

Note:  
The 'mantifao' username refers to Micheal Antifaoff  
The 'Arunscape' username refers to Arun Woosaree  
The 'phlana' username refers to Joshua Chang

This document is in reverse chronological order,  
You may want to read the document from the bottom up.

the log was originally created with the following command:

```
...
git --no-pager log --graph --all --oneline --pretty=format:"%h %ad%x09%an%x09%s" --date=short
...
```

I chose to write comments in the middle of the commit history, so that there is a better sense of the passage of time. Any line that does not start with a '\*' or a '|' is a comment I have written.

The convention I chose is that each comment will be referring to the group of commits below it.

Note: there may be more commits above this one, but those relate to the final submissions, and at this point the actual code for the project is finalized.

=====

Below here is the obvious last day frantic rush to get everything done. Luckily, the code portion is basically done, and we just needed to add comments, attaching our functional requirements.

Oh, and also finish all the reports. Turns out those were bigger than I had anticipated. Micheal and I worked together to finish the test plan and add comments to the code.

We also ran all of our tests one last time to make sure that everything works as expected. We somehow finished all of the functional requirements!

Joshua did not help at all with any of the final documents.

His contributions overall were limited for the entire project. With over 350 commits total, he had made under 10 of them.

* 609bde5	2021-04-16	Arunscape	final report changes
* 9b4d79c	2021-04-16	mantifao	Game.svelte comments are done!
* 93440ee	2021-04-16	mantifao	Final report PDF
* 3564293	2021-04-16	mantifao	Merge branch 'master' of <a href="https://github.com/PolyPong/PolyPong">https://github.com/PolyPong/PolyPong</a>
\			
* 52f13b5	2021-04-16	Arunscape	remove ## in document
*   2c7fc0a	2021-04-16	mantifao	Merge branch 'master' of <a href="https://github.com/PolyPong/PolyPong">https://github.com/PolyPong/PolyPong</a>
\			
* c72elb4	2021-04-16	Arunscape	rename test plan and suite
* 88f403c	2021-04-16	mantifao	Update README.md
* d8cac27	2021-04-16	Arunscape	assert that we ran the test cases
* 63ff50a	2021-04-16	mantifao	Update README.md
* f4a2107	2021-04-16	mantifao	Update README.md
* a963bf9	2021-04-16	mantifao	Update test plan
*   8a2065d	2021-04-16	mantifao	Final Report for Micheal - not yet finished
/			
* 37c0893	2021-04-16	mantifao	Add comments to Callback.svelte
* e2ec636	2021-04-16	mantifao	Add comments, clean up code in Home.svelte
* 26d0ef9	2021-04-16	mantifao	Add comments to Leaderboard.svelte; round win/loss ratio to three decimals
* 48859fc	2021-04-16	mantifao	Merge branch 'master' of <a href="https://github.com/PolyPong/PolyPong">https://github.com/PolyPong/PolyPong</a>
\			
* 99847f7	2021-04-16	Arunscape	test plan
*   c413f92	2021-04-16	mantifao	Add comments, clean up code in Lobby.svelte
/			
* dd51c6a	2021-04-16	mantifao	Add comments, clean up code in LobbySelection.svelte
* ce4cc22	2021-04-16	mantifao	Merge branch 'master' of <a href="https://github.com/PolyPong/PolyPong">https://github.com/PolyPong/PolyPong</a>
\			
* 6e4b48e	2021-04-16	Arunscape	update test documentation
* 4780c42	2021-04-16	Arunscape	fix e2e test
*   c4e9663	2021-04-16	mantifao	Add comments, clean up code in Settings.svelte
/			
* cf21bdd	2021-04-16	mantifao	Merge branch 'master' of <a href="https://github.com/PolyPong/PolyPong">https://github.com/PolyPong/PolyPong</a>
\			
* 9987c8c	2021-04-16	Arunscape	get rid of unused code
*   35c6faa	2021-04-16	mantifao	Clean up Signup.svelte, add FR comments
/			
* ef49c76	2021-04-16	mantifao	Delete Powerups.svelte, remove all references
* 93959ad	2021-04-16	mantifao	Stats.svelte and Login.svelte are deleted, removed all references to them as well
* 7451491	2021-04-16	Arunscape	game.ts comments
* 3f4a053	2021-04-16	Arunscape	comments for app.svelte
* 3f24e0c	2021-04-16	Arunscape	formatting
* 0407b42	2021-04-16	Arunscape	add comments for store.ts
* d2d3472	2021-04-16	Arunscape	index.ts comments

It was time to start the final capstone assignments.  
Turns out there is a lot of work to do.  
Also, it turns out there was still a lot of functionality left to test.  
I was definitely up past 1:30 am here.  
I also started the test plan report.

