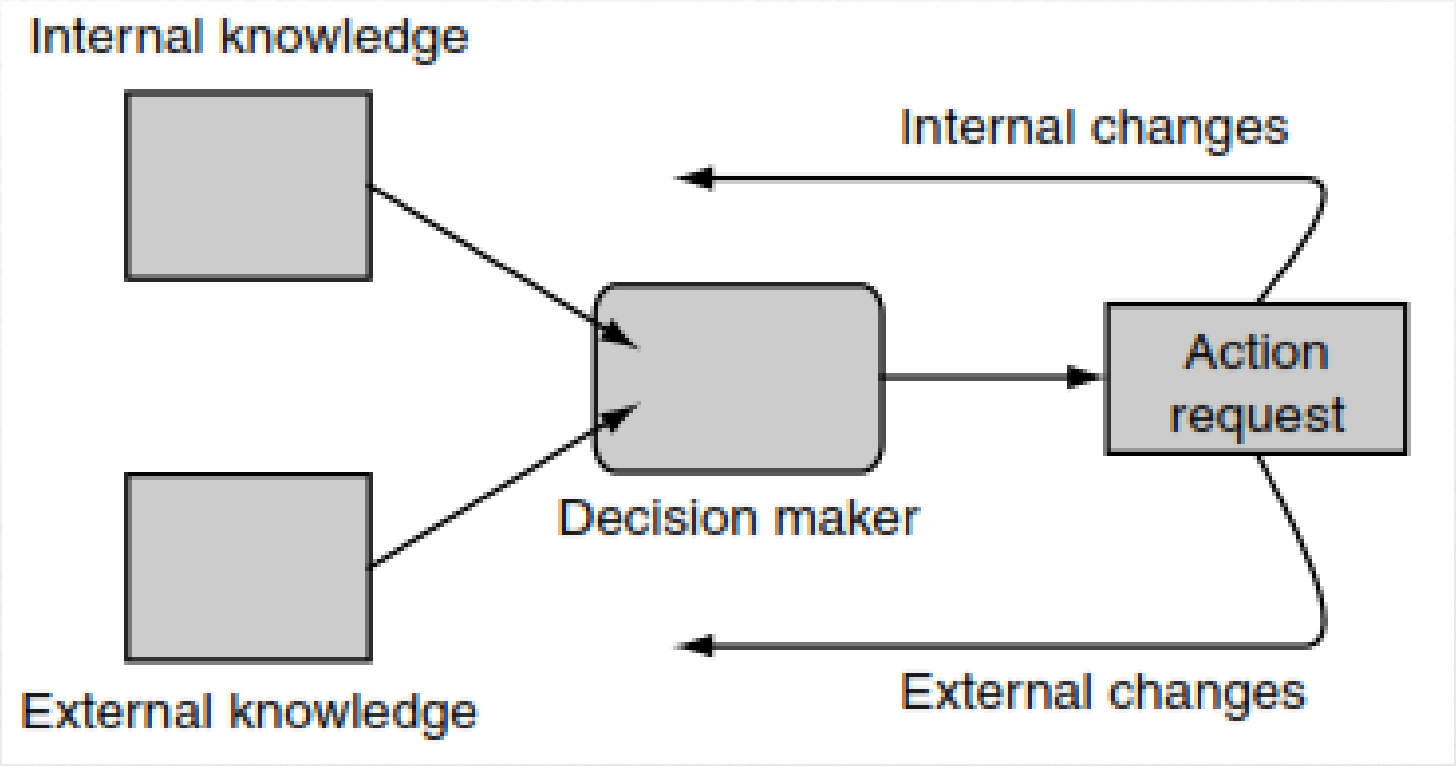
