Cubera

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Inhaltsverzeichnis

Section 1 – Game Overview

Working Title

Cubera

Genre

3rd Person Shooter/Action-Shooter

Summary

A Fast-paced, 3rd Person, Local-Multiplayer Shooter where you play a physics controlled cube. Just like a **Dice** you roll around and try to shoot your opposing players and if that's not enough, there are many more little gimmicks to make the game worthwhile!

The Plot

The world is filled with Cubes. The race of the Cubes started its own civilization and were divided amongst each other. Each civilization receiving a colour they wage War for supremacy and they try to eradicate their Enemies until the last one is gone entirely. You are from the great new generation of the cubes and it is your duty to fend the enemies off and survive in the grand Cube Wars! Let your journey begin.

Mindset

The Players need to feel a competitive vibe and need to want to win against the others. To avoid a big disparity between "better" and "worse" Players the game is meant to be fast paced and chaotic. The chaos and shooting all over increases the fun factor and eliminates the pure necessity of skill and increase occurrences of luck and "fun" situations. This should allow most players to have fun even without being a "hard core" gamer, what is kind of a standard in normal multiplayer shooter games like "Call of Duty". It is more aimed at "casual" gamers and should allow the feeling of winning and achieving in all Players. The hurried atmosphere of the game needs the Players to do split decisions and occurring luck for them to win. Additionally there is a fun factor in the player controls. Being able to climb walls and explore the level while trying to move to an adventurous position or simply just running away from enemies should be fun and is achieved through the extremely dynamic control over the character.

Target Audience

Older Children, Teens to Adults 12-26

Reference Games

Unreal Tournament

Quake

Halo (The Multiplayer Part)

Cube 2: Sauerbraten

Section 2 – Feature Set

General Features

Physics- Based Character Controller

Rolling a die (you are the die)

Wall Climbing

Fast Paced Gameplay

Power Ups

Multiplayer Features

Local Multiplayer

For 2 – 16 Players

Targeted Platforms

Windows

Mac OSX

Linux

Section 3 – Core Gameplay Mechanics

Physics Based Character Controller

- <**Details**>

Your character is not controlled in a precise manner, how it is known in big Industry Shooter Games like Call of Duty, Unreal Tournament or Battlefield, but is a Physics Object. That means that your character is controlled by common Physics Forces. For example: You don't instantly stop rolling if you stop pressing the movement buttons. Instead you continue the movement until all kinematic forces on you character fade, which means that there is a lot of motion around your character, some wanted and other unwanted. Your character rolls and bounces just like a Physics Object.

- <**How it works**>

Your character controller is a Physics Object and for movement the game applies Torque and Force in the given direction of the player's Input. If you want your character to move forward you just hit the according Input Key and there is Torque and Force applied in that direction, which makes the Character (Cube) move and roll in that direction because the Torque and Force increased the Velocity of the Physics Component of the character. After stopping giving Input to the character he still stays in movement until his Velocity hits zero again ant that's the moment when the motion stops. Force and Torque can be added at any moment along the X- and Z-Axis by the Player and along the positive Y-Axis by jumping if the Player is on the ground. Apart from the Input based Forces given

by the Player there also can be varying Forces applied by the environment and the other Players, like hitting other Objects with Colliders could change your movement and the Bullets from other Players could catapult you in different directions.

Physics Based Wall Climbing and Wall Jumping
   - <**Details**>

 The Player is able to perform Wall Jumps and Wall Climbing by jumping. This should enable a faster paced gameplay and more versatility in combat on the map. Through this ability the Player should feel more freedom and have more tactical possibilities against the other Players by being able to move along walls and come falling down into the enemies and attacking them for example.

   - <**How it works**>

 The Player is able to jump after colliding with another Object, which allows him to intentionally to jump into a wall, an object in the game or even another Player character and by colliding with one of those he is able to perform another jump. With this he can hit a wall and keep climbing it by repeatedly colliding with it and jumping on. Another use of this is in battle to perform even higher jumps by colliding with the environment.

Multiplayer Gameplay
   - <**Details**>

 The objective of this game is to battle other Players so Multiplayer Gameplay is a must. A Local Multiplayer shall be implemented for this.

   - <**How it works**>

 A Graphical User Interface allows other Players to find Servers in the local-network and join either existing open games or join Players directly over an IP-Address.

