

Battle Of the Tanks

Team Members

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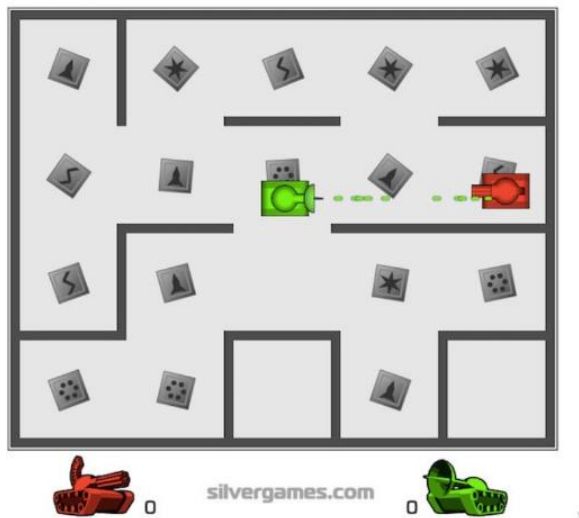
Game Summary:

In this game you and another player will fight on 3 different battlefields using tanks. The goal is to eliminate the other player on each map. To eliminate the other player, you must shoot them 3 times. Another way a player can die is by touching obstacles on the map. Once a player is eliminated the map will change, along with the obstacles. There will also be med kits/heals that spawn at random moments that heal 1 heart from the player that consumed it.

The default shooting speed is around 1 shot every 2 seconds but, if an obstacle is broken it will be replaced with a power up which will give the player a faster shooting speed or faster movement speed. Before the game starts there will be a 3 second splash screen with the team members' names, school, course and logo. After that there will be an intro screen with a play button and once that is pressed another splash screen with the controls will show up.

Related games

Tank trouble



Tank Masters



Awesome Tanks



User Interface Mock-ups:

There will be a couple of different maps.
Each different level will have a specific biome and obstacles that the user has to avoid.

One of the levels will take place on a volcano area

It will have a couple of different obstacles such as volcanos and lava globs



The holes in the ice and the cracks with the lava are just decor, they don't affect the player.

The next one will be in a snowy and icy biome.

Snow mans and ice spikes will be the obstacles.



For our third level its a desert area

Obstacles are boulders and cacti



(not final image)

Here are the different obstacles:

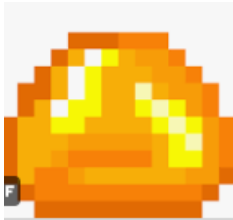
Volcano:



Snowman:



Lava: (not actual drawing)



Ice spikes: (not actual drawing)



Rocks:



(not final image)

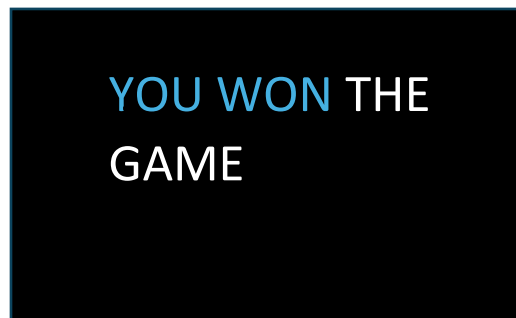
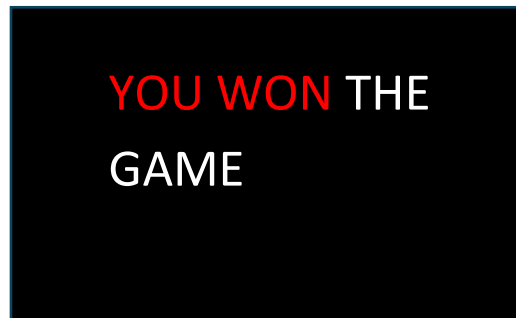
Cacti



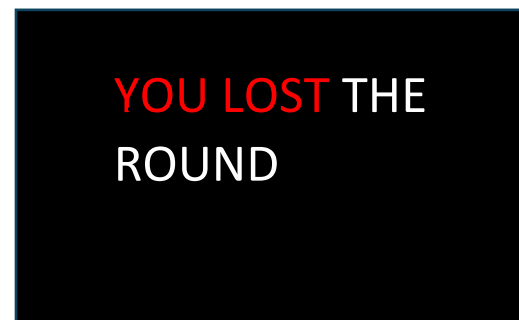
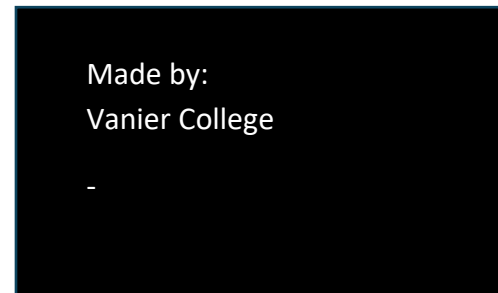
(not final image)

When a player wins, it will transition to a Winning screen. This will happen when a player wins 2 games, because it is the best out of 3 games. The text will be either blue or red, depending on the player that won