Micheal enabled games with more than 12 players.

On the days leading up to the demo, we had to get a lot done in a short period of time. You can see how many commits we did in such a short period of time.

There were a bunch of bug fixes. In general, we were fixing a lot of "jank" in the hopes that the demo would go smoothly. We think we did alright. Joshua also helped to contribute a little. There was a regression where the game state was being overwritten. In other words, there was a race condition in the synchronization algorithm, and the game play was very jittery.

Luckily, we got that fixed thanks to the combined effort of three team members this time.

* 85a494c	2021-04-12	mantifao	Rename bomb - commit 2/2. Should now appear in the powerups selection screen
* 277950d	2021-04-12	mantifao	Rename bomb - commit 1/2
* 5972aad	2021-04-12	mantifao	Add images for shaped paddles
* db7877b	2021-04-11	Arunscape	local leaderboard returns indices :)



```
* 7ba7b18 2021-04-07 mantifao Fixes a bug where skins were set correctly on the server, but not on the client so all paddles were white (instead of the correct skin color)
```

This group of commits was another rare moment where we got all three team members together in a call. There were some weird bugs, but we sat down for hours and got them fixed. Joshua also implemented the Dead Reckoning Algorithm.

```
* 4c6b4c5 2021-04-07 mantifao Remove lobby_id resetting
* 0a19ca8 2021-04-07 mantifao XP bug should now be fixed
* 8fc7df1 2021-04-07 mantifao Fix bug where XP was not assigned due to lobby_id being reset on the client before the last message from client to server was sent
* bad880b 2021-04-07 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * c187963 2021-04-06 Joshua Chang replace fewer players when merging states
| * b15fddc 2021-04-06 Arunscape we weren't specifying the port!!!
| * 3c71308 2021-04-06 Joshua Chang add and remove event listeners when needed
| * 1f029a4 2021-04-06 Joshua Chang good paddle movement
* | ac4755d 2021-04-07 mantifao Fixed game breaking bug where second round of game couldn't start after first round ended
|/
```

More pair programming between Micheal and I. We encountered many issues with the lobby over the course of this project. Thanks to the new rest endpoints I created, we were now able to implement the skins and game XP feature

```
* d79b9bd 2021-04-06 mantifao Fixed lobby selection bug
* fd04f02 2021-04-06 mantifao Add package.json
* 61bace9 2021-04-06 mantifao Skins are now working! Strong start on lobby selection, need to fix bug where two users cannot restart a game in the same lobby
* 64e089c 2021-04-05 mantifao Skins are now working!
* 5717d7f 2021-04-05 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * b6c363b 2021-04-05 Arunscape final report draft
| * c368319 2021-04-05 Arunscape bind:this for canvas
* | 33f7a48 2021-04-05 mantifao Game XP is now added and displayed to the user
|/
```

Another few days, more pair programming was going on. At this point, I was missing lectures from other classes and just focusing entirely on the capstone project because all of the midterms were done. The signup process was not working as we expected, so I had to fix that, and I helped Micheal implement a few power ups. Credit should go mostly to Micheal for the power ups, but I did help fix errors he encountered, and helped with designing how the client server communication works when a power up is activated. Things like sending the update to the server, merging the game state on the server, broadcasting updates to the clients, and merging the game state on the clients. We implemented a good amount of powerups and felt good about how the project was looking so far.

```
* c35b6f8 2021-04-05 mantifao Code cleanup, adding comments
* cb34633 2021-04-05 mantifao Update getPaddleY() for up to 7 players (need to finish 8-12 later)
* 55f9aa7 2021-04-05 mantifao Add attribution
* 708e3ee 2021-04-05 mantifao Path Trace powerup done, better initial ball speed
* 9849a65 2021-04-04 mantifao Distracting background working, stops when player who applied it is eliminated (no menu, just random colors every 5 seconds)
* d8bed85 2021-04-04 Arunscape this was confusing the compiler I guess
* 42495dc 2021-04-04 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * 97409a6 2021-04-04 Arunscape one space
| * 1866e33 2021-04-04 Arunscape cleanup
| * d831fe9 2021-04-04 Arunscape formatting
* | e3b97e1 2021-04-04 mantifao 2 Player wall collision detection working
|/
* 2635ddd 2021-04-04 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * e5a8ccb 2021-04-03 Arunscape signup works now
| * 7c088c8 2021-04-03 Arunscape oops
| * 6e5ccce 2021-04-03 Arunscape oops
| * ac7d5c2 2021-04-03 Arunscape signup theoretically works
| * 475f2fe 2021-04-03 Arunscape missing }
| * a0a7a2c 2021-04-03 Arunscape redirect user if logged in but account does not exist
| * 81cc3fd 2021-04-03 Arunscape handle loginwithredirect callback
* | 6074ad7 2021-04-04 mantifao 5 Powerups implemented (bigger, smaller and 3 invisibles)! Need testing to ensure they work as expected
|/
* 69fe1c4 2021-04-03 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * 2b9e162 2021-04-03 Arunscape copy, share link works now
| * 344cc95 2021-04-03 Arunscape oops
| * a94864f 2021-04-03 Arunscape create get username endpoint
* | 53f0a36 2021-04-03 mantifao Added list of powerups on each client
|/
```

