

# Game Design Document (GDD)

## Game Title: Bubble Brawl

### Game Overview

**Genre:** PvP Arena, Action, Strategy

**Platform:** PC

**Players:** 2 local multiplayer)

**Perspective:** Top-down

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## 1. Game Concept

In **Bubble Brawl**, players engage in a fast-paced PvP arena where they spawn and control different types of bubbles (Attack, Steal, and Food). These bubbles interact with each other in unique ways, providing a strategic layer to gameplay. The goal is to outmaneuver and outsmart the opponent by utilizing bubbles effectively to break their defenses, steal their resources, and grow stronger.

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## 2. Gameplay Mechanics

### 2.1 Core Gameplay Loop

- Players spawn bubbles from their designated points within a closed room.
- **Attack Bubbles:** Break enemy bubbles on impact. Can grow stronger by interacting with food bubbles.
- **Steal Bubbles:** When they hit the opponent's spawn point, they reduce the enemy's bubble count by 10 while increase own bubbles by 10.
- **Food Bubbles:** Explode after contact with an attack bubble, or after expanding to a certain size. The food burst strengthens attack bubbles that pass over them.

### 2.2 Movement

- Players spawn their 3 type of bubbles.
- Bubbles may get **slower or faster** after each bounce, depending on the final decision.
- Bubbles are spawned randomly within a defined angle towards the enemy.

### 2.3 Bubble Growth & Effects

- **Attack Bubbles:** Grow in size (e.g., 5 to 15) when they pass over food bubbles. They become stronger and more capable of surviving multiple collisions.
- **Food Bubbles:** Explode on collision with attack bubbles or after expansion, releasing food that powers up attack bubbles.
- **Steal Bubbles:** Not affected by food, they simply steal 10 bubbles from the opponent's pool when hitting the spawn point and award them to the opponent.

## 2.4 Scoring & Resources

- Players start with **100 bubbles**. They must choose between spawning Attack, Steal, or Food bubbles.
  - **Points** are scored for:
    - Breaking an opponent's bubble with an attack bubble.
    - Successfully stealing 10 bubbles.
    - Eating food bubbles and powering up attack bubbles.
  - The game could be based on **rounds**, with the first player to score a set number of points winning the match.
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## 3. Arena Design

- **Closed Room:** A box-shaped arena with walls where bubbles bounce off.
  - **Player Spawn Points:** Each player has their own designated point where their bubbles spawn.
  - The arena may have **randomized layouts** or fixed obstacles (such as walls or barriers) to increase the tactical depth of each round.
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## 4. Player Controls

### 4.1 Player Movement

- Players will use QWE for player 1, and 789 for player 2.
- Q/7 – Attack bubble, W/8 – Steal bubble, E/9 – Food bubble.

### 4.2 Bubble Controls

- The player chooses which type of bubble to spawn: Attack, Steal, or Food.
  - **Attack Bubble:** Spawns and moves in a random direction at a set speed.
  - **Steal Bubble:** Spawns and moves in a random direction at a set speed.
  - **Food Bubble:** Spawns and moves in a random direction at a set speed.
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## 5. Visuals and Art Style

- **Art Style:** Bright and colorful, cartoonish style with simplistic but expressive character designs for the bubbles.
- **Arena Design:** Simple, with walls and minimal obstacles to keep the focus on the bubble gameplay.

- **Bubble Animations:** Smooth animations for bubbles growing, popping, or bouncing.
  - **Particle Effects:** When bubbles explode, there should be satisfying particle effects to emphasize their impact.
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## 6. Audio Design

- **Bubble Pop Sound:** A satisfying "pop" sound when bubbles break.
  - **Bubble Growth Sound:** A soft sound as bubbles grow in size.
  - **Background Music:** Light, energetic music to match the fast-paced gameplay.
  - **Sound Effects:** Randomized sounds for when food bubbles explode or when steal bubbles hit their targets.
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## 7. Game Modes

### 7.1 Standard PvP Mode

- A best-of-three round match.
- Players compete to break each other's bubbles and steal resources.
- Time-based rounds with a possible score limit (e.g., 100 points).

### 7.2 Timed Mode

- Players have a set amount of time (e.g., 5 minutes) to score as many points as possible.
  - The player with the most points at the end of the timer wins.
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## 8. Progression & Unlockables

- **Unlockable Bubble Types:** Over time, players could unlock special bubble types with unique mechanics (e.g., split bubbles, larger attack bubbles, etc.).
  - **Customization:** Allow players to unlock different **bubble skins** or **visual effects** based on performance or achievements.
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## 9. Technical Details

- **Engine:** GameMaker Studio (GML)
- **Resolution:** 1080p (or configurable)
- **Input:** Keyboard, controller support
- **Multiplayer:** Local multiplayer (online could be added later)