SI 206 Final Project Plan
a. What is your group's name?
Team Baseball

b. Who are the people in the group (first name, last name, umich email)?
Alexander Likens, likensa@umich.edu
Matthew Finkel, mjfinkel@umich.edu
Zachary Mathews, zmathews@umich.edu

c. What APIs/websites will you be gathering data from? The base URLs for the APIs/websites must be different for them to count as different APIs.
1st API - https://rapidapi.com/theapiguy/api/mlb-data/
2nd API - https://appac.github.io/mlb-data-api-docs/
Website - https://www.mlb.com/

d. What data will you collect from each API/website and store in a database? Be specific.
The 1st API will be used to get player data for each player and store them in a players data table. We will store stats like OPS for hitters and ERA for pitchers alongside some other important indicators of success.
The 2nd API will be used to get team roster information and store it in a team data table. We will store the top hitter for each position in the table as well as the top 5 starting pitchers and top 3 relief pitchers.
The MLB.com website will allow us to find the playoff matchups for a given year and store the matchups, game results, and series results in a database for each matchup/year. It also lets us store the home/away team in every matchup.

e. What data will you be calculating from the data in the database? Be specific.
We will be calculating team stats based on the individual stats of a team's roster. We will take the averages of certain player data to compare team data against other teams' data.
We will also be calculating how many "upsets" we find based on the data and see historically how they compare to the "better" team winning.

f. What visualization package will you be using (Matplotlib, Plotly, Seaborn, etc)?
Matplotlib

g. What graphs/charts will you be creating?
One graph will take several players' stats over time in order to see the trends in performance as players get older (will the majority of players get better, decline, plateau, etc.)

One chart will compare team statistics during the regular season to their performance in the playoffs (Answering 2 questions: Will the better team win on most occasions? Does good pitching or hitting prevail more in the playoffs?)
We also will plot the margin of victory and runs scored/allowed compared to who is the home/away team (Is home field advantage a real thing in baseball playoffs?).

h. Who is responsible for what? Please note that all team members should do an equal amount of programming and total work.
Each member will be responsible for 1 graph/chart each. We will also split the programming up so that each member creates a similar number of functions. Each member will be responsible for 1 API/website and creating the necessary database stores.