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## Project Proposal

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The DFA that I propose is a baseball inning from start to finish. The final and complete state will be when the third out occurs in the inning. An out is defined as either 3 strikes or if the player hits the ball that results in an out. The DFA will keep track of the current outs and will keep track of the current balls and strikes for the batter up at the time. The score will not be kept for the inning because the main goal of the DFA is to track the process of an inning in baseball not keep the score of the game. This idea seems appropriate because baseball is a very step by step sport that can be easily tracked based on the decisions, or actions, that occur throughout the inning. Making the DFA by inning makes it easily scalable to the entire game because each game is divided into inning. Simply increasing the size of the DFA using the inning DFA multiple times can scale to the whole game very easily and simply. This project seems like a fun, doable, and unique idea for using DFAs. Creating baseball game simulation would be one practical use for this DFA but it can even be as simple as recording actions that occur throughout the game. Overall I think this idea would be appropriate for the project given out for this class.