<u>Goals</u>

Our goal for the first sprint is to have the database and optimization process done for at least one sport, NBA. The backend of the app should be functional and capable of sending out an optimized lineup. The front end should be functional to send a request with parameters to a web server in order to request the optimization from the database.

- Website Working Draft
- FanDuel -> NBA ->Select Players for your Lineup -> Optimize the remaining positions for your lineup


<u>Sprint Backlog</u>

**[Overall Total Time : ~49.5hrs ]**

*Website Development [Total Time : ~5hrs ]*
- Create Initial NULL site via Github: [Done, ~1hr]
- Add Project Overview: [Done, ~1hr]
- Add Technical Features Summary: [Done, ~1hr]
- Add a Bio Page: [Done, ~1hr]
- Design and Add Subpages: [Done, ~1hr]

*Requirements and Analysis [Total Time : ~4.5hrs]*
- ER of Diagram: [Done, ~1hr]
- Sketch of User Interface Design: [Done, ~0.5hr]
- Research to determine ways for the back end database to interact with the user interface: [Done, ~3hr]

*Design and Implementation [Total Time : ~37.5hrs ]*
- Database [Done, ~25hr]
    - Create Oracle Database: [Done, ~1hr]
    - Set up Amazon Web Services (AWS) and Connect to Python: [Done, ~1hr]
    - Update NBA Stats: [Done, ~7hr]
    - Create Linear Regression Model: [Done, ~1hr]
    - Run regression and improve accuracy: [Done, ~2hr]
    - adjust the r^2 and p values to get more accurate: [Done, ~2hr]
    - Create optimizer: [Done, ~1hr]
    - Specify to each sport: [Done, ~2hr]
    - Connect backend to frontend: [Done, ~1hr]
    - Set up web server in Python using Flask: [Done, ~2hr]
    - Set up get requesting to communicate with the web server: [Done, ~2hr]
    - Implementation for simple user interface to verify front end to back end connectivity:  [Done, ~3hr]

- System User Interface [Done, ~12.5hr]
  - UI to Back End Connectivity and Compatibility: [Done,~4hr]
  - Page to select FanDuel or DraftKings: [Done, ~0.5hr]
  - Page to select desired sport: [Done, ~0.5hr]
  - Display players to select as part of the optimized lineup: [Done, ~3hr]
    - Player Description, Position, Team Name, Salary, Ranking
  - Generate Optimized Lineup Button: [Done, ~1hr]
  - Specifications for lineup choice page: Remaining Salary, Position Drop Down: [Done, ~0.5hr]
  - Parse incoming JSON to Java text box: [Done, ~3hr]

*Testing and Demos [Total Time : ~2.5hr]*
- Create "test.py" to test java to python compatibility: [Done, ~2hr]
- Create test file to implement HTTP Connection: [Done, ~0.5hr]