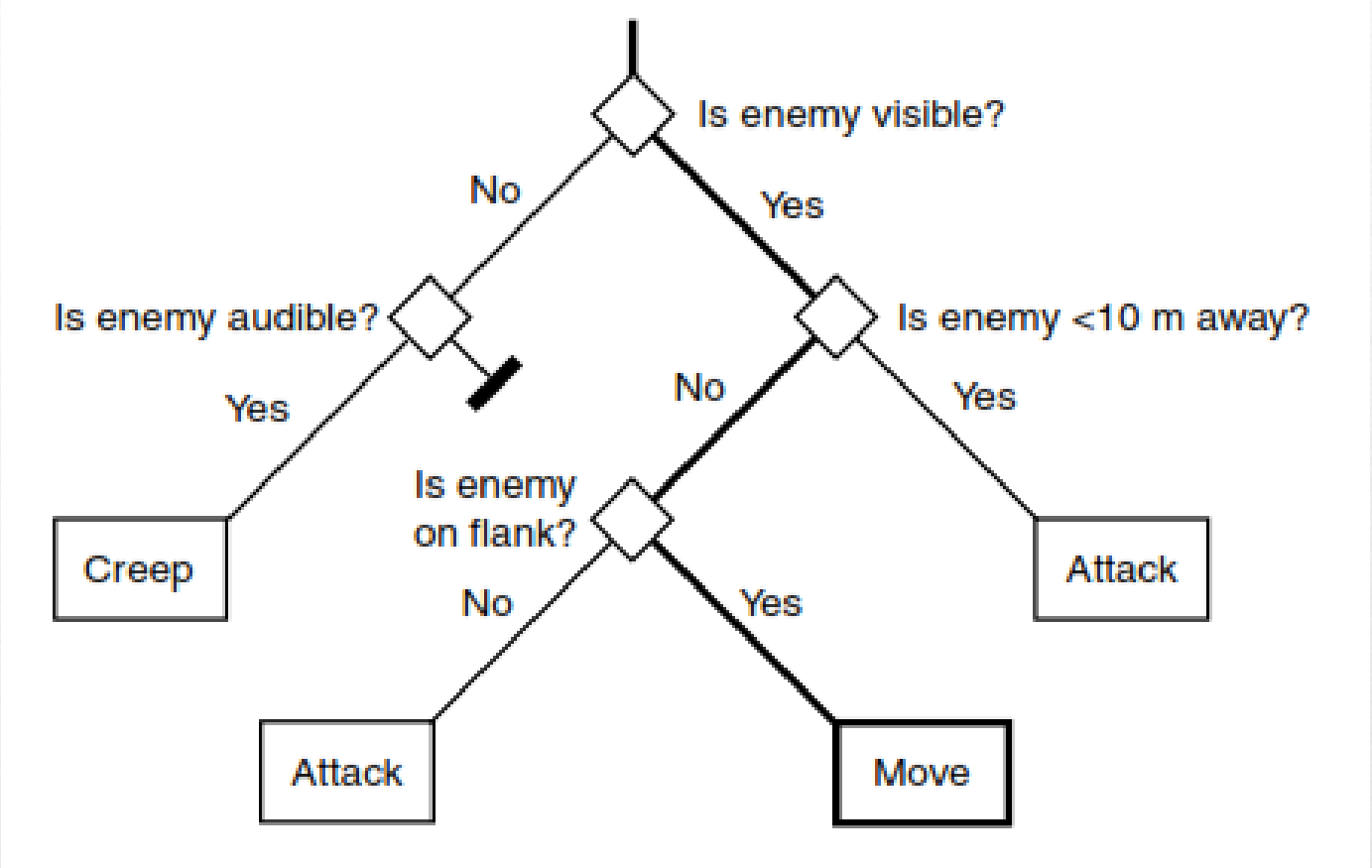
Decision Making

