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"""Simple blackjack environment
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Blackjack is a card game where the goal is to obtain cards that sum to as  
near as possible to 21 without going over. They're playing against a fixed  
dealer.
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Face cards (Jack, Queen, King) have point value 10.
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Aces can either count as 11 or 1, and it's called 'usable' at 11.
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This game is played with an infinite deck (or with replacement).
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The game starts with each (player and dealer) having one face up and one  
face down card.
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The player can request additional cards (hit=1) until they decide to stop  
(stick=0) or exceed 21 (bust).
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After the player sticks, the dealer reveals their facedown card, and draws  
until their sum is 17 or greater. If the dealer goes bust the player wins.
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If neither player nor dealer busts, the outcome (win, lose, draw) is  
decided by whose sum is closer to 21. The reward for winning is +1,  
drawing is 0, and losing is -1.
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The observation of a 3-tuple of: the player's current sum,  
the dealer's one showing card (1-10 where 1 is ace),  
and whether or not the player holds a usable ace (0 or 1).
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This environment corresponds to the version of the blackjack problem  
described in Example 5.1 in Reinforcement Learning: An Introduction  
by Sutton and Barto (1998).
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http://incompleteideas.net/sutton/book/the-book.html
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