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CSC 33200 Section T

### Task 6: Cigarette Smokers Problem

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RANDOM NUMBER = 1
Agent puts TOBACCO and MATCH on the table.
Second smoker picks up TOBACCO and MATCH.
Second smoker is smoking cigarettes.
RANDOM NUMBER = 1
Agent puts TOBACCO and MATCH on the table.
Second smoker picks up TOBACCO and MATCH.
Second smoker is smoking cigarettes.
RANDOM NUMBER = 0
Agent puts TOBACCO and PAPER on the table.
Third smoker picks up TOBACCO and PAPER.
Third smoker is smoking cigarettes.
RANDOM NUMBER = 1
Agent puts TOBACCO and MATCH on the table.
Second smoker picks up TOBACCO and MATCH.
Second smoker is smoking cigarettes.
RANDOM NUMBER = 2
Agent puts PAPER and MATCH on the table.
First smoker picks up MATCH and PAPER.
First smoker is smoking cigarettes.
RANDOM NUMBER = 1
Agent puts TOBACCO and MATCH on the table.
Second smoker picks up TOBACCO and MATCH.
Second smoker is smoking cigarettes.
RANDOM NUMBER = 1
Agent puts TOBACCO and MATCH on the table.
Second smoker picks up TOBACCO and MATCH.
Second smoker is smoking cigarettes.
RANDOM NUMBER = 0
Agent puts TOBACCO and PAPER on the table.
Third smoker picks up TOBACCO and PAPER.
Third smoker is smoking cigarettes.
RANDOM NUMBER = 0
Agent puts TOBACCO and PAPER on the table.
Third smoker picks up TOBACCO and PAPER.
Third smoker is smoking cigarettes.
RANDOM NUMBER = 1
Agent puts TOBACCO and MATCH on the table.
Second smoker picks up TOBACCO and MATCH.
Second smoker is smoking cigarettes.
```

In my code, the first smoker holds tobacco, second smoker holds paper, and the third holds matches. Based on these results, we can see that it succeeds in synchronizing by having the correct smoker take the items they need to smoke every time an agent puts them down instead of the smokers racing to take the items for themselves and not being able to smoke. In the code, I randomized the items by giving a certain value from 0-2, and the agent then places two certain items based on the value it got from the randomizing.