Scripted Behavior
- Decision Trees
- State Machines
- Hierarchical State Machines

Decision Making Scheme



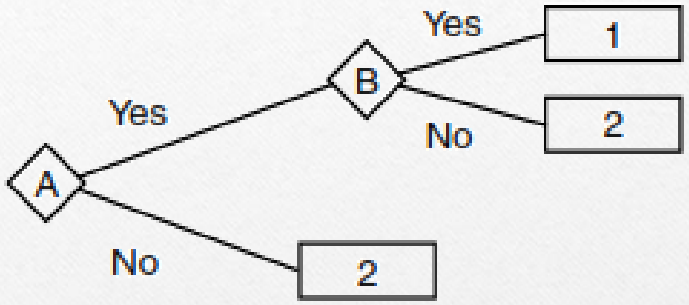
Decision Tree



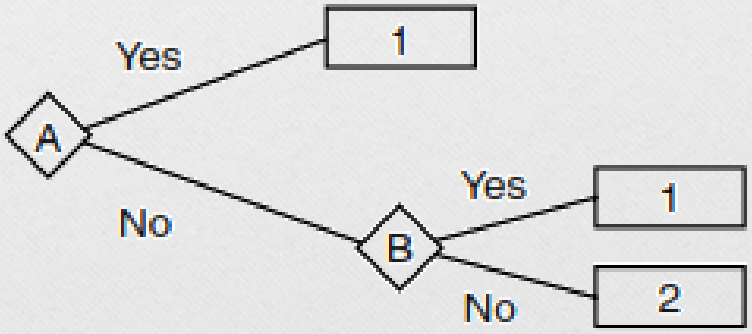
Fixing a Branch in DT

Logical Connectives

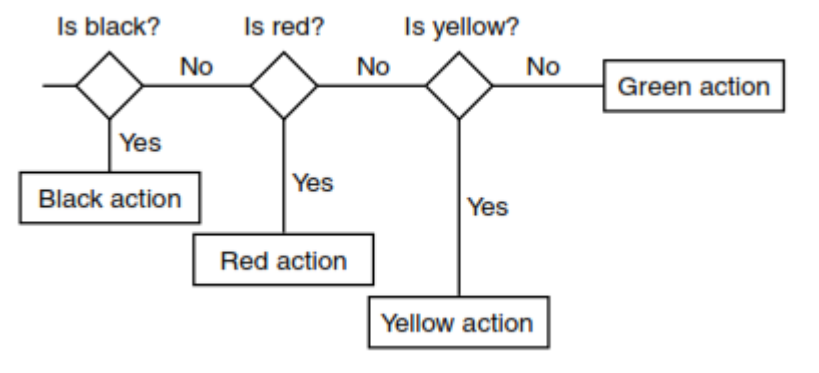
If A AND B then action 1, otherwise action 2



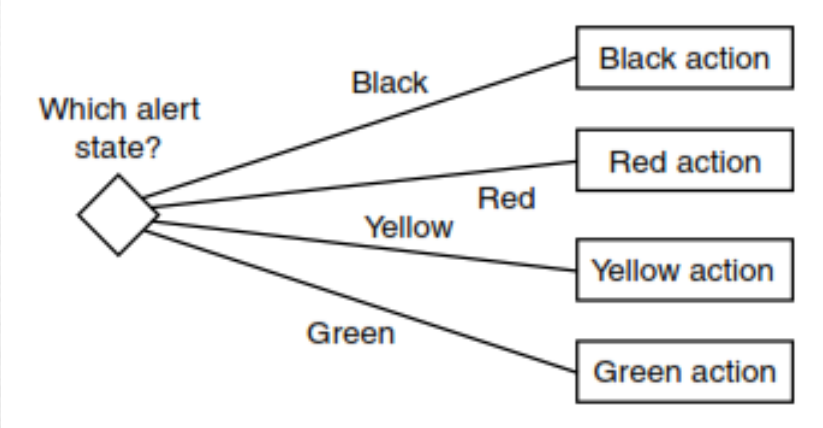
If A OR B then action 1, otherwise action 2