Collectible Power-Ups
   - <**Details**>

 There will be different kinds of Power-Ups scattered across the map so Players can collect them and get an advantage over the other Players. Examples for Power-Ups would be Health-Packs or Armor-Packs to protect the player from a certain amount of damage.

   - <**How it works**>

 There is a limited amount of Spawn points for Power-Ups. At each Spawn point there is a Power-Up and after it is collected there is an internal Timer, which assures another Power-Up to spawn at that place in a certain amount of time. There is no limit to the respawns of Power-Ups, only a limited amount of Locations and how many Power-Ups can exist in the moment.

Reward or Acknowledgement System for Players

    - <**Details**>

      To give the Players a feeling of accomplishment or superiority there needs to be some kind of Reward or Acknowledgement System in place. A possibility for this would be a Points-System which tracks who defeated the most enemies in the current game or something similar. There needs to be feedback for the Player that he achieved something in the game.

    - <**How it works**>

      The game needs to track which Player defeats which Player so there can be feedback for the winning Player. The Bullets shot need to be mapped to the Player, who shot them and then also matched to the Player, who received Damage.

Jump and Shoot

    - <**Details**>

      Jump and Shoot is the mechanic that emerges from the base control mechanics of this game. Being a Physics Object in a fast paced shooting game where you can wall climb and wall jump you need to stay in motion and shoot you enemies. It is also important to avoid the other Player's bullets so you don't get defeated yourself. So in short: Shooting for Victory and Jumping to avoid defeat!

    - <**How it works**>

      The whole map is a battlefield and the other Players are spamming their Bullets and are trying to hit each other. You yourself are shooting and while doing that and hoping you get some hits in you are also trying to avoid getting hit. The best way to do that is jumping and trying to stay in the air or on a wall.

Section 4 – Gameplay
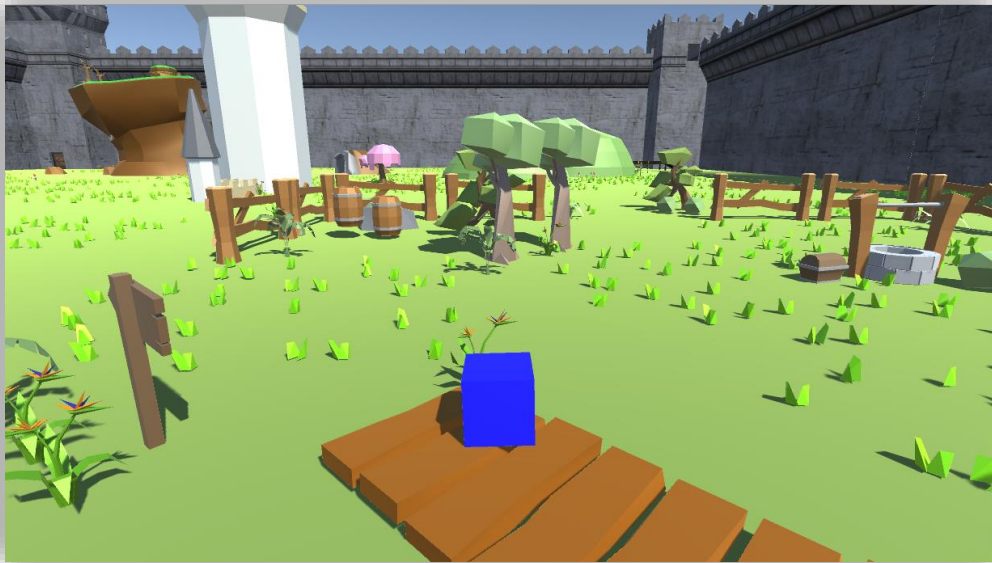
The Player

Player Camera

Third Person

Perspective Camera controlled by the mouse.

Shooting is possible only on your height level. You cannot shoot up or down. Just left and right.

