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## A Simulated MLB Game

For my final project, I will look to create a program that allows a user to run a simulated baseball game on their computer. It will give the user an option to swing or not at an undetermined pitch. From their, my code will have calculated the odds of the pitch being a ball, a strike, a fair ball, a foul ball, or an out. My simulation will run through many loops where the outcome of the players choice will be determined. As a pitcher, the player will have the option to choose what pitch they would like to throw. The advantage and disadvantages of the pitch will be told to the player before he throws a pitch (ex-curveball= high chance to be a ball, low chance to be a hit, tiny chance of a strike). Lastly, I will also try to include the swing type a player can choose from which will include "Power Swing" "Contact Swing" and "Bunt Attempt." Each will have its benefits and disadvantages (Power = High chance strike, medium chance home-run, Contact = Medium Chance base-hit, low chance strike) (Bunt= High chance out, low chance error advance to second).

I have always been a sports fan and since I started learning how to code in Java, I have always wanted to apply my knowledge in coding to something I truly love. While I have already seen someone do a football simulator, I have not seen a baseball game simulator where the power is in the hands of the person selecting the pitches and whether to swing or not. I think this will be a really cool idea but will be complicated and take lots of work. While I am not sure how I am going to make this simulator at the moment, I am sure it will take a lot of "for loops" and "if statements", while also including many different "Math" functions where I can use this to help

calculate the odds of a specific choice happening when it is chosen. I am looking forward to starting this project and hope to enjoy to process of creating it.