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Assignment 1:

1. I propose a temperature analyzing percept. This will allow undercooked food and nonsterile water, which are sources of the E. coli bacteria, to be detected. This will cost effective approach, which will allow the percept to be observed through temperature gauge sensors. Testing for enzymes would not be cost friendly.

**3.6.b)** A 3-foot tall monkey is in a room where some bananas are suspended from the 8-foot ceiling. He would like to get the bananas. The room contains two stackable movable, climbable 3-foot high creates.

Note: The monkey is the agent.

**States:** The state is determined by the following:

* agent location
* agent height
* location create one
* height of create one
* location of create two
* height of create two
* number of bananas to collect
* height of each banana

**Initial State:** Any state can be designated as the initial state. Although I would assume that the agent would start off at the agent’s natural height with no creates stacked on each other and at least one banana to collect.

**Actions:**

* Move agent location
* Move create one
* Move create two
* Stack create one on create two
* Stack create two on create one
* Agent climbs create one (increase height)
* Agent climbs up create two (increase height)
* Agent climbs up on top of stacked creates (increase height)
* Agent climbs down create one (decrease height)
* Agent climbs down create two (decrease height)
* Agent climbs down stacked creates coming down to floor (decrease height)
* Grab banana

**Transition model:** (A description of what each action does) Given a state and action, this will return a resulting state. i.e. if agent moves one step right, the state of agent’s location will be updated.

**Goal test:** Are all bananas collected?

**Successor:** This will be a table of current states and the other possible states achievable through actions.

**e.**g.

**Table**

|  |  |
| --- | --- |
| Current State | Actions |
| Agent 9 feet tall | grab banana, climb down create one stacked on create two, climb down create two stacked on create one |

e.g. Note that there is no action to move create one or two (limited by current state)

**Function cost:**

I was thinking of making each action a count of 1, thus making the most optimal solution a solution with the least amount of cost.