Player Stats	
Starting Health	100
Maximum Health	100
Starting Armor	0
Maximum Armor	100
Torque	2000
Jump Speed	300

Gameplay

The gameplay is oriented around a face paced jump and shoot routine. The Players spawn at the given Spawn points and need to kill each other. They each can damage each other by shooting their Cube Bullets. There are three different kinds of Bullets, which differ in size, speed, rate of fire, dealing of knockback and damage. The Players all start out with 100 Health and 0 Armor. There are Power-Ups scattered around the map and they consist of Health and Armor Power-Ups, four of each with different appearances and amount of Healing/Armor. They are meant to replenish the Player's Health and getting an advantage against the other Players, so it is a good idea to stay in motion and collect these Power-Ups. Except those Power-Ups there are Weapon/Special Ability Power-Ups

which give the Player a special kind of skill. The Players are Physics Objects which makes them vulnerable to being affected in their movement by the environment and the enemies Bullets. The Players are also able to Wall-jump and climb walls by keeping near a wall and jumping consecutively. The Player needs to keep a cool head amidst all the chaos of Cube Bullets flying around and players being able to appear from nearly any direction, be it from the front, back, the sides or even the air!

Gameplay Elements

Shooter Aspect

This game is a shooter in its core so it obviously it hat shooter Aspects. There is a variety of Bullets with different parameters to choose from to make this aspect less linear. There are also Power Ups which can change the pace of the game.

Action Aspect

The Jump and Shoot mechanic is very action oriented because it forces the Player to act fast. The Multiplayer aspect intensifies the fast paced gameplay and also adds a tactical element to the game.

Competitive Aspect

As this is a multiplayer game, where you compete against you friends or other people makes this a highly competitive game. This is a very strong aspect, which is meant to increase the player experience and fun in the game, in ways of feeling superiority and acknowledgement, when the playstyle and the tactics of the player help him to victory.

Game Modes

Deathmatch

A Free For All kind of mode where each Player is on his own and all the others are enemies.
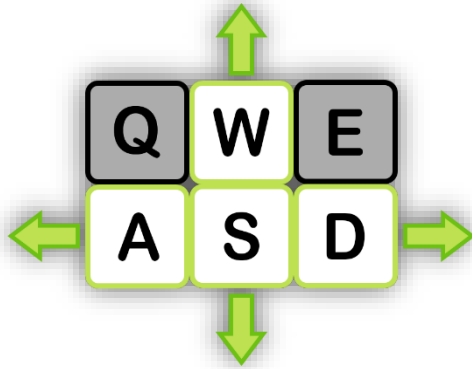
Team-Deathmatch

Players are put into Teams and each team competes against the other Team.

Last Man Standing

Players have a limited amount of lives and if they run out they can't respawn again so at the end of the game only one Player wins.

Controls

Basic Movement

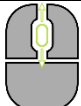|	
W	Adds force and torque along the forward component of the character. Changing view does not change that. Character will always try to move forward if possible.
A	Adds force and torque along the right component of the character. Changing view does not change that. Character will always try to move right if possible.
S	Adds force and torque along the left component of the character. Changing view does not change that. Character will always try to move left if possible.
D	Adds force and torque along the back component of the character. Changing view does not change that. Character will always try to move back if possible.
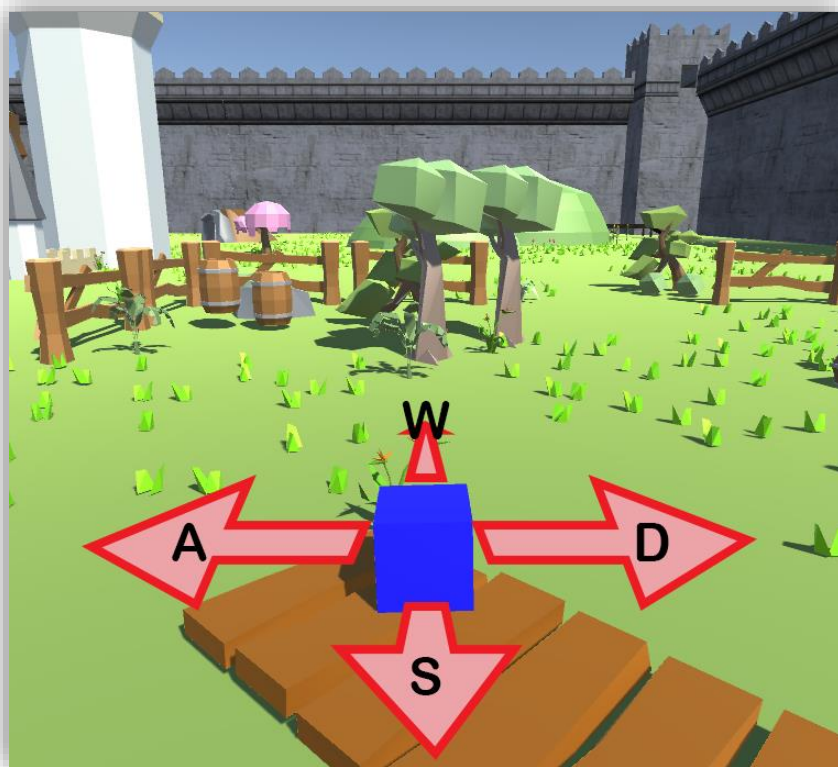
Jumping

