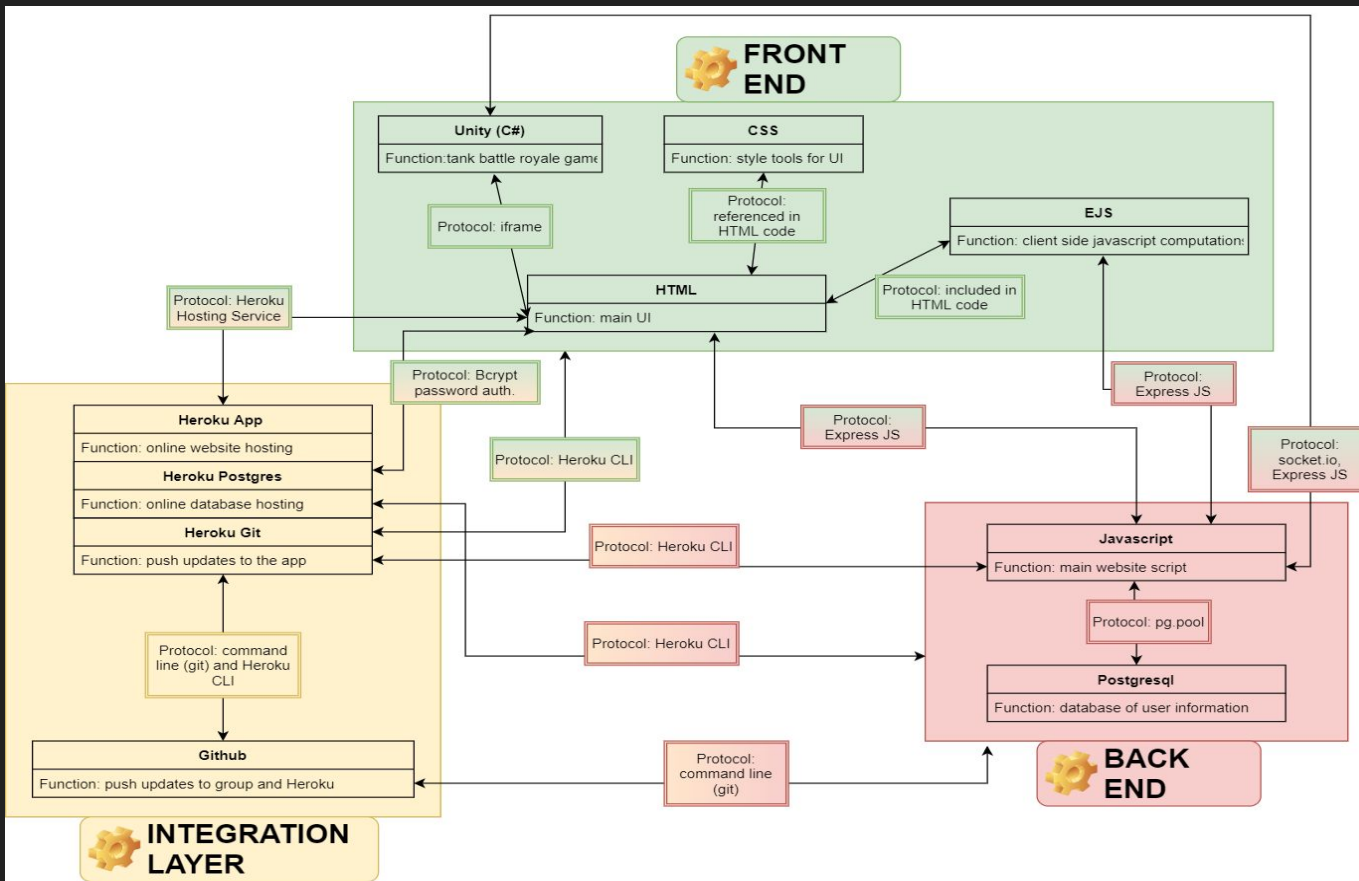


Tank Royale

Jake Martin, Ryan Marizza, Angelo Vacca,
Mauro Nannini, Chirag Telang

Tank Royale Architecture Diagram



Development and Organizational Tools

Project Tracker: TRELLO

VCS repository: GITHUB

Database: PostgreSQL

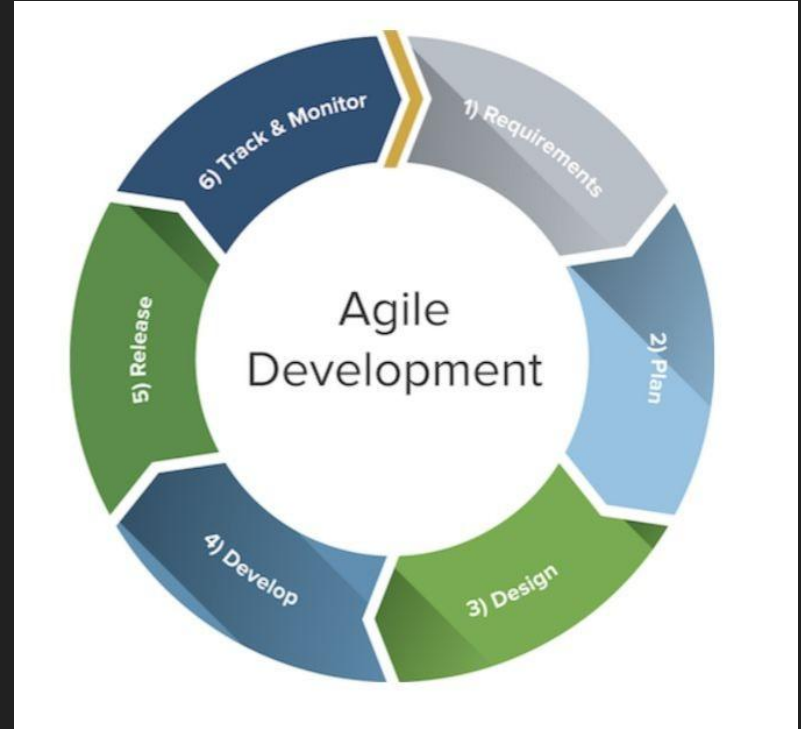
Deployment: Heroku

IDE: Atom, Visual Studio Code

Framework: Node.js / Unity WebGL build

Agile: Methodology

- Allow for general adjustments and changes as the project advances
- Iterative model
 - Plan iterations to complete in sprints
 - Allow for flexibility
- 2 week sprints
- Work collaboratively
- Keep track of progress using Trello Board and GitHub meeting log repository
- Code reviews on pull requests
- Grade: 5/5



Trello: Project Tracking

- Project tracking and organization
- Grade: 3/5
- Useful in concept for assigning tasks
- Good visual layout
- Good for organizing our thoughts initially, but afterwards we mostly stopped using it, as it didn't feel essential



Boards

Board ▼ TankBR

Private Team

Private

CT R AV JM M

Invite

To Do

The user wants to loot other fallen players

Have multiplayer matchmaking set up over the server, with winnable games

Implement main menu / menu navigation

Matchmaking will take up to 50% less time.

As a player, I want to be able to see stats at the end of the match.

As a player, I want to have visual cue of how long reloading is taking.

As a player, I want to be able to customize my settings with regards to gameplay.

As a player, I want to be able to look at minimap in-game.

The map shall allow the presence of plains

System will display eliminations by showing the killer's name, followed by the victim's name

+ Add another card

Doing

Have server send email when a user registers or deletes an account

Update Login/Registration page UI

Create hitbox for user

+ Add another card

Done

Have basic unity game with "WASD" tank movement control

Have basic website hosted online via Heroku

