# Splitball

## Alt Names

* Cutie Footie
* Multidimensional Soccer
* No Own Goals Allowed <= I like this one as well, or a variation on it
  + Own Goals Not Allowed is better, because “no own” is clunky with two o-s after each other.

## Idea

You’re playing a *very simple* pong/soccer game. You’re just a dot, the ball is just a dot, goals on two sides, small field. 2D, top-down view, simplified graphics.

**However, multiple of these games are happening at the same time.**

So you’re not just moving in one game, you’re simultaneously moving in *all of them*. Which means you might accidentally block your teammate’s shot somewhere else. Or own goal.

“No Own Goals Allowed”: if you score an *own goal*, you immediately lose. (Or it’s just a *huge* penalty, like 10 goals to the opponent.)

The general feel of the game? One where you must always multitask and jump between fields/playstyle, and each field is always unfair (with one side at a disadvantage) by design.

## Objective

Score X goals *across all fields*.

## Input

Each player can *move* their character. That’s all.

## Implementation

Just make each field a *self-contained game*.

* It holds a *score*
* It holds its characters
* It holds its visuals

The direction/location of goals and stuff is *randomized* per field. It’s best if this is *as different as possible*.

Then create a FieldManager => it displays the fields in a sensible configuration. (Probably just put them vertically next to each other. Maybe, when more fields enter, we can just *resize* them to match?)

And create a PlayerManager => with a Player module for each player => which sends its input to *all its characters*.

Also, **AI / Bots** would be a great addition. Would increase player/team count and make solo mode possible.

## Extras

Create a way to reduce the number of characters. (So you’re not present in some of the fields.) => this has both upsides and downsides. You’re not own goaling as much, but you also cannot defend/attack at those other locations.

Dynamically add/remove fields. (On remove, add whatever score it had to the existing fields? Or you just *lose* that score?)

A “max bodies on field” (or “min bodies on field”) powerup/property?

## Potential Pitfalls

**How to prevent players from just playing on *one field* (ignoring all others)?**

The rule “own goal is really bad” and the fact that you can always focus on other/easier fields are *subtle* pushes.

Here’s a more certain method:

* When you score, your character is *removed* from that field. (If this was your last character, it’s simply transferred to another field.)
* When someone scores against a team, one of the players in that team gets an *extra character*. (If you’re already present in all fields, nothing happens.)

Scoring an *own goal* means these cancel each other out: you are removed from that field, then added back.

**How to prevent extremely easy scoring (because one team just isn’t present on a field)?**

The method above kinda solves this. (If you concede a goal, you get an extra character on that field.)

To aid players:

* Provide ways to purposely walk to a different field. (Like powerups or gates you can enter.)
  + Gates at the sides of the field, that literally connect with the field they go to (or point at it) are probably clearest.
  + Don’t allow entering a field where you already are? Or is that actually also fun?
* Provide ways to *defend* a field at which you’re not present. (Through powerups, actions you apply to *other* fields.)

# To Do

**BUG:** Sometimes it counts a single goal twice or thrice. (If you stay close, you might even be able to hit the ball again *while it’s already scored a goal*.)

**GATES:**

* From left to right, place a gate on the *right* of the field (any random position), then place one at a matching height (on the *left* wall) on the field next to it.
* They are simply teleports from left to right. (Area detection. When entered you teleport, can’t teleport for a second or so afterwards to prevent infinite looping.)

**FIELDS:**

* When someone scores an *own goal*, a field is either removed or added.
* (When field count is low, probability of adding is much greater. The reverse is true for high field counts.)
* Don’t allow new fields if no space. Don’t allow removing if that would leave only one field.

**POWERUPS:**

* Make some basic ones that are just sensible for this type of game.
* Place them randomly. Make them scarce, a big impact when picked up.
  + **IDEA:** Pickup powerups by shooting them with the ball? That’s a bit harder. Less easy to pickup good ones you want, but also less chance of accidental powerup grabbing.
  + I don’t want an extra “pickup powerups” mechanic; how to integrate this with the main game?

**GAMELOOP:**

* We only need the **input screen** here. Just create a *very basic* one. (Can’t choose anything. Just login => ready up => starts when everyone is ready.)
  + Add key hints for moving
* **Tutorial:** some explanation for the main rules. Just place this in the main menu? (Adding images before/in each game is *not* a good idea.)
* **Bots?**
  + Calculate our move for all fields.
  + If these roughly align, average them and do them all. Otherwise, prioritize one field at a time: the one where the *ball* is closest to our goal or the one where *we* are closest to the ball.
  + Move towards a point *behind* the ball (so it always goes away from our goal)
  + (Randomly, decide to move to a *gate*.)
  + (Also try to line up shots so they hit an opponent?)

**Extra:**

* *Color* goal lines appropriately. (Also, I need an impulse too drastic for the effect to work; dampen it less?)
* Reset balls to random positions in the field? How to prevent *insta goals* (just cause you’re close when the ball respawns?)
* *Inside* shadow for the field walls. (Also rounded corners?)
* The goal *placement* can also be randomized.
* Sound effects and some soundtrack.
* Some sort of powerups that
  + Affect the field to the right/left
  + Affect *all* your characters. (So you could pick up a speed boost somewhere else, then become faster *everywhere*.)
  + Reverse goal directions, change goal position, anything to prevent “static goal blocking”
  + Add/remove balls