Space

| Space	Adds force onto the World-up component(Y-Axis)which makes the character jump. Each time hitting an Object with an collider allows another jump, which makes wall jumping possible.

1.Wall Jumping Graphic
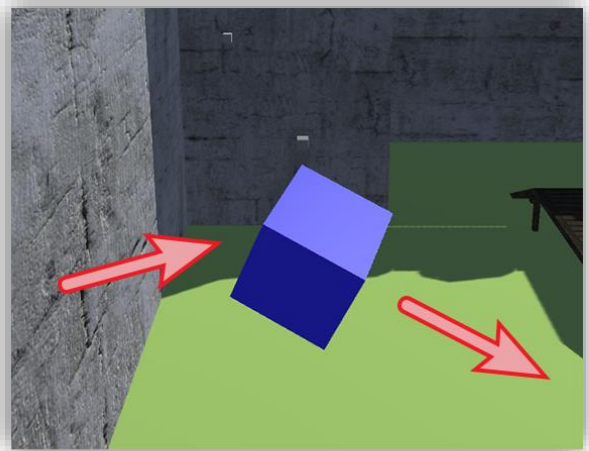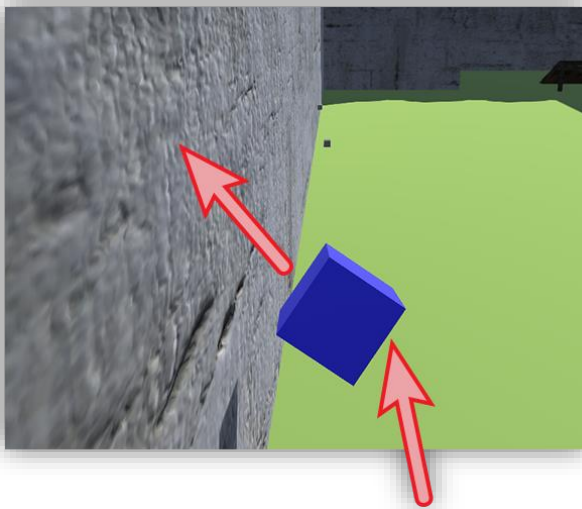

Battle System
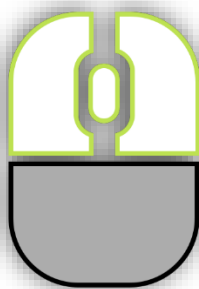
	Fire Button. Makes the character fire the primary ability, which is shooting different kinds of cubes with different parameters, dealing the enemy Damage and knocking them back.
	Scrolling allows the change of the firing cube in other words changing the shooting mode.
	Activates the Special Ability. The ability needs to be rolled first. (rolling die mechanic)

Player Interface
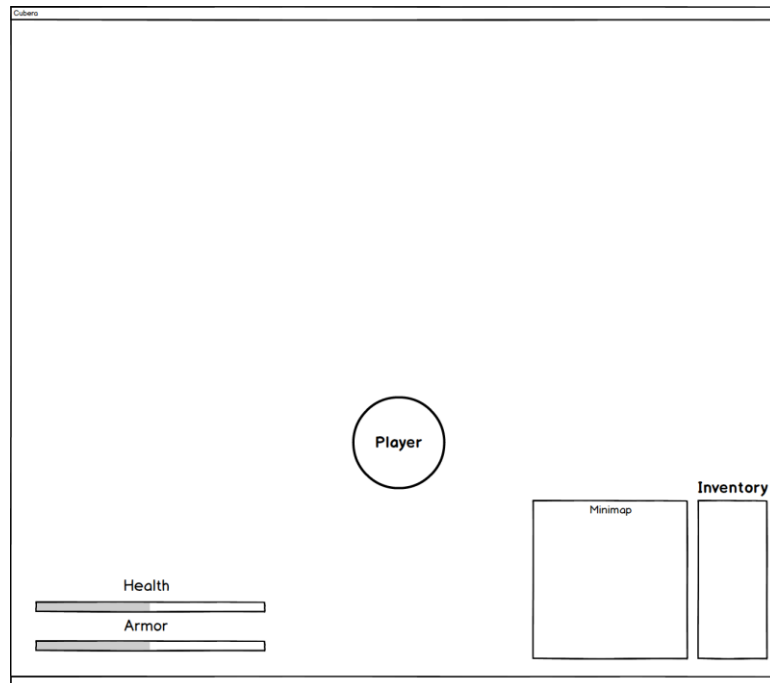
The Player Graphical Interface consists of the Health- and Armor Bar, the Minimap and Inventory.

