

INTRODUCTION



The aim of this project is to design the breakout game that where you use a ball and paddle to break down a wall.

This game first developed in 1976 by Steve Wozniak before he and Jobs started Apple. The game was a commercial success selling over 3500 arcades cabinets. While it is relatively simple game it involves various elaborate loops, score tracking and rules for to be developed.

This process might be difficult, so the objective is to use turtle library in python to simplify and code the game.

MARKET RESEARCH

Example	Name	Pros	Cons
	Original	Easy	Boring
	Googles	Very easy, lack of rules, big bar entertaining cubes	Too easy
	Radzion Chachura code	Different, cubes need multiple hits to destroy	Still boring
	1001games.com	Good replica, with modern features such as responsive and sound	Hard to code
	1001games.com Progressive	Different and engaging	Harder to code

	Crazygames.com	High energy games and music and speed	Too much stimulation
	Brad Stewart	Easier version of original	Not known breakout game

TARGET

Different examples of people interested in this game: **Who? What? Why and where?**

There is different type of persons with interested in this game, it might be cause nostalgia programmers first codes, a bet or drunk people.

What? Must be able to use a ball and paddle to break down a wall like the old Ataria game.

Why? People might want to revisit the game

Where? In clubs, particularly in 80s clubs. The game may not be equal to the original close cased game, but the function must be equal.

DESIGN SPECIFICATIONS

The product requirement list (Table 2) gives me a clear information about important features that must be thought of when creating a product. It also showed me about the thought process required when developing the product.

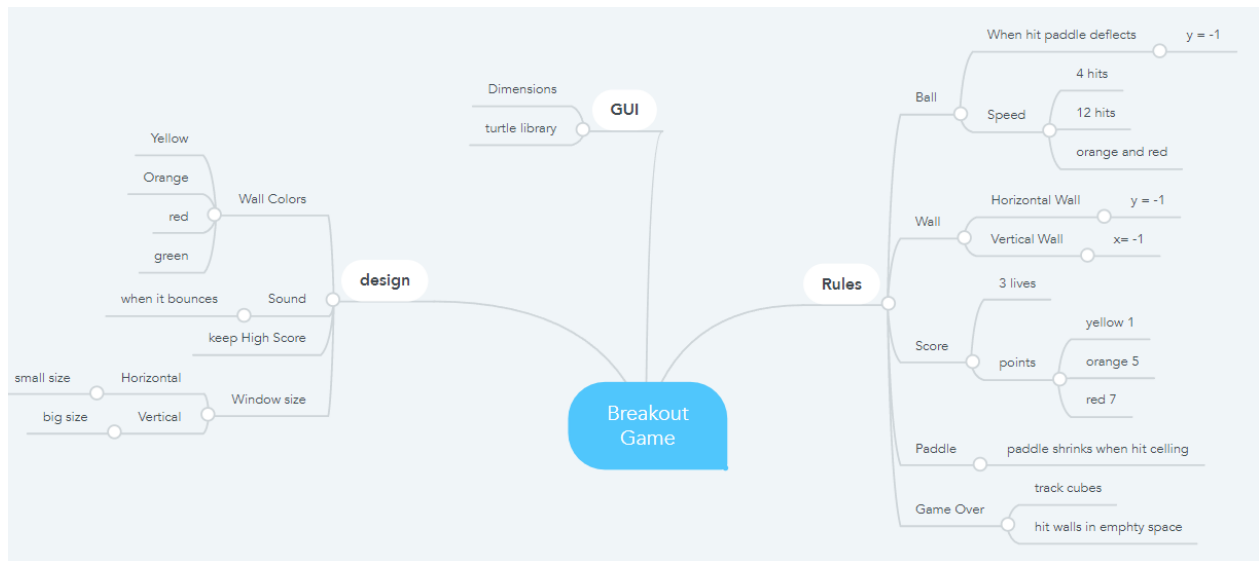
D- Stands for demands. These are requirements that are a must, they must be followed and executed when making sketches and coming up with ideas, such as health and safety requirements they are a must for all ideas to be developed.

W- Stands for wishes. These are requirements that, as a designer, we want our product to have.

Requirements List For the Breakout game	
D	<i>Is a GUI</i>
W	<i>The mouse controls the paddle</i>

D	<i>The Paddle, wall and limits deflect the ball</i>
D	<i>It has cubes that can be destroyed</i>
D	<i>It has a score system</i>
W	<i>Game over sequence with reset</i>
w	<i>When reaching a score ball speed increases</i>
w	<i>The cubes has different colours</i>
W	<i>The paddle gets smaller with score</i>
W	<i>Game modes</i>
W	<i>Music, sounds, effects, max high score</i>
W	<i>Hard case mechanicaly done</i>

MIND MAP



The purpose of the mind map (Figure 2) is to getting ideas and information out of the brain. It is a simple and quick way of emptying the mind into the paper. This process helped me a lot in organise information and create relationship between ideas. For example, made me lay out the rules in a nice compressive way. Like when the ball should invert and increase speed. This information led to multiple ideas.

DESIGN CONCEPT

After unloading the ideas into paper and select the good from the bad ones, we were left with ideas, some good of what we wanted in the projects. The following lines describe the functionality of the system game and the downside of each idea.

