

Bomb-Golf (not final name)

Technical Specs:

Libraries: [three.js](#)(3D), [Ammo.js](#)(Physics)

View: Third Person

Language: TypeScript

Requirements:

- It is built using a platform (i.e. engine, framework, language) that does not already provide support for 3D rendering and physics simulation.
- It uses a third-party 3D rendering library.
- It uses a third-party physics simulation library.
- The playable prototype presents the player with a simple physics-based puzzle.
- The player is able to exert some control over the simulation in a way that allows them to succeed or fail at the puzzle.
- The game detects success or failure and reports this back to the player using the game's graphics.
- The codebase for the prototype must include some before-commit automation that helps developers, examples:
 - Linting
 - Autoformatting
 - Blocking commits for code that does not pass typechecking or other build tests
- The codebase for the prototype must include some post-push automation that helps developers, examples:
 - Automatic packaging and deployment to GitHub Pages or [Itch.io](#)
 - Automatic screenshot generation using a headless browser
 - Automatic interaction testing where a fixed sequence of input is executed to ensure the game reaches an expected state

Gameplay:

The game features a bomb and you have a certain amount of turns to move that bomb into the blast containment. The less movements you use, the better your score will be. The bomb will explode based on how many turns the bomb displays.

For example level 1 has 3. If the bomb explodes after the third and last turn, they lose.

Movement:

At the start of the turn, the player can choose which direction they want to push the bomb by selecting an area around the bomb to place a club. The club should disappear after the turn so they can place it near the new location of the bomb. Then, when the player is about to use a turn, the player holds down the space button to charge a push. If the player's push is above a threshold, the push can turn left or right uncontrollably, (like in wii sports golf). The bomb will explode if they do not move in time. There will be a countdown after every push.

For example, on the first turn, the player must push the bomb within 30 seconds, then on the second turn they have 20 seconds, then on the last turn they have 10 seconds. The bomb will decrease its time until it explodes.

Physics:

When the player pushes the bomb, it interacts with the environment. The bomb behaves like a ball and will roll around and collide with walls. The environment can have low and high points and the bomb will slide from those low and high points. The bomb can hit through certain objects and breakable walls. On later levels, there will be hazards that will explode the bomb if touched.

Success/Failure:

When the player successfully pushes the bomb into the hole, they complete that level, if not, the bomb explodes and the player loses. The game's graphics will reflect this with either the bomb falling in the hole or having the bomb explode.