Team Group Number: 201-4
Team Name: Ominous Corp.
Members:

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

Application Name: *Tank Royale*

Project Features List:

- Registration Page
  - An HTML front-end webpage that consists of fields where new users are able to create an account using an email and password.
- Login Page
  - An HTML front-end webpage where returning users are allowed to gain access to the Tank Royale Application by entering their email and password.
- Tank Battle Royale game
  - Application accessed via a web server where users can play a Tank Battle Royale game, FFA (free for all) and/or teams in which they try to deplete their opponent(s) health.

Requirements:
Basic:
- **Functional**
  a. Email must be sent once a user registers on the website for the first time.
  b. Email must be sent if a user deletes their account
  c. As a player, I want to be able to join a game with other players.
  d. As a player, I want to be able to move tank and fire weapons.
  e. Game will be won by a player or team.
  f. As a player, I want to deal damage to enemy players
  g. As a player, I want to have a menu to be able to navigate between lobby and matchmaking.
  h. As a player, I want to be able to check on their own health during a match.
- **Non-Functional**

a. Emails should be sent with a latency of no greater than 1 hour from such an activity.
b. Player will select a button in main menu to queue into a matchmaking which will find an available occupancy on a server; will take no longer than 90 seconds.
c. Player will be able to move on an x, y axis (and any combination thereof) while having a weapon that fires single rounds at a maximum of every x seconds. (move with wasd and aim weapon with cursor)
d. Player will be limited to 180 degrees of aiming range
e. Player or team will reach a certain score limit or time will run out (x kills or y minutes, whichever comes first).
f. Damage will be taken by enemies if hitbox is hit by a player projectile.
g. Menu will contain Matchmaking and Quit options.
h. Players will have a health pool visualized in a horizontal bar at the bottom of the screen during a match.

Performance:

- **Functional:**
  a. Matchmaking will take up to 50% less time.
  b. As a player, I want to be able to see stats at the end of the match.
  c. As a player, I want to be able to not deal damage to teammates.
  d. As a player, I want to be able to customize my settings with regards to gameplay.
  e. As a player, I want to have visual cue of how long reloading is taking.
  f. System will display eliminations by showing the killer's name, followed by the victim's name
  g. As a player, I want to be able to look at minimap in-game.
  h. The map shall allow the presence of plains
  i. The map shall allow the presence of obstacles (water, trees, etc.)
  j. Player will be displayed the environment within a certain radius of the player's tank

- **Non-Functional:**
  a. Optimize code to let players join matches faster or include AI NPCs to fill the match faster if no players found.
  b. Image of Chart will show all the players number of kills and deaths.
  c. System will prevent two players from having the same username
  d. Settings option in the main menu will be added.
  e. Dotted circle on bottom of the screen will take 3 seconds to created a circle indicating weapon is reloaded and ready to fire.
  f. Cell added in top right corner that shows position on map (x,y axis)

Excitement:

- **Functional:**
    a. As a player, I want to be able to heal a portion or all of health during a match.
    b. As a player, I want to be able to create a party to invite and join friends.
    c. As a player, I want to be able to customize tanks in lobby.
    d. As a player, I want to be able to play objective based game modes.
    e. As a player, I want to be able to host their own custom games with their desired settings
    f. The endgame chart will include assists.
   g. Players can see other players' "skins" in the same party in the lobby.

- **Non-Functional:**
    a. Players will obtain health on kill or there will be a designated area (hot zone) which is dangerous (i.e. open area that is central) in which they will drive their vehicle over said area and restore a portion of or all health of that player.
    b. Players will have an additional menu option in the lobby to play objective based game mode. (king of the hill?) by holding a certain hot zone on the 2D map.
    c. Button in the main menu that will let players customize tanks with different color options.
    d. Once tank is customized, the player will see their new tank on the menu screen
    e. Players will be able to select between original game mode and second objective-based game-mode.
    f. If multiple players are on the same team, there will be some distinguishing factor (such as color) that identifies them with their particular team
    g. Additional columns of cells will be added to include assists. Assists calculated by damage done to enemy(ies) but not final blow. (maybe calculated by percent of damage done, not final blow, bc that leads to picking off kills)
    h. Allow clients to sync with the server to communicate visual skins to all
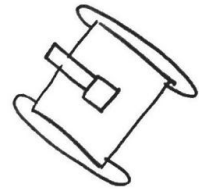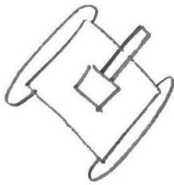
Project Plan:
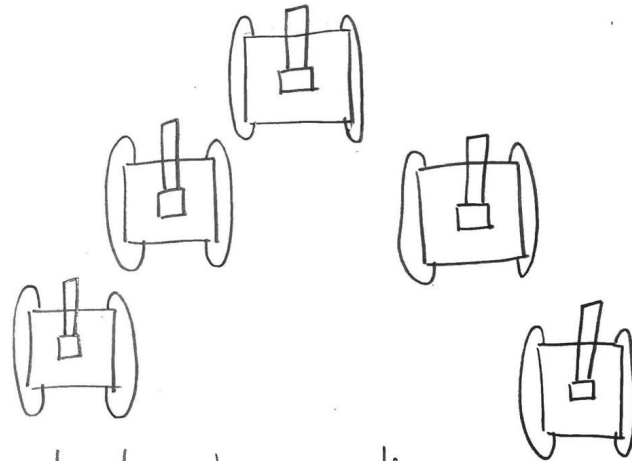https://trello.com/invite/b/GVMqp4Ri/8fe4651296cd63bfd8c15151da3cbf2d/tankbr