Health & Armor
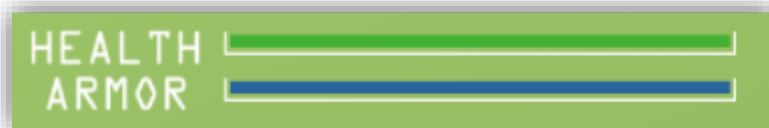
Tracking the Players current Health and Armor.

Minimap

The Minimap is centered at the Player's location and always followst he Player. It is possible to see the other Players moving on the Minimap when they are in range and you also see the near environment.

Inventory

The Inventory has two slots. The lower one to indicate which kind of Bullet is equipped. The icon for that is a cube shown from the side and the size of the cube indicates the kind of Bullet. The upper Slot for special equipment.
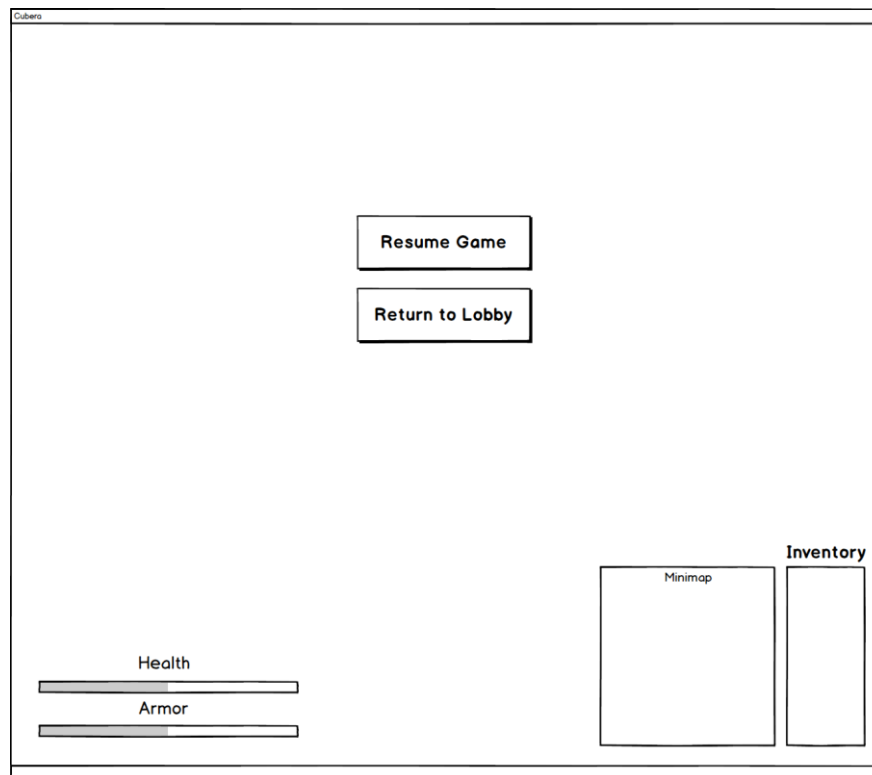
The Player Interface at one glance.

InGame Score Interface

The Interface is activated as long as the TAB - Key is pressed.

Ingame Options Menu

Bullets

The Player can choose between three kinds of Bullets. Each has its own parameters, strong and weak points. The bigger the Bullet the more Damage is received but the rate of fire decreases significantly. The bigger the Bullet the stronger knockback it has.