Login page

Registration page

Password Encryption

Milestone 2 Document

Make a camera that follows the player

Implement projectile aiming/firing with mouse

+ Add another card

+ Add another list

Calendar

Butler

Menu

About This Board

Change Background

Search Cards

Stickers

More

Butler

Power-Ups

Calendar

Activity

Angelo Vacca marked the due date on Create hitbox for user complete

Jake Martin moved Implement projectile aiming/firing with mouse from Doing to Done

Angelo Vacca moved Make a camera that follows the player from Doing to Done

Angelo Vacca added Make a camera that follows the player to Doing

Jake Martin joined Create hitbox for user

Jake Martin added Angelo Vacca to Create

GitHub: VCS Repository

- Remote repository for development
- Repositories for meeting logs, milestones, and “Tank Royale” frontend/backend code
- Grade: 5/5
- Integrated pull requests with built in code review functionality



master 6 branches 0 tags

Go to file

Add file

Code

JakeMartin99 update heroku backup

25e37e2 5 days ago 62 commits

All project code	update heroku backup	5 days ago
Milestone Submissions	Add files via upload	16 days ago
Team Meeting Logs	Create Meet_9-11-20	3 months ago
Test files	test login page	2 months ago
.gitattributes	Unity Changes	20 days ago
.gitignore	perhaps now?	9 days ago
README.md	resolved merge conflict	2 months ago

README.md

Project Team Members 1 Angelo Vacca, 1 Mauro Nannini Ryan Marizza Jake Martin I am adding more text here now ;)
Jake Martin Chirag Telang

About

No description, website, or topics provided.

[Readme](#)

Releases

No releases published
[Create a new release](#)

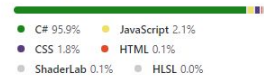
Packages

No packages published
[Publish your first package](#)

Contributors 5



Languages



Activate Windows
Go to Settings to activate Windows.

master The-Ominous-Corp / All project code / Go to file Add file

JakeMartin99 Reformat File Structure of Repo c74086 13 hours ago History

..

