

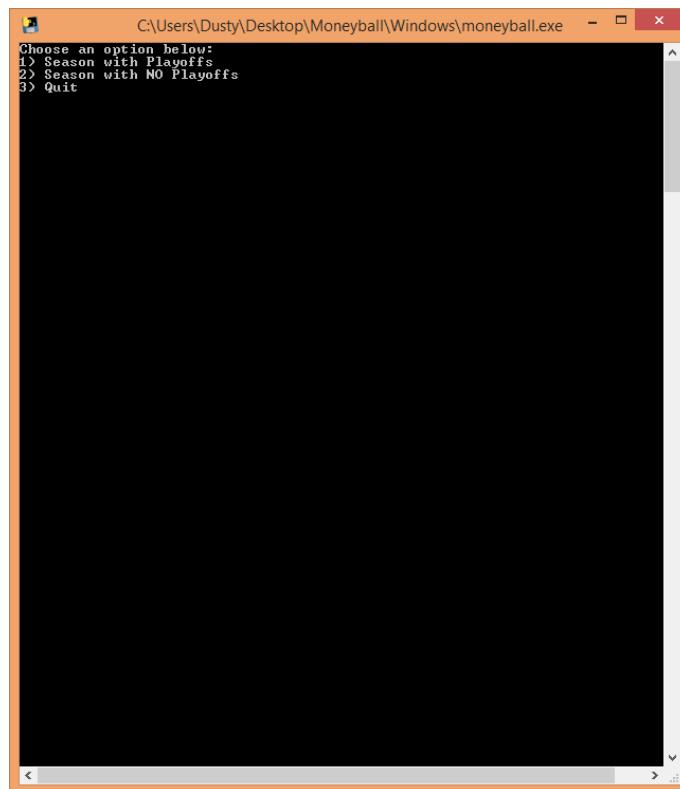
Using the Moneyball Simulator Program

This program simulates a simple draft of offensive players for a baseball team, and simulates a season of 10 games against every other team in the league. If playoffs are chosen, then the program also simulates a series of 7 games in each round between teams after seeding according to regular season record.

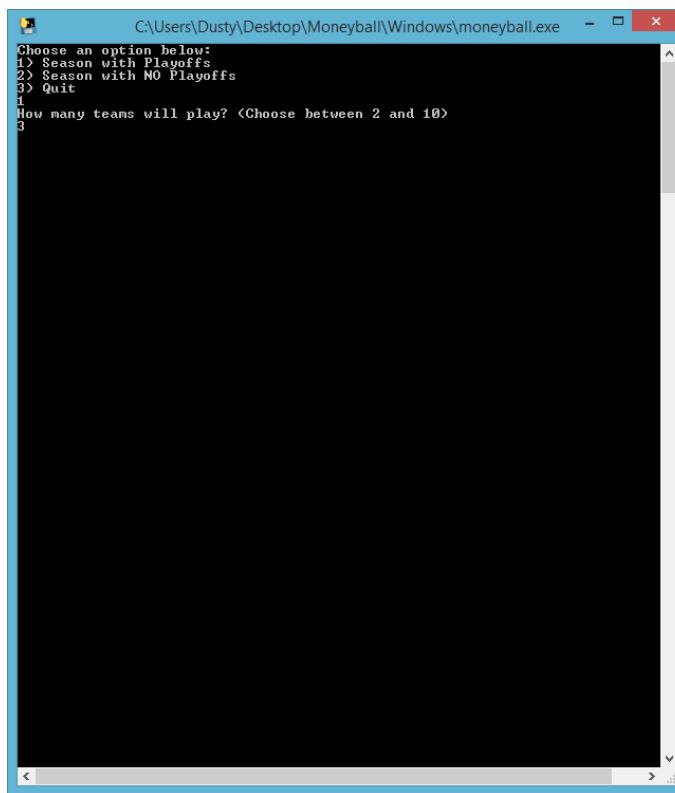
The goal of the program is to aid students in their understanding of Marginal Revenue Products by selecting players who are valuable relative to their wage, and to compete in an environment that is familiar to most students (sports). The program is compatible with the Windows operating system, and was written in Python. The program was inspired by the film Moneyball, and written by Dusty White and Jadrian Wooten in order to be able to apply the principles demonstrated in the film in their sports and labor economics courses.

