WRITTEN ASSIGNMENT 3

Design a propositional knowledge base to represent the statement, "Heads I win, tails you lose". Write a resolution based proof to prove that I will always win.

[Extra Credit] Use propositional resolution to solve the following murder mystery.

1. There are three possible murderers: Mark, Sam and Tony.
2. Mark told the police: "I didn't do it. The victim was friends with Sam. Moreover, Tony disliked him."
3. Sam said: "I didn't do it. I didn't know the guy. Moreover, I was out of town that week."
4. Tony told the police: "I didn't do it. I saw both Mark and Sam in a club with the victim that day. One of them must have done it."
5. Let us assume that there is only one murderer. The innocent people are telling the truth but the guilty one may not be.