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Quiz 9b

The solution to the spin problem is straightforward and easy to follow. The first couple of lines is essentially defining the man, wolf, goat and cabbage. The lines proceeding are defining the different types of possible unsafe states. The clever thing about defining the unsafe macro is that you can negate the unsafe macro and get the possible safe states.

The Act function essentially is flipping the states of the man with respect to the other actors and himself. These states are flipped atomically; the execution of the atomic statements cannot be blocked since there is not an impending block that is reliant on outside code. The only thing these blocks rely on is if Man is equal to the other actors. We can see that at the end of the do construct, man is flipped at the end to ensure that he is always on the “boat”.

The next important line is the “Make system falsify” clause. I could not find any useful documentation on this construct but from my understanding, tries to falsify the claim. The next block of code essentially finds solutions to the negated falsified solution.