



Wacky Tanks

REALITY BYTES



Demo

<https://wackytanks.herokuapp.com/>

Wacky Tanks Application

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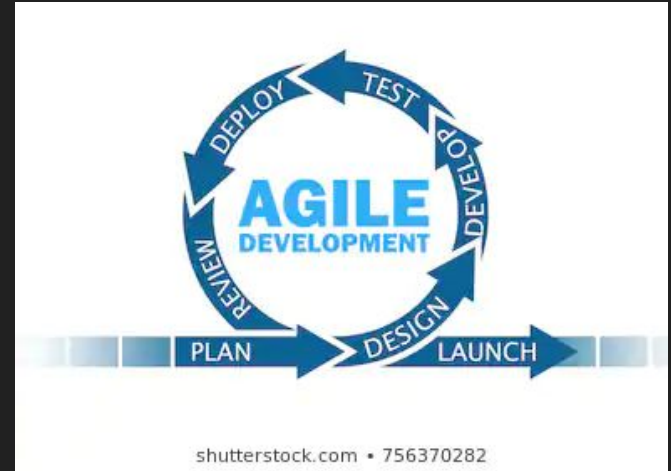
-Clint Eisenzimmer

About

- Wacky Tanks is an online multiplayer tank battle game
- We used agile/kanban development, atom, trello, HTML, CSS, Mongo DB, Heroku, Node JS, and Git Hub to build and operate the game

Agile Development (5 Stars)

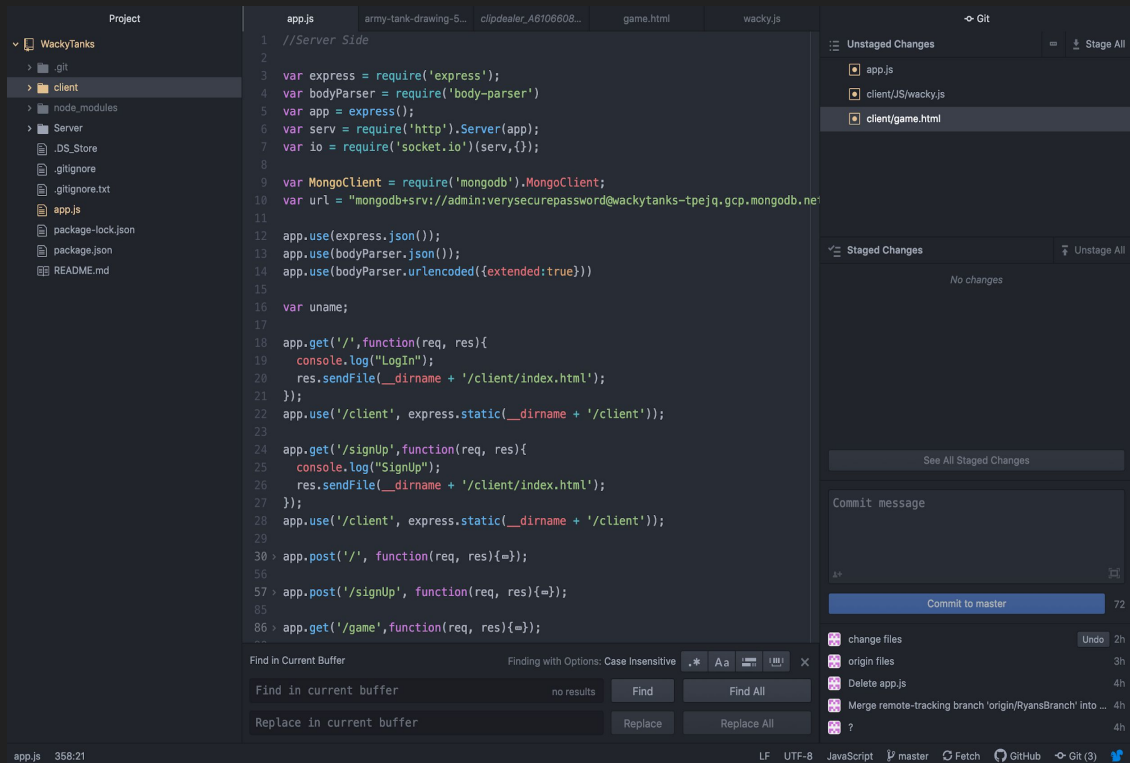
- Frequent Meetings
- Changing Goals
- Helpful with Learning Process
- Modified our Scope and Goals as we Went