Instructions for Simulation

1. Make sure that you have both the Moneyball executable file *and* the “playersheet.csv” file in the same folder. If you don’t then the program will not be able to run.
2. Open Moneyball.exe to begin the program.
3. Upon opening the program, you will be presented with a simple menu. Choose whether you would like to simulate a season with playoffs (an end-of-season seeded tournament to determine the league champion), or without. You are also given the option to quit the program.

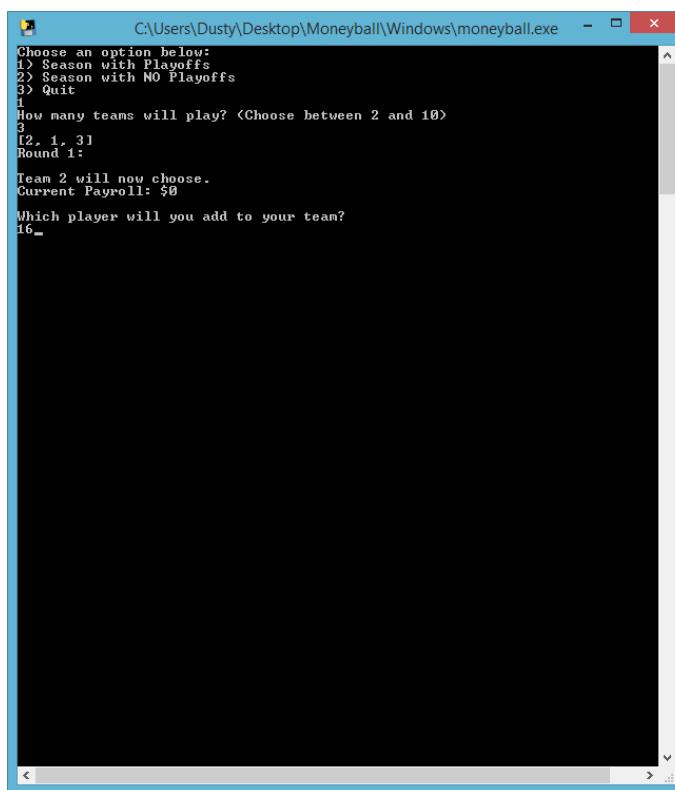


4. After selecting a league format, you are prompted to indicate the number of teams that will participate in the season. Choose a number between 2 and 10.
5. At this point, teams are randomly ordered for a 9-round draft. The team that selects last in one round will select first in the subsequent round.



```
C:\Users\...Desktop\Moneyball\Windows\moneyball.exe
Choose an option below:
1> Season with Playoffs
2> Season with NO Playoffs
3> Quit
1
How many teams will play? <Choose between 2 and 10>
3
```

6. As the draft proceeds, teams will be informed at the player selection prompt how much of their salary cap has been spent. The salary cap is currently set at \$40 Million. If a team exceeds the salary cap, all of their subsequent selections will be made by the simulator, and will be “Mendoza Players.”



```
C:\Users\...Desktop\Moneyball\Windows\moneyball.exe
Choose an option below:
1> Season with Playoffs
2> Season with NO Playoffs
3> Quit
1
How many teams will play? <Choose between 2 and 10>
3
{2, 1, 3}
Round 1:
Team 2 will now choose.
Current Payroll: $0
Which player will you add to your team?
16
```



```
C:\Users\Dusty\Desktop\Moneyball\Windows\moneyball.exe
28
Player28 already selected. Please make another selection.

Team 3 will now choose.
Current Payroll: $13075000.0
Which player will you add to your team?
29
Player29 already selected. Please make another selection.

Team 3 will now choose.
Current Payroll: $13075000.0
Which player will you add to your team?
30
Round 6:

Team 1 will now choose.
Current Payroll: $18300000.0
Which player will you add to your team?
31
Round 6:

Team 2 will now choose.
Current Payroll: $20000000.0
Which player will you add to your team?
32
Round 7:

Team 1 will now choose.
Current Payroll: $21800000.0
Which player will you add to your team?
33
Round 7:

Team 3 will now choose.
Current Payroll: $14775000.0
Which player will you add to your team?
35
Round 8:

Team 3 will now choose.
Current Payroll: $38775000.0
Which player will you add to your team?
```