More pair programming happened here.  
I cleaned up some code, and changed how the frontend can request data from the server for stateless things. I showed Micheal how to consume the new endpoints, and together, we fixed some bugs that existed in the code for the lobby system.

```
* 70804d4 2021-04-02 mantifao Update images, Lobby now waits for everybody and has power up selection
* 081f246 2021-04-02 Arunscape global and local leaderboard now using rest methods, just need to get username now
* e8e23a8 2021-04-02 Arunscape setskin works from the frontend now (in the sense that it saves the new value in the
database)
* 1b40a09 2021-04-02 Arunscape oops
* ad0b811 2021-04-02 Arunscape we're using rest to handle this stateless data instead of passing it over the
websocket
* c11e716 2021-04-02 Arunscape set skin rest endpoint
* 72a2fb8 2021-04-02 Arunscape remove unused code in server.ts
```

Finally, we had gotten all three team members together in a call.  
I showed Joshua how to run the project and walked him through the code we had already written so far. Even at this point, there was a lot to go through. On April 1st, Joshua made his first commit to the repository.

```
* 7306fc0 2021-04-01 Arunscape local leaderboard rest endpoint
* 6009ccc 2021-04-01 Arunscape global leaderboard rest endpoint
* ade41a6 2021-04-01 Arunscape getavailableskins rest endpoint
* 759dd24 2021-04-01 Arunscape use auth0client.isauthenticated
* 8f9836d 2021-04-01 Joshua Chang Merge branch 'master' of https://github.com/ECE493Capstone/project
|\
| * bb8bda8 2021-04-01 Arunscape login with redirect also, getTokenSilently() returns a proper token now
| * 9463ba2 2021-04-01 Arunscape implement getxp endpoint using traditional rest for simplicity
| * 5e54f66 2021-04-01 Joshua Chang smoother paddle movement
|/
| * 4821c69 2021-04-01 mantifao Work in progress to synchronize emails and usernames across client and server
|/
```

Here, Micheal and I did a lot more pair programming. We added a buch of features together, and fixed some bugs. At this point, we had a working game basically, and we could spend some time having fun bouncing a ball off of some paddles. Another exciting development was that I managed to deploy our code to a server, so that a production version of the website is accessible at <https://polypong.ca>  
We could finally share our project with friends!  
(Even though we were far from done at this point)  
I also wrote tests for the database functions.

```
* a956424 2021-03-31 mantifao Game background colour is now the same as rest of background
* 5628aca 2021-03-31 mantifao Fix background color
* ab60467 2021-03-31 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * 5c0a06c 2021-03-30 Arunscape leaderboard functionality
| * 4c4bf61 2021-03-30 Arunscape leaderboard also theoretically works now
| * 0e8cf83 2021-03-30 Arunscape add logic for getting skins and setting it (with authentication!) (untested lol)
| * c65fecf 2021-03-30 Arunscape fix some linting and allow port to be specified as an environment variable
| * 26fff32 2021-03-30 Arunscape add leaderboard functions for dbhelper, and tests for all of dbhelper
| * 6c3827e 2021-03-30 Arunscape server can run locally again
| * d6916f4 2021-03-29 Arunscape let's see if this is faster
| * 14b0ff6 2021-03-29 Arunscape oops
| * 3812267 2021-03-29 Arunscape ooh let's try this
| * 3177e7a 2021-03-29 Arunscape pls
| * bd9b095 2021-03-29 Arunscape ohhh it might be a CORS thing
| * 0a6155f 2021-03-31 mantifao When we finish one game, a new game is started!
|/
* a7d7ffa 2021-03-29 mantifao Improve the animation
* 9c827df 2021-03-29 mantifao Update getPaddleY() to work better, add Game Over text animation
* 1ec3a21 2021-03-29 Arunscape try this port on cloudflare
* 09dd68a 2021-03-29 Arunscape let's see if this works
* 32ff7d0 2021-03-29 Arunscape try binding to 0.0.0.0
* dec0d48 2021-03-29 Arunscape oops I spoke too soon
* 272adda 2021-03-29 Arunscape aaand theoretically we should be live
* ec610f9 2021-03-29 Arunscape it works
* e8d3dc4 2021-03-29 Arunscape rename it so it works on cybera (because I'm already running another instance of
mongo there)
* 9ccb72f 2021-03-29 Arunscape this should work
* 54788c8 2021-03-29 Arunscape create dockerfile
```

