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Software Development

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### Baseball Simulation

For my final project, I will create a program allowing a user to run a simulated baseball game on their computer. It will allow the user to swing or not at an undetermined pitch. From there, the will have predetermined odds of the pitch being a ball, a strike, a fair ball, a foul ball, or an out. I will use Final int's to discuss if the hit is going to be a single, double, triple, home run, ball, strike, hit by pitch, etc. I plan on using "for loops" to calculate the odds of a ball being hit or if it would be missed.

Through this project, I look to learn much more about loops and learn more about java then I currently know. I am trying to stretch far beyond my current knowledge in order to acquire more understanding and knowledge in Java. I look forward to completing this project.

### Introduction

While I have never tackled a task as hard as creating a baseball simulator before, my love for coding and sports will help me power through this difficult project. The difficulty of this task if more about the quantity of work put in and not about the code I will be doing. Since I have in fact used most of this coding before, I believe I will be able to get through this project and gain a substantial amount of experience in coding in Java.

## Detailed System Description

The system allows the user to select if he wishes to power swing at a pitch, contact swing at a pitch, or not swing at all. After he makes his choice, the system will run through a few different loops which will randomize the chance of the pitch being a ball, strike, foul, hit, or swing and a miss. There will be a main class called baseball which will have many subclasses that describe the odds of these options happening.

*You should include the UML here.*

## Requirements

While there is no specific problem my project is addressing, it will allow users to try to simulate a baseball game online instead of having to create their own simulator. After researching, I could not find any baseball simulators similar to my design. So this proves that the problem my project will solve is the problem that there are not any similar baseball simulators online.

## User Manual

The way this system is used is by having the user select if he wishes to not swing at a pitch, contact swing, or power swing. After this, the user will continue to choose from these three options until the inning ends. This system is purely for recreational use for people to play a fun game made in java on their computer. After the inning is over, the user will have the option to play again or end and accept the amount of runs they scored. After this decision, if the user chooses to play again, the system will restart and begin to play. If they choose to end, the system will finish.

## Conclusion

Although I have never done a project in java as complex as this, I look forward to continuing to work on this project throughout the rest of the semester. Even though I have only outlined my project at this point, I will begin to program it over the next week. Despite the difficulty, I am truly looking forward to doing this project and completing it.