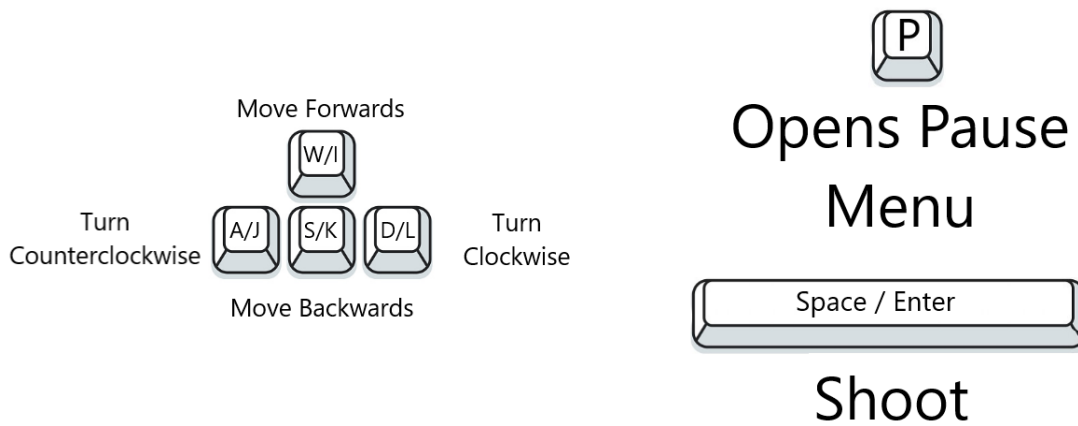
Splash screen prototypes



When you get eliminated, it will quickly transition to a "you got killed" screen, then it will go on to the next round. Once again, the text will either be blue or red.



Learn the controls



Controls

Player 1:

W = move forward

A = turn to the left

S = move backwards

D = turn to the right

Space = shoot

Player 2:

I = move forward

J = turn to the left

K = move backwards

L = turn to the right

Enter = shoot

Task and Schedule Breakdown

Phase 1 – Base Game

Player Controls and Movement (Due: October 25, 2024)

- **Responsible:** *Kiavash Emrani*
- **Tasks:**
 - Implement Player 1 controls (WASD for movement, space for shooting).
 - Implement Player 2 controls (IJKL for movement, Enter for shooting).
 - Set tank speed, rotation rate, and responsiveness to input.
 - Test for input conflicts and smooth movement.

Shooting Mechanics (Due: October 28, 2024)

- **Responsible:** *James Luciano*
- **Tasks:**
 - Implement the firing mechanism for tanks (single bullet).
 - Set bullet properties (speed, direction).
 - Create a visual bullet image and a firing animation.

- Set a firing rate with a cooldown (e.g., 1 shot per second).
- Ensure bullets are destroyed after a set distance or when colliding with objects.

Collision and Health Systems (Due: October 30, 2024)

- **Responsible:** *Charles Jacob Winkler*
- **Tasks:**
 - Implement collision detection for tanks vs. map obstacles (e.g., tanks can't pass through walls).
 - Detect projectile collisions with tanks.
 - Implement a health system for each tank (e.g. start with 3 lives; each bullet reduces one life).
 - Create death event when a tank's health diminishes (e.g. tank explodes)

HUD and Scoring System (Due: November 2, 2024)

- **Responsible:** *Vlaicu-Matei Suba*
- **Tasks:**
 - Create an HUD displaying each player's lives left.
 - Make sure the HUD updates in real time as the game progresses (lives drop)

Phase 2 – Game Features

Power-ups and Obstacles (Due: November 7, 2024)

- **Responsible:** *The Ving Vuong*
- **Tasks:**
 - Implement power-ups (e.g., extra lives) that appear at random times.
 - Create a system for tanks to collect these power-ups.
 - Implement obstacles such as destructible walls and destructible obstacles that block movement and projectiles.

Sound Effects and Background Music (Due: November 10, 2024)

- **Responsible:** *Kiavash Emrani*
- **Tasks:**
 - Add sound effects for tank movement, firing and bullet impact.
 - Include background music that loops during game.
 - Ensure sounds are synced with game actions.

- Ensure gameplay balance (tank speed, firing rate, health).
- Optimize the game's performance by making code more efficient layout.

Phase 3 – Testing and Adjustment

Bug Fixes and Debugging (Due: November 20, 2024)

- **Responsible:** *Entire team*
- **Tasks:**
 - **James Luciano:** Test collision detection (bullets hitting walls, tanks, and obstacles).
 - **Charles Jacob Winkler:** Fix movement issues (e.g., tanks getting stuck).
 - **The Ving Vuong:** Test power-ups, ensuring they trigger correctly.
 - **Kiavash Emrani:** Verify sound syncing and adjust volume if needed.

- **Polishing and Final Touches (Due: November 23, 2024)**

- **Responsible:** *Charles Jacob Winkler, Vlaicu-Matei Suba*

- **Tasks:**
 - Improve the overall visual presentation (sprites, animations, HUD layout).

- **Final Playthrough and Optimization (Due: November 25, 2024)**

- **Responsible:** *Entire team*
- **Tasks:**
 - Playtest the game end-to-end to ensure there are no bugs or performance issues.
 - Verify that gameplay is smooth and responsive, with no lag.
 - Test on different computers to confirm consistency.

Phase 4 – Submission

**Final Game Submission (Due:
November 28, 2024)**

- **Responsible:** *Entire team*
- **Tasks:**
 - **Charles Jacob Winkler:**
Package the final game with all necessary files (Greenfoot project, sounds, images, etc.).
 - **Kiavash Emrani:** Ensure the game is zipped and ready for submission on GitHub.