Small Bullet	
Rate of Fire	0.2
Speed	28
Damage	5
Medium Bullet	

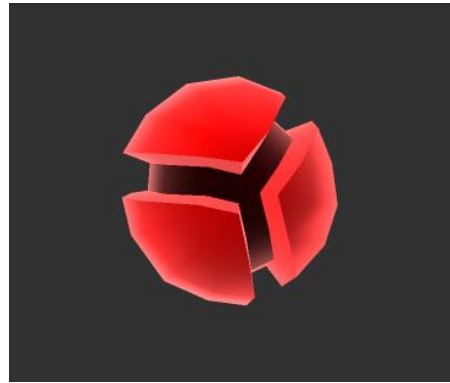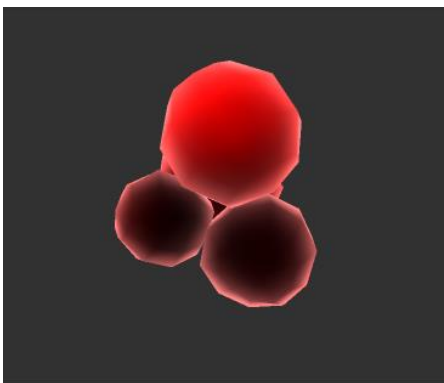|	
Rate of Fire	0.4
Speed	36
Damage	10
Big Bullet	
Rate of Fire	0.6
Speed	50
Damage	30
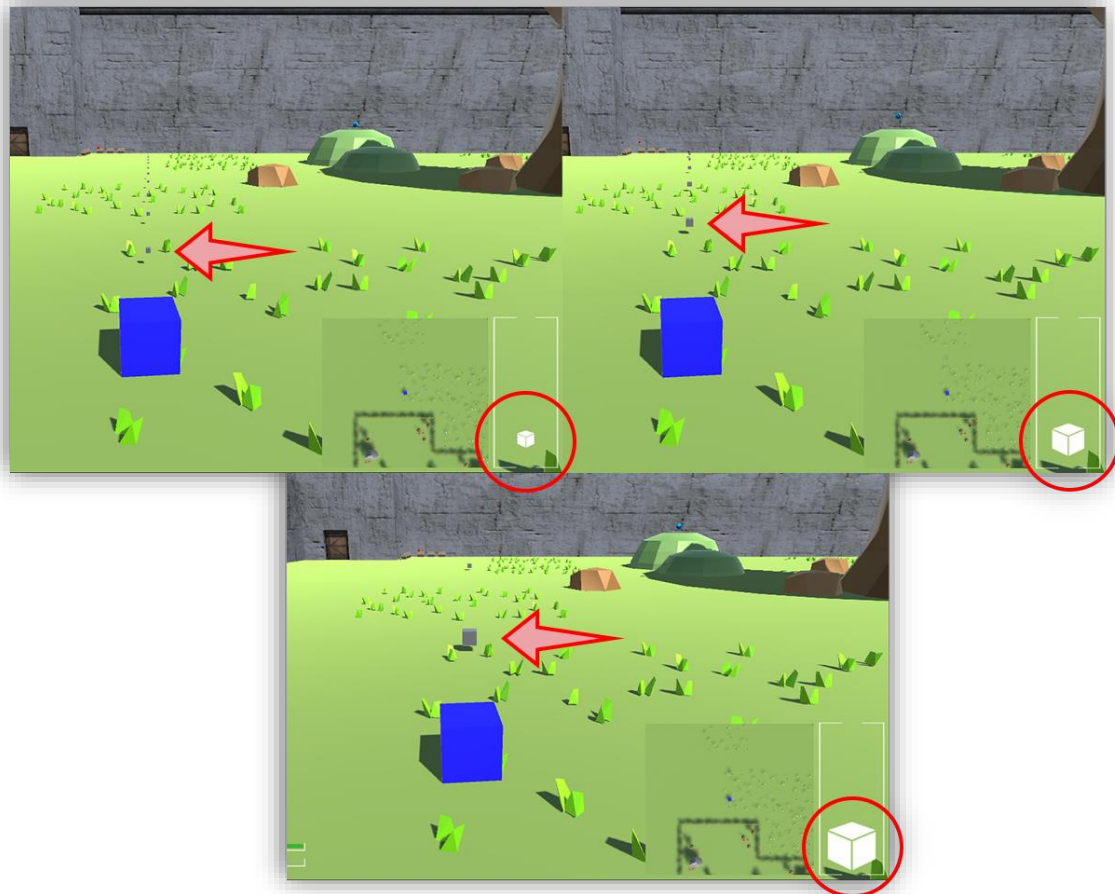
Power-Ups

