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BSCS-3 B

Part I

1. Define non-monotonic reasoning in your own words.

Answer: In my own words, non-monotonic reasoning is when we believe that it is the truth, but when we find new facts, we change our belief based on the new information that gather.

2. How does non-monotonic reasoning differ from monotonic reasoning?

Answer: The difference between non-monotonic reasoning from monotonic reasoning is that non-monotonic reasoning is assumptions only, but when new facts arrive, our assumptions change, while monotonic reasoning, when our assumption is true, even when new facts appear, the assumption remains true.

3. Give a real-life situation where a conclusion must change after new information is added.

Answer: A real-life situation where the suspect is arrested by the police because the suspect was at the crime scene. When new information arrives, the suspect is not the one who committed the crime.

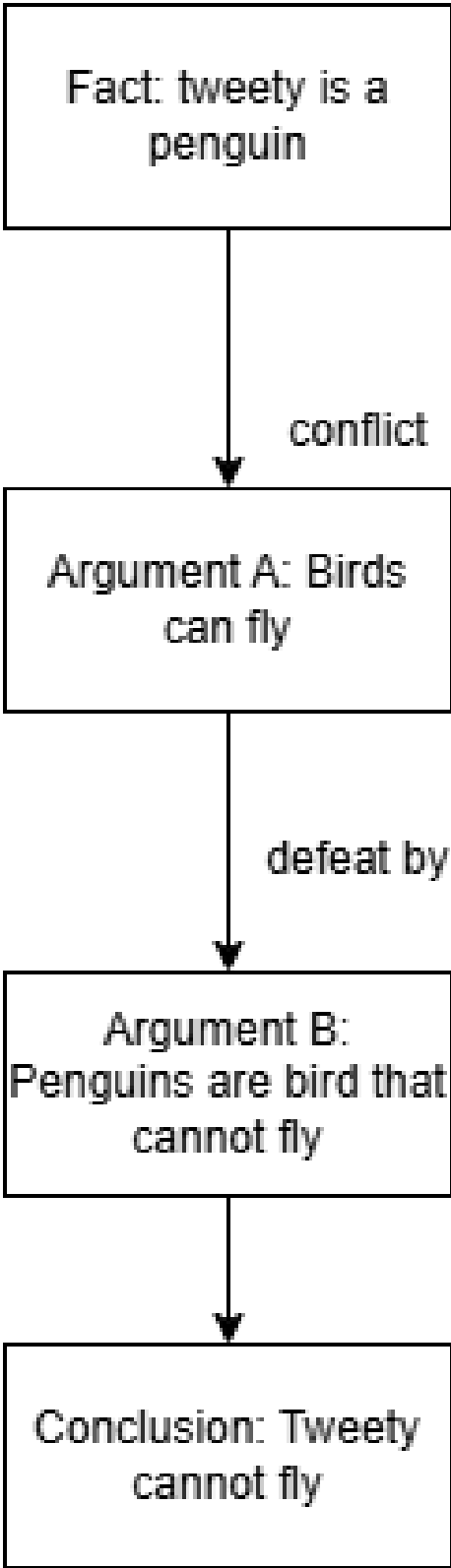
4. What is a default rule? Provide one example.

Answer: It is a type of rule that the belief is true unless there is new information that opposes the belief. An example of this is that when the car won't start, it assumes that the has no fuel, unless there is proof that it doesn't.

5. How do argumentation frameworks help AI systems decide between conflicting rules?

Answer: The argumentation frameworks help AI systems decide between conflicting rules by making each rule an argument and a counterargument that checks which one has the strongest argument. When there are conflicting rules, the AI compares the arguments using information that is gathered and sees which is more reasonable for the answer.

Task 2: Argumentation Framework



Part III. Reflection and Discussion

“Think of a time when you changed your conclusion after learning new information. How is this similar to non-monotonic reasoning in AI?”

The time when I changed my conclusion after learning new information is that when I stare at my phone or computer at prolonged hours, will damage my eyesight, because my parents always warned me about the prolonged hours in phone or computer and I believe them. But when I look at a article, it said that it will not permanently damaged the eyes but it will give a temporary symptoms like eye strain, headaches, blurred vision.

This knowledge is similar to non-monotonic reasoning in AI, because it changes my conclusions when new information arrives to me. If I did not have time to look for an article, then my conclusions would remain the same. The non-monotonic reasoning in AI, helps the system to change the previous conclusion into new one that is more accurate and contradicts to the previous conclusion. Just like I changed my understanding that it will not damage my eyes but it will cause only temporary symptoms, but I still need to rest my eyes since it has a temporary symptoms and it is also stated in the article, that gives me information to rest my eyes.