

## Requirements

*Powerups are visually shown and can drop from the bubbles. The menu is a start screen where options can be adjusted too.*

### Must

- Powerups are drawn to the screen with an icon to display that a powerup is in use.
- A powerup has a visual in-game representation that can be picked up by the player.
- On random occasions (once in five splits), the in-game representation of a random powerup drops from a bubble when a bubble is split.

### Should

- The shop shows when a powerup is bought with an icon.
- The menu screen is interactive so that options for the game can be set.
- An in-game powerup expires after 30 seconds.
- A power that is bought in the store expires when a level is completed or lost.

### Could

- Buttons in the store give visual feedback by adding depth when clicked.
- The player sprite is changed when a powerup is applied.

### Would

- The menu is multiple levels deep and screen and audio options can be changed.

## CRC

Many of these classes already exist, but we want to look at their responsibilities to see where we apply the changes and lay the new responsibilities.

### Classes

- PowerUp
- PowerUpGenerator
- GameView

<b>PowerUp</b>	
Superclass(es):	
Subclasses: LifePowerUp, SlowPowerUp, TimePowerUp	
Activate powerup	
Draw powerup	GameView

<b>PowerUpGenerator</b>
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Superclass(es):	
Subclasses:	
Generate a powerup based on randomness and previous events	Bubble
	PowerUp

<b>GameView</b>	
Superclass(es):	
Subclasses:	
Draw all elements to the screen	Wall
	Bubble
	Player
	PowerUp

### Explanations for decisions

We decided to not implement powerups as decorators, because this would limit the effect of powerups to - for example - the player. We'd also like powerups to affect the timer and bubbles.