Health

There are four kinds of Health Globes, which can heal the Player for 10, 25, 50 and 100 Health.
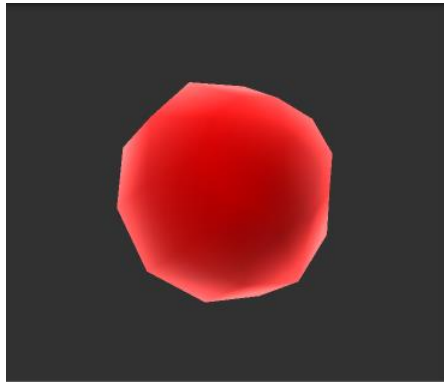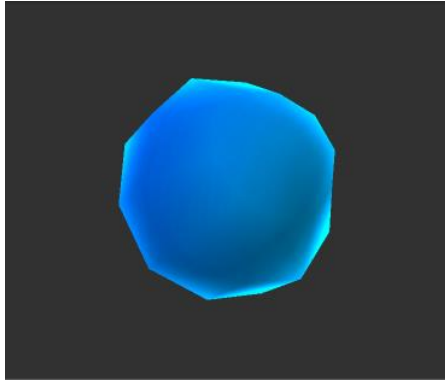

+ 10 Health Globe
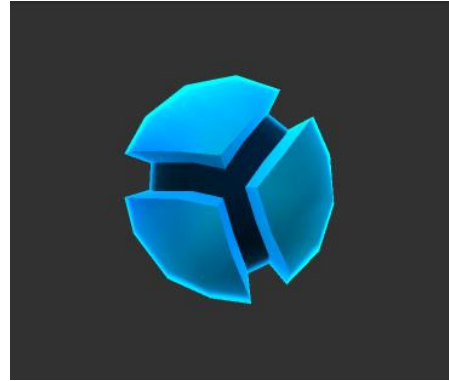

+ 25 Health Globe

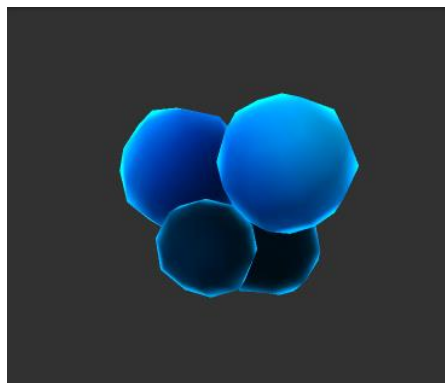*+ 50 Health Globe*

+ 100 Health Globe

There are four kinds of Armor Globes, which can increase the Player's Armor by 10, 25, 50 and 100 Armor.
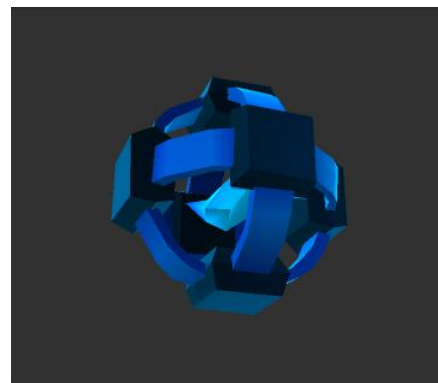

+ 10 Armor Globe

+ 25 Armor Globe

+ 50 Armor Globe

+ 100 Armor Globe

Player Feedback

The Players receive Feedback through pop up Numbers in the Screen center.

The Healing Popup is in Green.

The Armor Popup is in Blue.

The Damage Popup is in Red.

