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1. Agent Name: Reginald George
   - Persona: Our agent persona is sassy, modeled after Regina George from the Mean Girls movie. Even when losing, our agent is rude and sassy with their insults to the other player.
2. Our twin has a different name, and remarks compared to our main agent. The remarks are also more mature compared to our main agent (modeled after Elle Woods).
3. Alpha beta question
   a. Our alpha-beta pruning is implemented extremely similar to how we implemented our minimax for the pacman problem in P2. However, there are differences. The depth we search will only be up to k because we only need to search as far as we get a potential win for our agent. Additionally, because we have only 2 agents, ours and the opponent's, there's no need to iterate through multiple opponents like we did for the ghosts in P2. Instead, our agent (X) calls the maxValue() while our opponent (O) calls minValue(). Furthermore, our cut-off will be if our alpha or beta is <= or >= because we don't need to consider states that won't improve our ability to win (our evaluation score).
   b. We have done some tests to find out how many static evals are saved due to the cutoffs. It's hard to hand count the number for larger games like 4x4 and 5x5, but we can clearly see that the game finds a winner significantly faster. At least 50% faster than before we set the cutoffs to be <= or >=.
4. Our agent persona is meant to be sassy, even when it is in a losing position. It is modeled after Regina George from Mean Girls. We want our agent to be sassy in the way a teenager would be sassy, not in an extremely rude or genuinely disrespectful manner. Since our agent is modeled after Regina George, we also want it to use more slang and colloquial language rather than a formal response.
5. Based on the value returned by our static evaluation function, we return a different utterance. If the value is less than 0 (i.e. negative), then it means that the game favors our opponent (O). So, we return a utterance with the perspective that we are losing (which is still hopefully sassy, just less rude). If we are winning, our agent will have a more haughty utterance.
6. We used Gemini AI to generate the dialogues for us. Given the opponent's remarks, it's completely dependent on the static evaluation score. So, as the opponent gets closer to winning, our agent's utterances turn more unsure, but still sticking to the character and being a haughty, sassy persona.

Extra Credit

Using LLM to generate prompt:

● For our agent's utterances, we used Gemini AI to generate these dialogues. Based on whether the agent was a twin or not, we created a different "persona" field, which contains a string describing the agent's persona. Then, we used text to prompt Gemini for a one-sentence exclamation regarding a k-in-a-row game in the tone of the persona. Whether the utterance was positive or negative depended on the static evaluation value of the current game state.