Tree Types



Binary Decision Tree



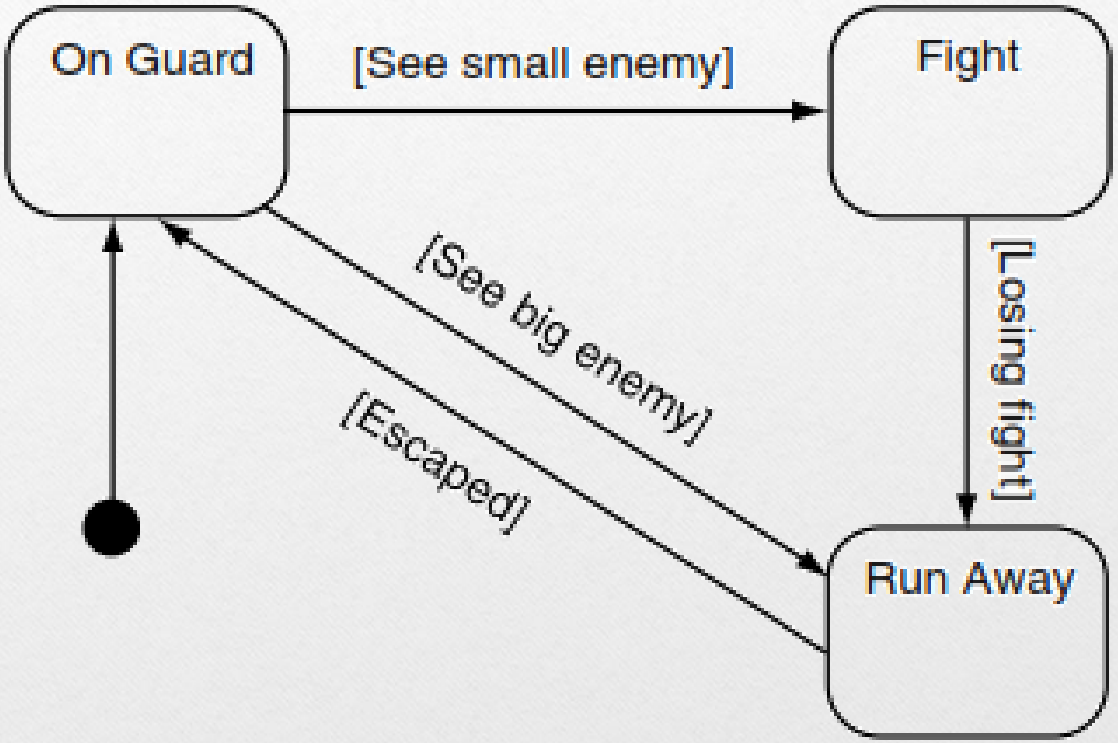
Flat Branching Decision Tree

Using Decision Trees

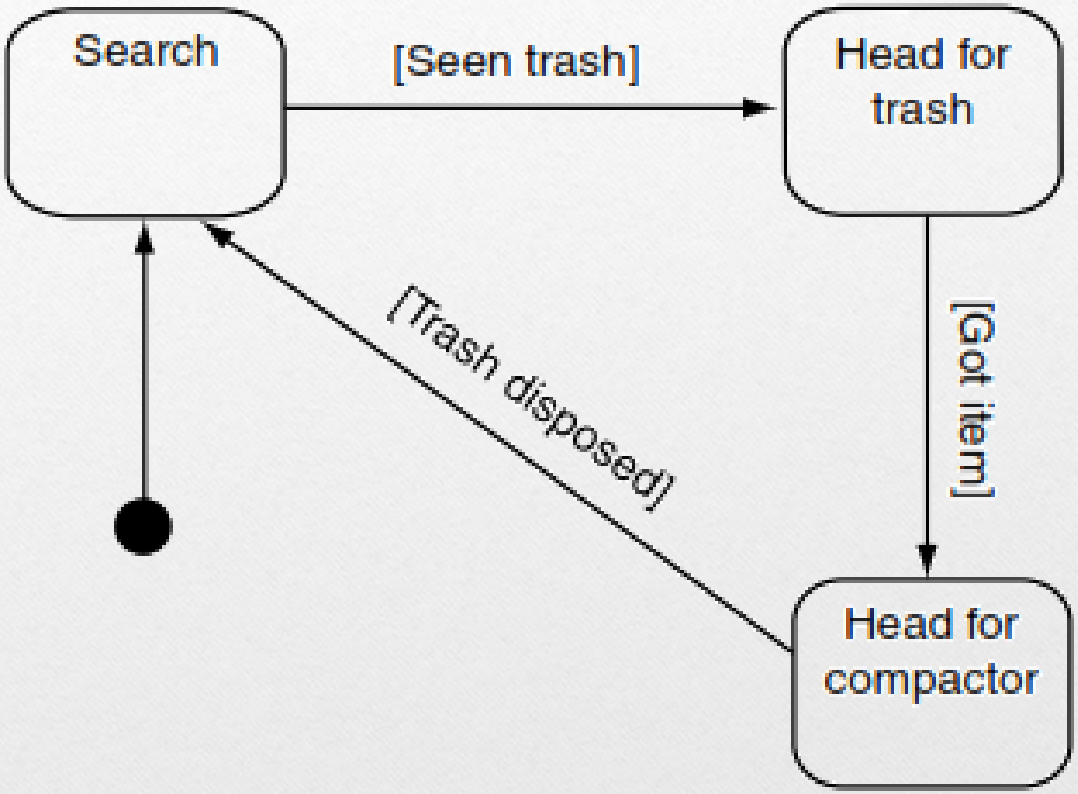
Pay attention to:

1. Balance between Depth and Time Complexity
2. Scalability to new Data
3. Pruning
4. Validity (no loops in a Tree)
5. Randomizing condition (Bernoulli RV)

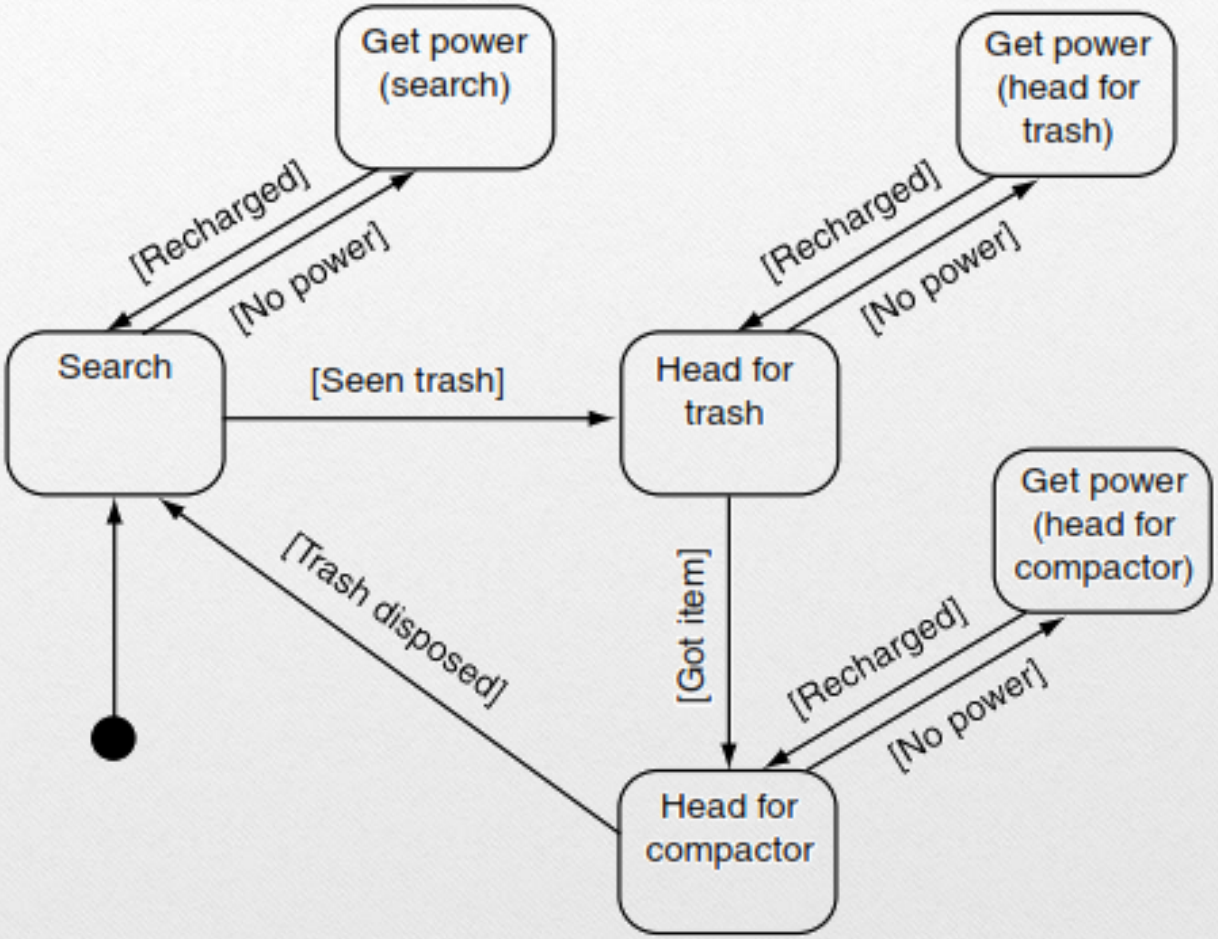
Finite State Machines



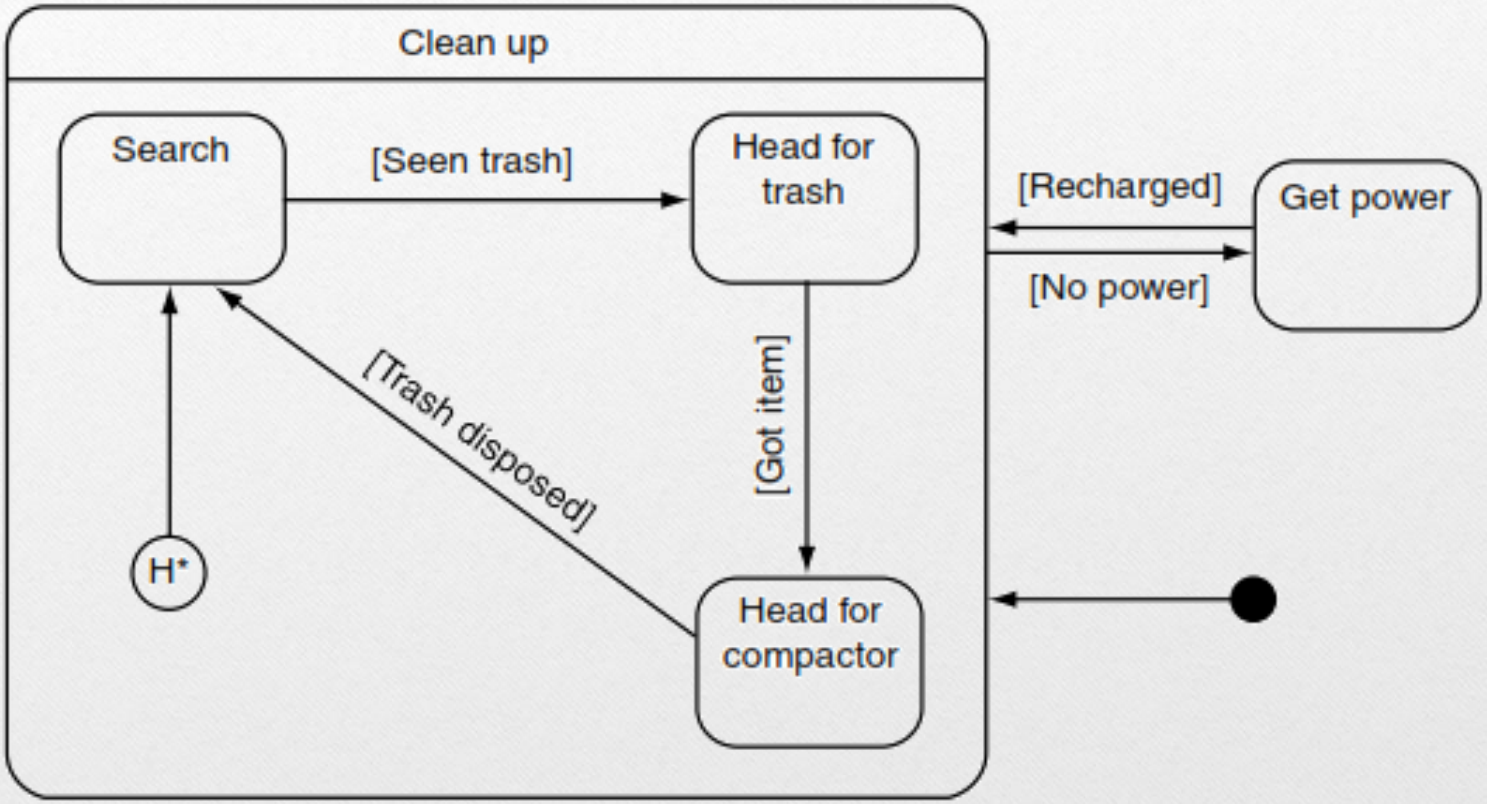
Hierarchical State Machines