TankRoyaleSite/site login/homepage changes 10 days ago

UnityGames/Tank_Royale_Game Unity Changes 20 days ago

immense-cliffs-backup Reformat File Structure of Repo 13 hours ago

login page/login page login/homepage changes 10 days ago

profilepage profile page 16 hours ago

shoppage shop page 14 hours ago

c Create "All project code" folder 3 months ago

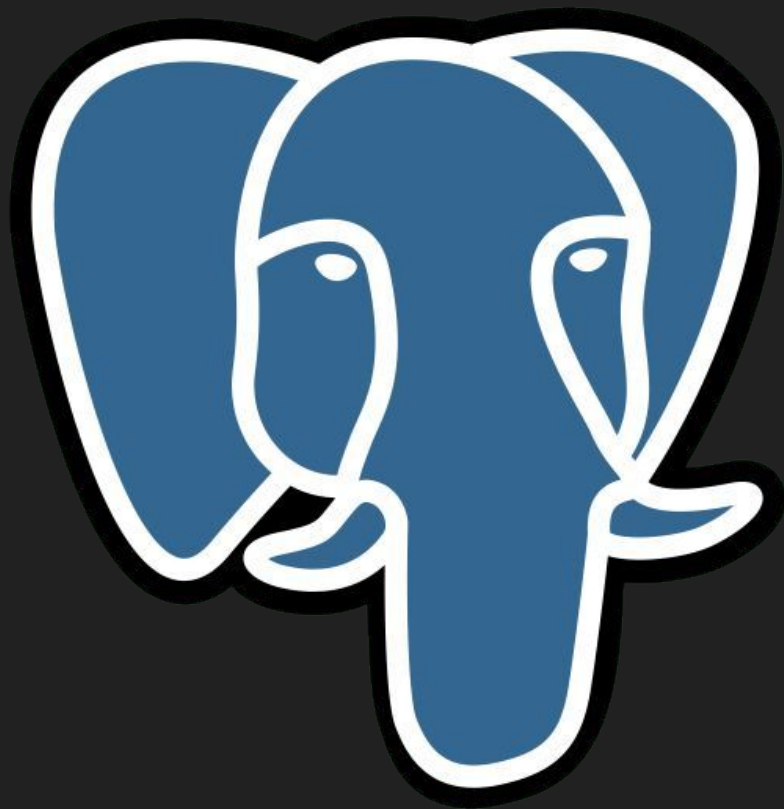
NodeJS: Framework

- Web framework
- Grade: 5/5
- Easy to follow tutorials, led nicely into project development
- Handled full stack
- Built in template language and handler for dynamic html generation



PostgreSQL: Database

- Grade: 5/5
- Handled through Heroku Postgres
- Designed early on
 - Took full advantage of relational abilities of the database
 - Database Normalization
 - Well structured and defined from the beginning



Id (serial) (PK)	Email (unique varchar)	name (varchar)	Encrypted Password (varchar)
1	test@gmail.com	testo	e5e9fa1ba31ecd1ae84f75caaa474f3a663f05f4
2	john@gmail.com	johntank	d1e8a70b5ccab1dc2f56bbf7e99f064a660c08e3
...

Database Structure/Design

Unity : Game-building Tool

- Development environment / tools for games
- Grade: 3/5
- Made designing and coding the game features relatively easy
- Sometimes slow, and hard to get working with Heroku
- Unity API was very useful in writing scripts for the game mechanics we implemented
- Assets store gave easy access to many simple characters and object textures
- Unity's popularity meant many tutorials existed and were useful for the making of our game's mechanics



Heroku: Deployment

- Deployment
- Grade: 4/5
- Many additional things to consider when moving to production
- Slow loading for free tier



heroku

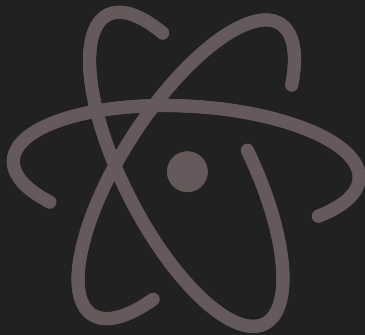
Atom, Visual Studio Code: IDEs

Visual Studio Code (5/5):

- Good user experience
- Integrated git
- Integrated diff tool to make merge conflicts a breeze

Atom (5/5):

- Integration with GitHub



Challenges

- Sickness
 - One of our group members contracted COVID-19 as well as a sinus infection, which kept him out of work for several weeks
- Heroku
 - Sometimes debugging was difficult due to minor errors completely crashing the site
 - Getting it to work with Unity was a massive challenge
 - The “rollback” feature ends up breaking some of the git functionality, which is a pain to fix
- Unity
 - Pushing to and pulling off of unity tended to be slow and inconsistent when merging scripts
 - Loading changes to scripts was also slow
 - Trouble integrating a build with Heroku