7. After the draft is concluded, the simulator presents team statistics for each team in the league, and pauses in order to allow discussion of what expected outcomes might be.



```
C:\Users\Dusty\Desktop\Moneyball\Windows\moneyball.exe
Team 1 will now choose.
Current Payroll: $30800000.0
Which player will you add to your team?
37
Round 8:

Team 2 will now choose.
Current Payroll: $7650000.0
Which player will you add to your team?
38
Round 9:

Team 2 will now choose.
Current Payroll: $8650000.0
Which player will you add to your team?
39
Round 9:

Team 1 will now choose.
Current Payroll: $33800000.0
Which player will you add to your team?
40
Round 9:

Team 3 will now choose.
Current Payroll: $39175000.0
Which player will you add to your team?
41

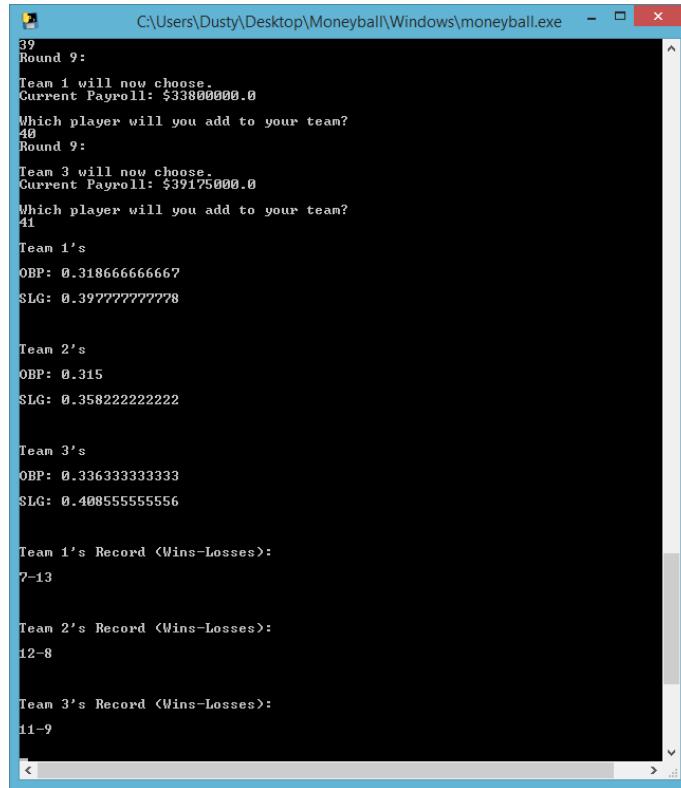
Team 1's
OBP: 0.318666666667
SLG: 0.397777777778

Team 2's
OBP: 0.315
SLG: 0.358222222222

Team 3's
OBP: 0.336333333333
SLG: 0.408555555556
```

8. Following the team statistics, the game will then simulate the regular season, with each team

playing all opponents 10 times. Regular season records are then presented, and the simulator pauses again to allow discussion of regular season outcomes. If you chose to play a season without a tournament, then the season concludes and a champion is declared.



The screenshot shows a terminal window titled 'C:\Users\Dusty\Desktop\Moneyball\Windows\moneyball.exe'. The window displays the following text:

```
39
Round 9:
Team 1 will now choose.
Current Payroll: $33800000.0
Which player will you add to your team?
40
Round 9:
Team 3 will now choose.
Current Payroll: $39175000.0
Which player will you add to your team?
41
Team 1's
OBP: 0.318666666667
SLG: 0.397777777778

Team 2's
OBP: 0.315
SLG: 0.358222222222

Team 3's
OBP: 0.336333333333
SLG: 0.408555555556

Team 1's Record <Wins-Losses>:
7-13

Team 2's Record <Wins-Losses>:
12-8

Team 3's Record <Wins-Losses>:
11-9
```

9. Using the number of wins in the regular season, the simulator seeds a tournament bracket and begins simulation of each round of the tournament. Each tournament round consists of 7 games against the single opponent. The simulation pauses after declaring the outcome of each match-up.
10. Tournament play proceeds until the League Champion is declared. After pausing, the simulator returns to the start menu.

```
C:\Users\Dusty\Desktop\Moneyball\Windows\moneyball.exe - □ X ^
```

41

Team 1's

OBP: 0.318666666667

SLG: 0.397777777778

Team 2's

OBP: 0.315

SLG: 0.358222222222

Team 3's

OBP: 0.336333333333

SLG: 0.408555555556

Team 1's Record <Wins-Losses>:

7-13

Team 2's Record <Wins-Losses>:

12-8

Team 3's Record <Wins-Losses>:

11-9

Tournament seeding:

1> Team 2

2> Team 3

3> Team 1

Team 3 vs Team 1

Team 3 advances to the Championship Game.

The League Champion is Team 2!