IDE - ATOM (5 Stars)



- Easy to work with github
- Cross-platform editing
- Built-in package manager



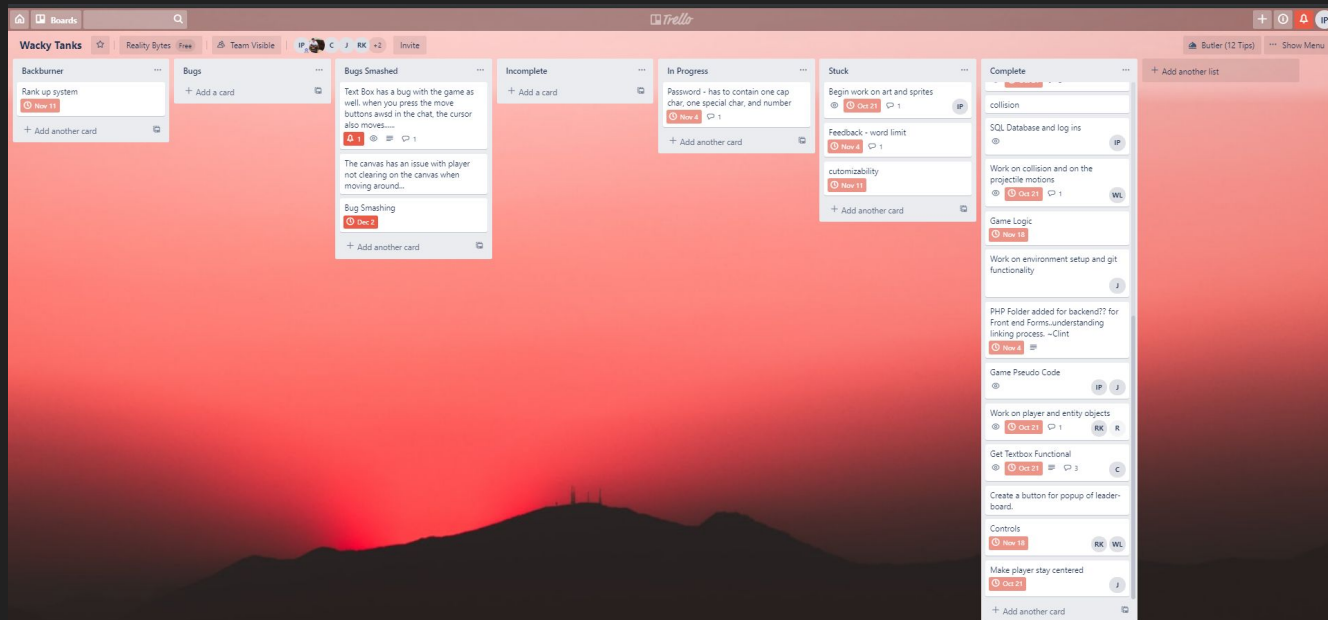
Project Tracker - Trello (2 Stars)

-Organization

-Focus

-Good for

Meetings



FrontEnd - HTML and CSS (5 Stars)

- CSS and Bootstrap
- Design
- Forms



Database - MongoDB (3 Stars)