Wireframes:
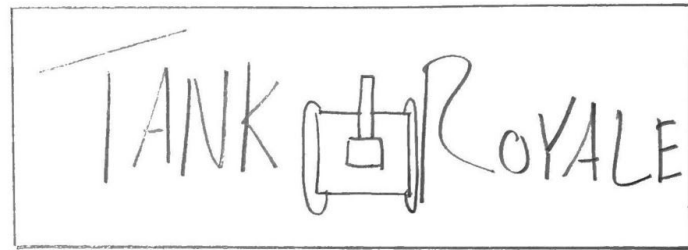
TANK ROYALE

Press any key to continue

MAIN MENU

HIGEST SCORE: 789

MATCHMAKING

SETTINGS

QUIT

Earn your way to glory by competing in matches.

Social Media

Tank Royale

Login/Register

Frame 2

Frame 1

Profile

Shop

Challenges

Settings

About Us

Your Tank

Leaderboard

Join Game

Host Game

Terms   v1.0.0
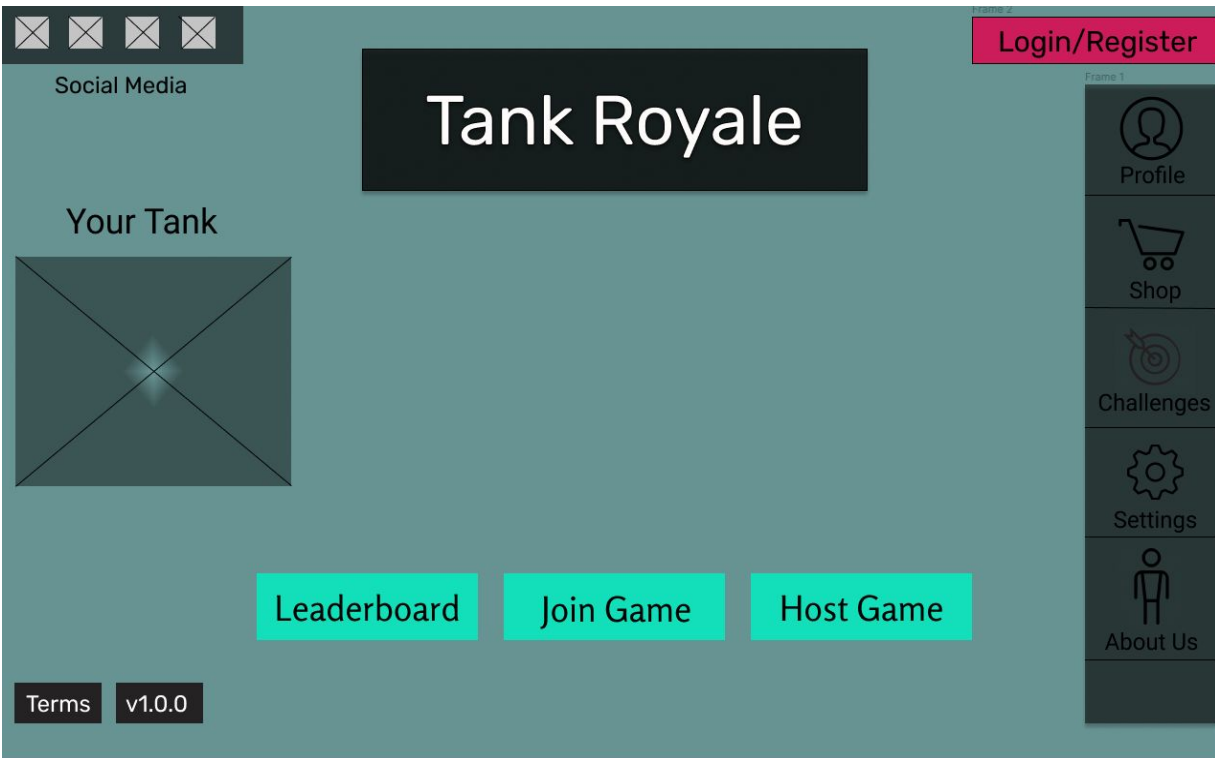
TANK ROYALE

BOB
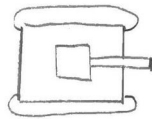
100/100 (R)

TANK ROYALE
VICTORY

2:47

RANK	NAME	KILLS	DEATHS
	FREE FOR ALL		
1 *	Bob Saget	15	0
2	Bill Cosby	7	9
3	J. Epstein	6	8
4	Jeff Bezos	6	5
5	Sean Connery	5	6
6	Jeff Goldblum	4	0
7	Will Smith	3	3
8	C. Boseman	2	1
9	Ralphie	1	3
10	Taika Watiti	0	30

QUEUE FOR MATCHMAKING

Return to MAINMENU

Individual Contributions:

- Jake Martin:
  - Unity
- Ryan Marizza:
  - Login/Registration Page
  - Heroku Website Hosting https://immense-cliffs-00493.herokuapp.com/
- Angelo Vacca:
  - Unity
- Mauro Nannini
  - Milestone 2 Document Rough Draft
- Chirag Telang
  - Comm Lead + Hi-Res Wireframe
  - Added several functional/non-functional requirements

https://csci-3308-fa20-201-4.atlassian.net/secure/RapidBoard.jspa?rapidView=1&atlOrigin=eyJpIjoiYjYxNTVmYTdjYmI4NDQ2ZmIwN2EzMzllOTJjNzE4Y2QiLCJwIjoiaiJ9