Game Flow

1. Player needs to adjust settings in the Menu UI(see UI Overview)
2. Gameplay starts
3. Player spawns at one of the Spawn points
4. Game starts and Players can move and shoot
5. Players start moving and shooting to eliminate the other Players
6. While shooting the other Players, the Player also tries to avoid the other Player's shots
7. During the battle the Player tries to collect Power-Ups to get an advantage
8. Players try to get the highest score and have fun

Section 5 – User Interface

UI Overview
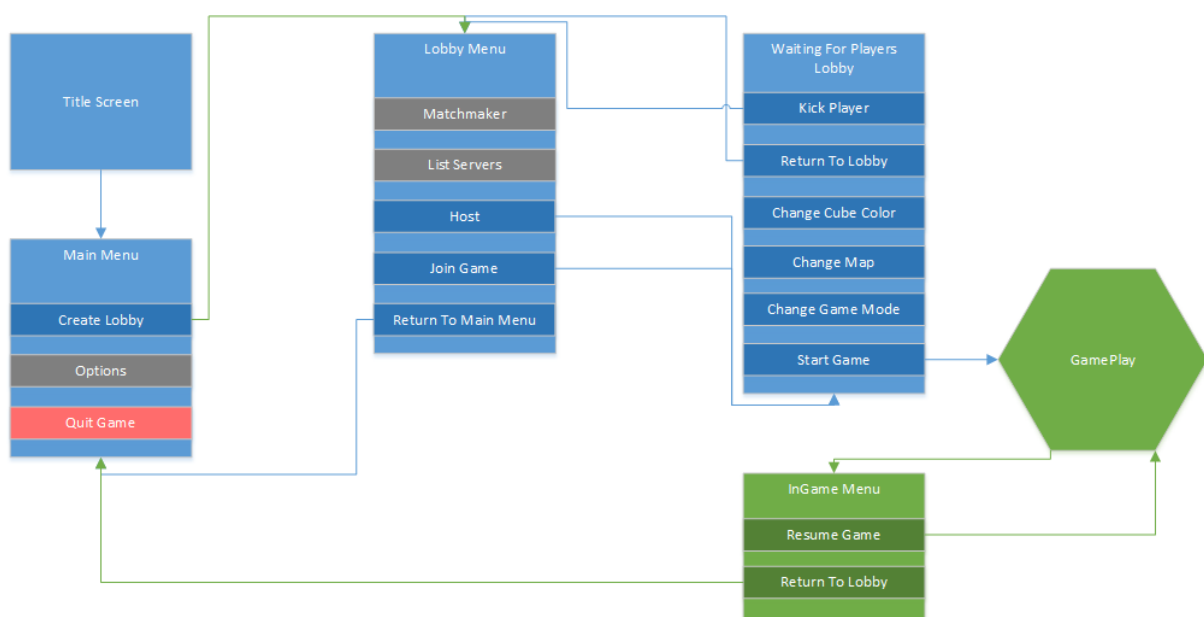
Interface Screens

<div align="center">

Title Screen

Menu Screen

[Options Screen]

Lobby Menu

Waiting For Players Lobby

</div>

Section 6 – Multiplayer Game

Overview
--Describe how the multiplayer game will work in a few sentences and then go into details below.

Max Players
The game should allow at least 2 Players to play and at most 16 Players to join a game.

Servers
Locally Hosted Server.

Server Options
--Describe the Game modes

Section 7 – Level Design

The objective is to design at least 3 different maps for the game.

Section 8 – Visual Art

Character Models
- 3 kind of cubes(normal, lightly armored, heavily armored)

Environment Models
- At least 3 different kind of models for 3 maps

Particles
- Shattering Cube Particles for Bullet Hit
- Big Shattering Cube Particles for Player Death

UI Elements
Other Art Assets

Section 9 – Sounds and Music

Player Sound Effects
- Player rolling Sound
- Player getting hit Sound
- Player jumping Sound

Weapon and Power-Up Sound Effects
- Power-Up pickup
- Shooting

Environment Sound Effects
- Colliding with Objects

UI Sound Effects
- Switching Menu Elements / Hovering over Menu Elements
- Clicking on Menu Element

Music
- Menu Music
- For each map a soundtrack

Section 10 – Experimental Features

Internet Multiplayer
Setting up the game framework so it is possible to host your own server on the pc and let others connect over the Internet.

In-Game Chat
An in game chat where Players can communicate with each other. (only necessary if there is Internet Multiplayer.)

Scoring and keeping Score
The game keeps track of the Score of a Player in a game or even further, outside of a game in a global scope.

The mechanic of keeping score would be either counting the defeated Players (kill shots) or counting the Damage done to each Player in a game and converting it into some kind of Score.

Pushing Bullets Game Mode
Bullets don't do any damage but there are Environmental Assets around the Map that do. The Player pushes the other Players with his Bullets or any other way into those traps to do damage and defeat the other Players.