COMP304P2: Tutorial - Logic
Due Date: 25 October 2024

For each set of sentences (a, b and c) below:

    I. Convert the sentences to predicate logic statement clause form.

    II. Use resolution on the clauses to prove the statement shown in ***BoldAndItalics***.

a) The Road Runner aka Not Mad Max

1. Every coyote chases some roadrunner.

2. Every roadrunner who says "beep-beep" is smart.

3. No coyote catches any smart roadrunner.

4. Any coyote who chases some roadrunner but does not catch it is frustrated.

5. Jack is a coyote.

6. Speedy is a roadrunner who says "beep-beep".

    Prove: ***JackIsFrustrated***

b) Annoying Vegans

1. Every child loves candy.

2. Anyone who loves candy is not a nutrition fanatic.

3. Anyone who eats vegetables is a nutrition fanatic.

4. Anyone who carves a pumpkin does not eat it.

5. Anyone who carves a pumpkin is a child

6. Pumpkin is a vegetable 7. Lifesavers is candy.

8. John carves a pumpkin.

    Prove: ***JohnIsNotAFanatic***

c) Santa Clause and other Lies

1. Every child loves Santa.

2. Everyone who loves Santa loves any reindeer.

3. Ruldolph is a reindeer and Rudolph has a red nose.

4. Anything which has a red nose is weird or is a clown.

5. No reindeer is a clown.

6. Scrooge does not love anything which is weird.

    Prove: ***ScroogeIsNotAChild***