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p4_tracking_q7_joint_particle_filter_full_system

Question 7 (4 points): Joint Particle Filter with Elapse Time

Complete the `elapseTime` method in `JointParticleFilter` in `inference.py` to resample each particle correctly for the Bayes net. In particular, each ghost should draw a new position conditioned on the positions of all the ghosts at the previous time step. The comments in the method provide instructions for support functions to help with sampling and creating the correct distribution.

Note that completing this question involves removing the call to `util.raiseNotDefined()`. This means that the autograder will now grade both question 6 and question 7. Since these questions involve joint distributions, they require more computational power (and time) to grade, so please be patient!

As you run the autograder note that `q7/1-JointParticleElapse` and `q7/2-JointParticleElapse` test your `elapseTime` implementations only, and `q7/3-JointParticleElapse` tests both your `elapseTime` and `observe` implementations. Notice the difference between test 1 and test 3. In both tests, pacman knows that the ghosts will move to the sides of the gameboard. What is different between the tests, and why?

To run the autograder for this question use:

```
python autograder.py -q q7
```

Congratulations! Only one more project left.