In your initial post, address the following:

* Design a set of states, rewards, and rules for an intelligent agent playing a simple board game. You may choose any board game that you are familiar with. In your design, be sure to consider the following:
  + States, including starting and ending states, and possible actions
  + Rewards or penalties for reaching a state
  + Rules for navigating from one state to another
* Compare your approach to the Markov Decision Process (MDP) that you learned about in this module. What similarities and differences do you see between your approach and the MDP?

Chutes and laders

States(multiple if not infinite)

Policy instead of rewad

Rewards

Thought out ahead for the highest result givine the set of variables known

Rules

Based on taking pluses and negatives and summing up the result

MDP Markov Decision Process

States

Past does not matter to the future state, only current isrelative

Rewards

Qailty of stated goal

Example is negative if time spent but if money is involved it more than makes up for the time loss. -2 time loss +12 money gained = 10 you win

Rules

Move from one state to the next

IN the board game monopoly, The state can be from your current location roll the dice and move to the next spot. This is deterministic, however once you are on the spot certain actions will need to be decided before ending the turn. Is It owned, pay money and then end the turn. But if unowned, Then we use the discounted rewards algorithm to determine if we wish to buy the property. This includes variables: how much money do I have. What is the determined value of the property? The first side is cheaper, the boardwalk sign you can get more rent. The Red and orange corner you tend to get the best of both sides. The overall reward is to have money while your opponents have none left and must declare bankruptcy.

The Markov Decision Process is great for a game like chutes and ladders where the reward is to reach the top left most square, and every square has a determined action to be taken. And then you play the game out from one state to the next one. Its good for games like that, but for monopoly the decision would be to buy property until one runs out of money. That would lead to not having the desired reward, nor would never spending money on property until the other players buy up all the property and the AI would lose money with limited ways to receive any more, there by not achieving the desired reward that way either