Initial Project Description

Team No. 8

Team Members:

- Aris Vinsant
- Thomas Angles
- Beau Hodes
- Justin Schreiner
- Cole Adam

Project Name:

Bet Liquid

Project Identifier:

Online exchange-based betting platform that allows users to predict the outcome of an event by buying shares in the end result

Project Description:

In the last two years, the market for legal sports betting in the United States has exploded. This is largely the result of the supreme court's 2018 decision to overturn the federal ban on betting. Since then, many large players in the casino & gaming industry have fought for market share using the same outdated betting platforms with high margins for the house and low liquidity for gamers looking to actively enter and exit their bets in real time. Our project is to create an exchange that allows players to bet against each other at all times. Ultimately, the bettors are betting the hopes of receiving a fixed payout of $1 per "share". The price of each share is the implied probability of that proposition coming true (in cents), and a payout of $1 will be made for each share that cashes out correctly. Our platform will use traditional sports betting lines to create an "opening line", and the free market of players will be able to take it from there. Our primary focus is to create an exchange for sports betting, but our ultimate vision is to create one online exchange for all prediction markets, regardless of the event.

Project Milestones

- First semester:
    - Have back-end in place (Firebase set up, at least 2 endpoints in our own API finished/working such as adding users or updating bets). This will also include deciding between NodeJS, ExpressJS, Pyrebase, or C++ for our own API. Estimated completion date: 11/27
    - Have documentation for back-end AND front-end in place (does not need to be fully written out, but deciding on a documentation tool and being able to generate

documentation at will should be done)
Estimated completion date: 11/27

- Ability to translate odds API data into implied probabilities before storing in Firebase (this will use Pyrebase).
  Estimated completion date: 10/16
- Create a comprehensive list of the gems that we will implement in the final design
  Estimated completion date: 11/2
- Make github repo that incorporates continuous integration using TravisCI
  Estimated completion date: 11/2
- Design the process of how the front end will communicate with the backend API (will likely need to add gems to accomplish this)
  Estimated completion date: 11/27
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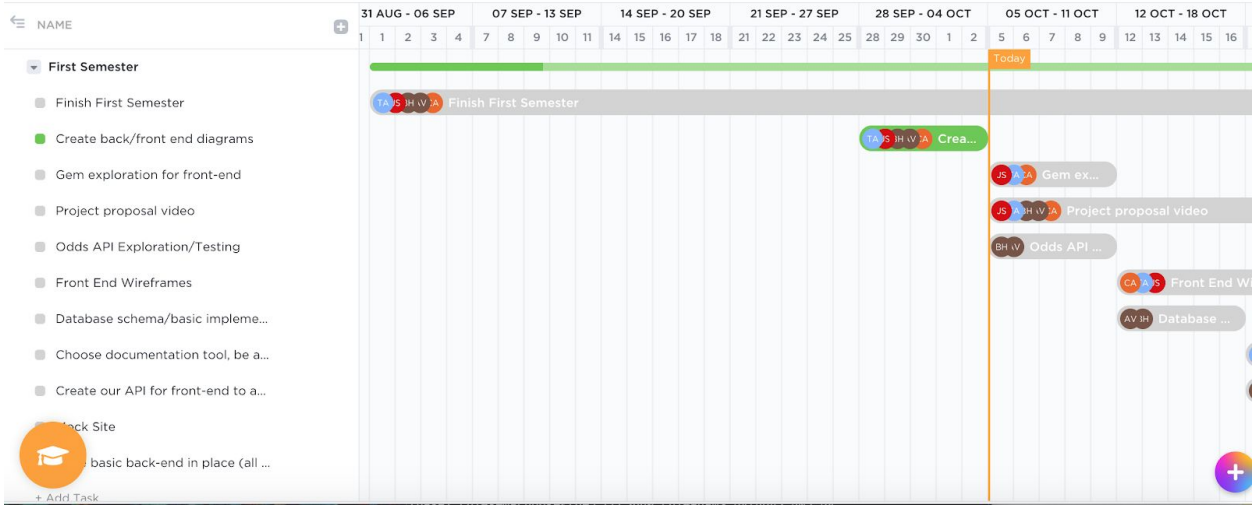
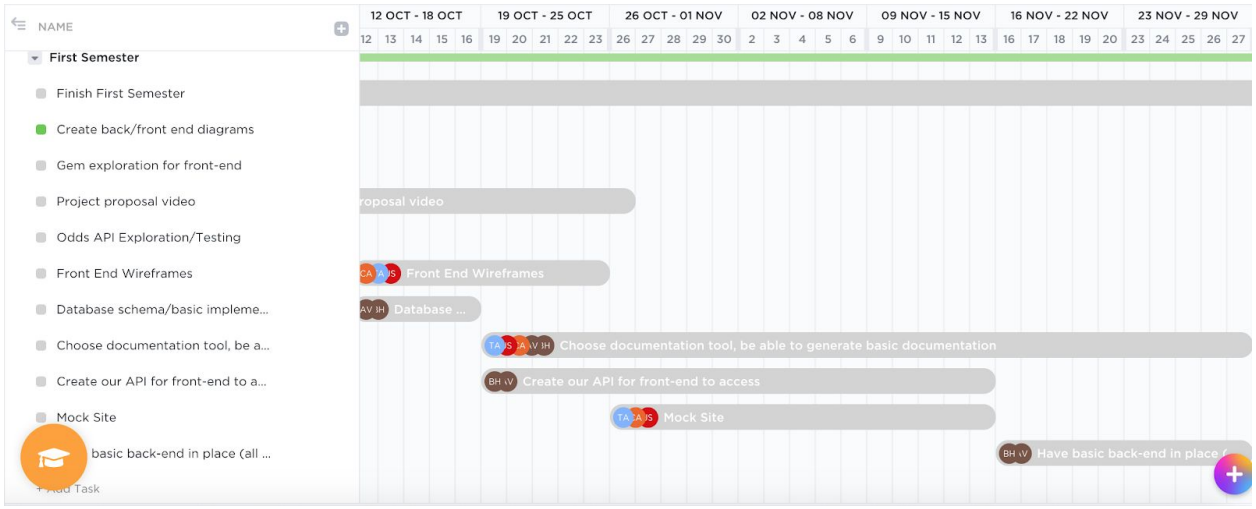
- *front end people add one here*

- Second semester:
  - Be able to update lines directly from implied probabilities (which will be pulled from odds API) for testing/demo purposes. In real life, the market would decide pricing, but we need to have this ability for testing/demo
    Estimated completion date: 2/19
  - Create graphs for pricing over time for events (for instance, the price of the implied probability for the Chiefs to win a certain game, starting from a week before the game up until the game is over, at which point it would be $1 or $0).
    Estimated completion date: 3/26
  - Complete documentation.
    Estimated completion date: 4/9 (roughly)

• Gantt Chart
https://app.clickup.com/8487240/v/g/830a8-56?pr=10713408





Project Budget

- Domain Name
    - $25
    - Date needed: ASAP
        - We've found a domain that we plan on using, so we hope to buy this as soon as possible so that we can secure the name.
- API requests - the Odds API, Rookie Subscription
    - $15/month
    - Date needed: January-May
    - We'll be able to scale down our project initially and reduce the scope of the available events which we'll allow users to place bets on. As the project gets closer to the final iterations, we'll need to expand the scope to allow the site to be fully functional.
- Total estimated costs:
    - $100