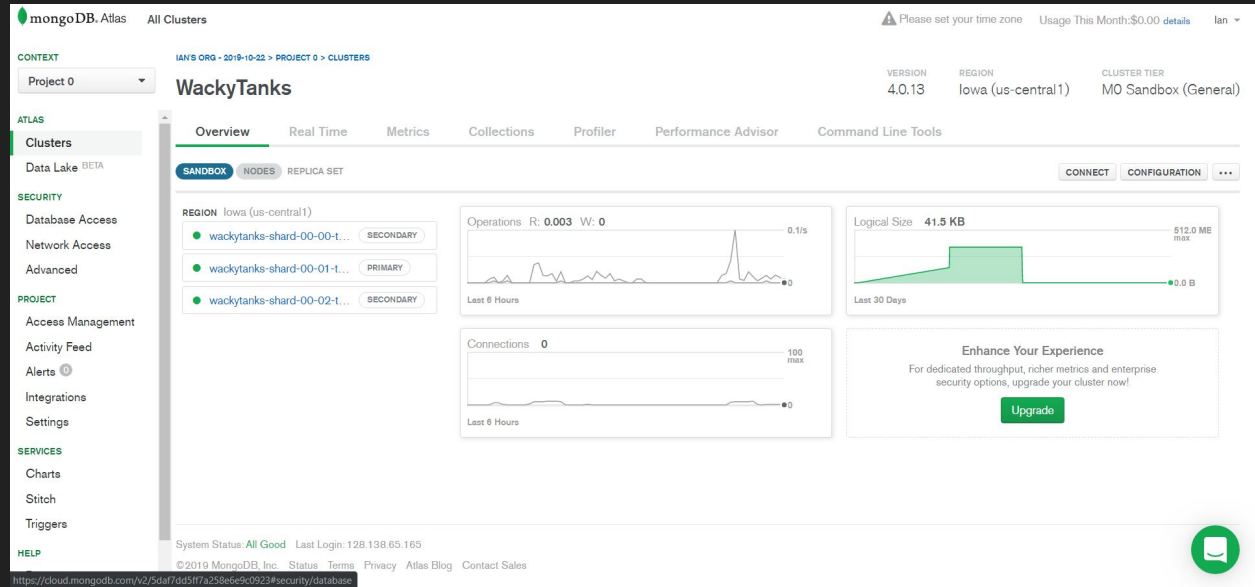


-Cloud Based

-Monitoring

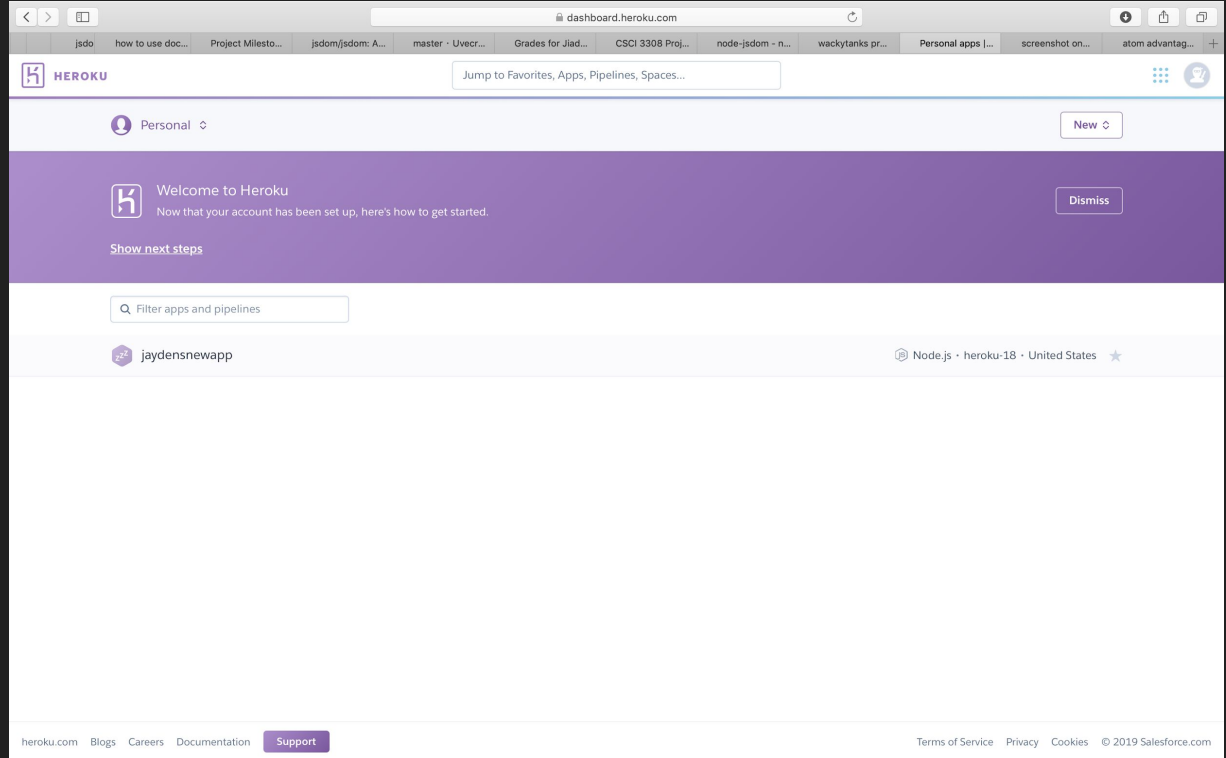
-Easy Integration

with NodeJS

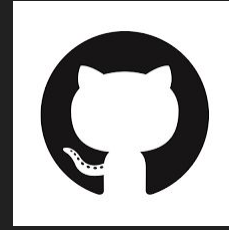


Deployment Environment - Heroku (5 Stars)