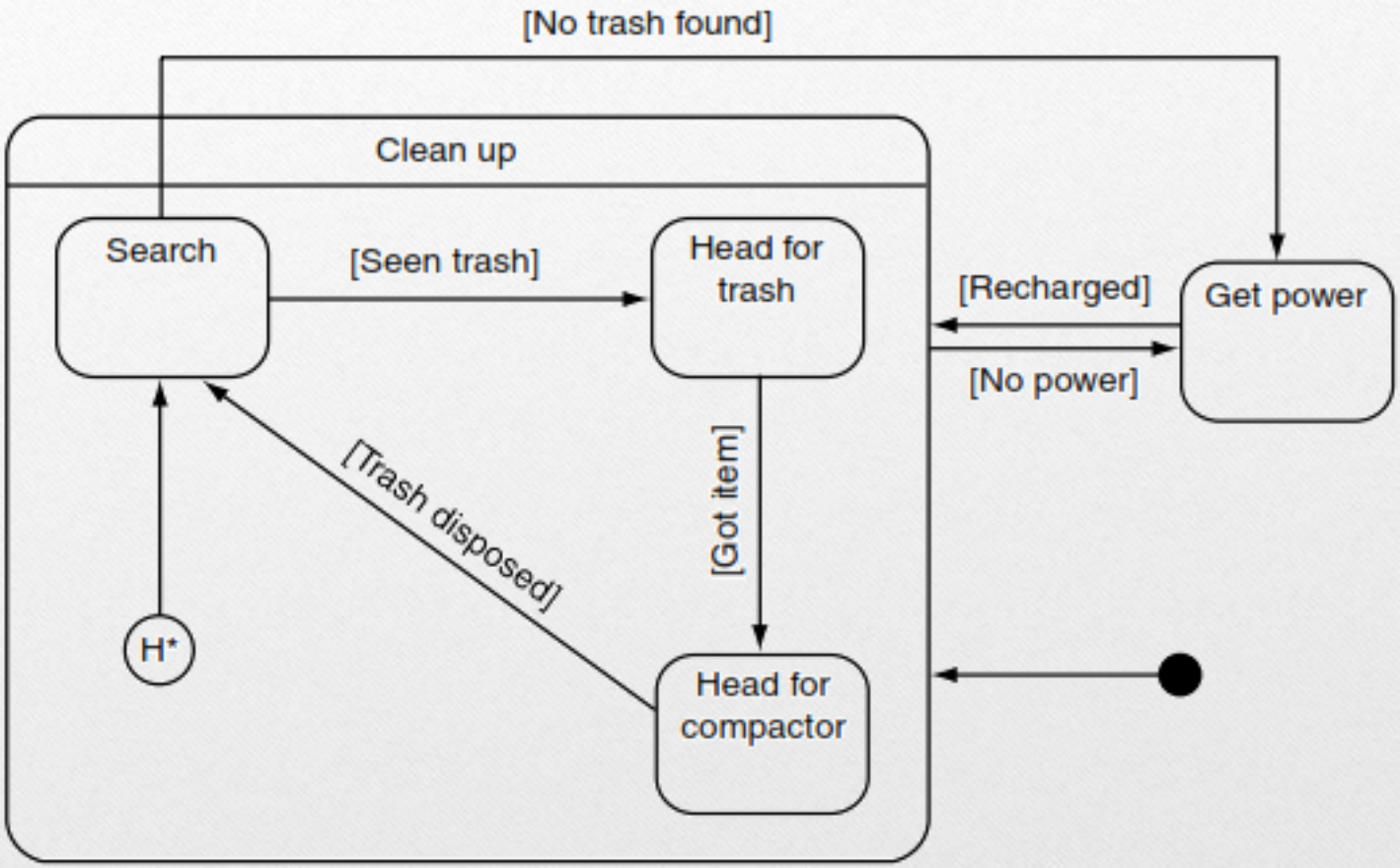
Hierarchical State Machines



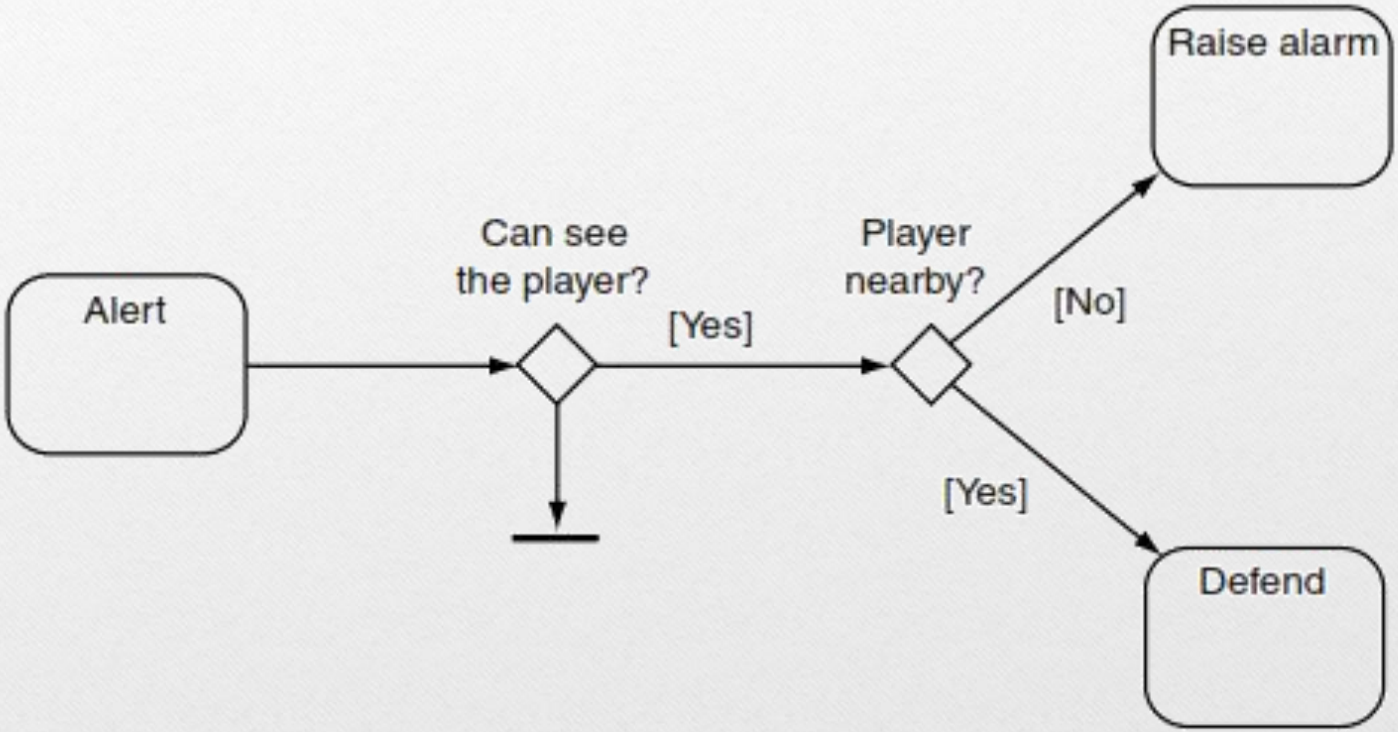
Hierarchical State Machines



Hierarchical State Machines



Hierarchical State Machines with Decision Trees as Transitions



Maze Massive Escape

Classes