Exercise 4.38.

Modify the multiple-dwelling procedure to omit the requirement that Smith and Fletcher do not live on adjacent floors. How many solutions are there to this modified puzzle?

Answer.

We can type the modified multiple-dwelling procedure at the `amb` evaluator driver loop and run the procedure as follows:

```
;;; Amb-Eval input:
(multiple-dwelling)

;;; Starting a new problem
;;; Amb-Eval value:
((baker 1) (cooper 2) (fletcher 4) (miller 3) (smith 5))

;;; Amb-Eval input:
try-again

;;; Amb-Eval value:
((baker 1) (cooper 2) (fletcher 4) (miller 5) (smith 3))

;;; Amb-Eval input:
try-again

;;; Amb-Eval value:
((baker 1) (cooper 4) (fletcher 2) (miller 5) (smith 3))

;;; Amb-Eval input:
try-again

;;; Amb-Eval value:
((baker 3) (cooper 2) (fletcher 4) (miller 5) (smith 1))

;;; Amb-Eval input:
try-again

;;; Amb-Eval value:
((baker 3) (cooper 4) (fletcher 2) (miller 5) (smith 1))

;;; Amb-Eval input:
try-again

;;; There are no more values of
(multiple-dwelling)
```

As the interaction shows, there are 5 solutions to this modified puzzle.

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