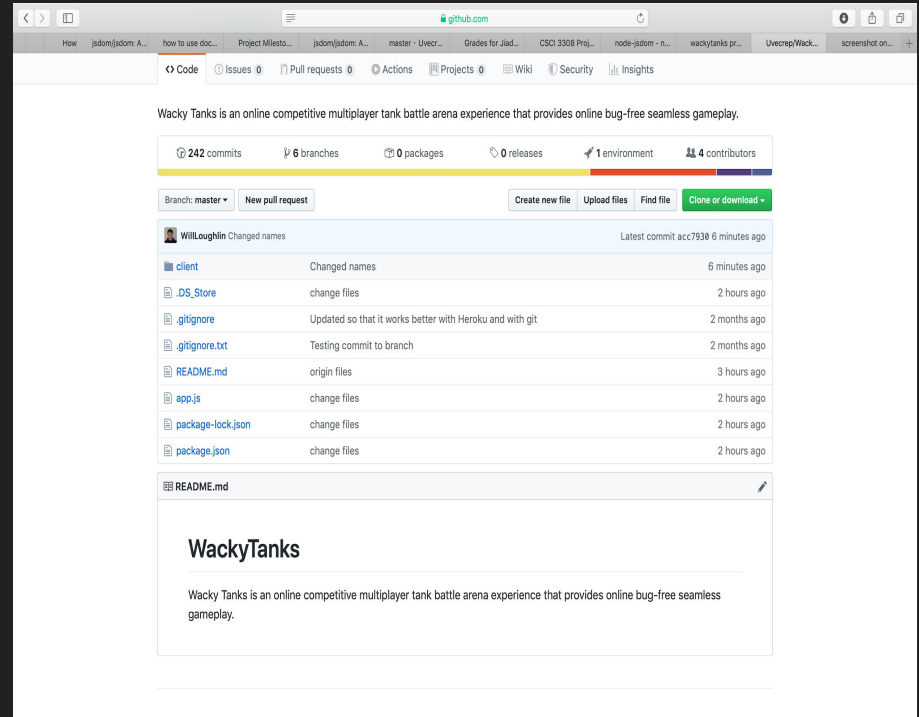
- Free
- Linked with Github
- Automatic/Easy Deployment



VCS Repository - Github (5 Stars)



- Each person work on their assigned part and save on individual branches to keep work organized
- Using Github Repository to merge branches to master branch



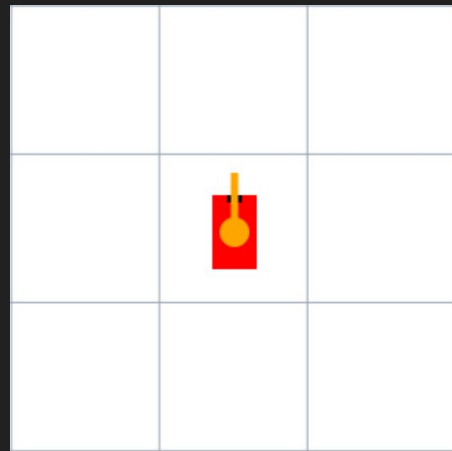
Framework - NodeJS (5 Stars)

- Good for Developing a Game
- Plays Nice with Others
- Server Separate from Client
- Socket.io and Express



Challenges

- Player Collision with Walls
- Bullet Collision with Walls
- Bullet Collision with Players
- Drawing Objects and Centering Players



Collision

- First task was bullet player collision
 - rotated frame of reference
- Then bullet wall collision
 - normal angle
 - Different cases for each side of wall
- Finally player wall collision, treated each corner of tank as point
 - Rotation matrix to determine (x,y) of each corner of the tank
 - Check against each wall