In this group of commits, Micheal and I over several days pair programmed even more together, and we got a lot of work done. At this point, I will admit that I was a bit worried that Joshua had many opportunities to join the video calls Micheal and I had on Discord, and he had not contributed any code yet or talked about the project much -- especially because Micheal and I were sending messages back and forth which are supposed to send notifications in Discord.

I had also created some database functions in this group of commits. At this time, I had asked Joshua about a week ago to research a bit about MongoDB and Deno, and see if he could start writing some interfaces, and maybe a few database functions to see how we can interact with the database.

We didn't really hear from him for a while aside from the Monday meeting we had established, and in order to progress with the project, we needed to start doing some database stuff.

```
* a852a09 2021-03-28 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * 2917325 2021-03-28 Arunscape oops
| * acd4dc4 2021-03-28 Arunscape logic for levelling up and setting skins and getting available skins
| * fa4b545 2021-03-28 Arunscape add some pretty colours
* | cfae28a 2021-03-28 mantifao Gameplay working and smooth, graphically glitches ironed out, Client can now detect
when it has lost (but not yet sent to server or other clients)
|/
* a25d53e 2021-03-28 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * 260a729 2021-03-28 Arunscape undo rotation
* | 4bf30cc 2021-03-28 mantifao Collision detection working across multiple clients, graphical glitches abound
|/
* 6940d71 2021-03-28 mantifao Merge branch 'master' of https://github.com/PolyPong/PolyPong
|\
| * 42f197a 2021-03-28 Arunscape don't send websocket buffer
* | 74d6856 2021-03-28 mantifao Working on getting ball consistent
|/
* 1d95da8 2021-03-28 mantifao Collision detection is poor but working
* 00757ec 2021-03-28 Arunscape send unrotated dy dx for ball
* 8f4370a 2021-03-28 Arunscape skip sending websocket buffer in the update lol
* 035bb48 2021-03-28 Arunscape red paddle should move now on other clients
* 8e626d9 2021-03-28 mantifao Collision detection now works client-side! Ball is also drawn correctly (but not
synchronized)
* 5cf8b12 2021-03-27 Arunscape idk :/
* ac0a03b 2021-03-27 Arunscape oops
* 0e12240 2021-03-27 Arunscape ball should be in sync now
* b8ae6e0 2021-03-27 Arunscape ball moves in sync until there is a collision also collisions are broken
* 3814bc4 2021-03-27 Arunscape refactor
* 61f7b36 2021-03-27 Arunscape refactored game object
* dfce8ff 2021-03-26 mantifao Include interface from PPC (removes error message)
* 3e67b26 2021-03-26 mantifao Login now checks db, we let users set their username on first login
* 0dc17aa 2021-03-25 Arunscape we can see other players' paddles moving now!!!
```

In this group of commits, Micheal and I did a bunch of pair programming together. We fixed issues with the login system, I showed him how the lobby system I made in the previous group of commits work, how the store works, and he showed me the changes he made to the frontend. I showed Micheal how to use WebSockets and how he could build on top of my existing code in the backend. We spend a lot of time on a discord call together.

```
* a3da283 2021-03-22 mantifao Log In on Home page now prints user email to console if authenticated
* 07f5092 2021-03-22 mantifao Fix Auth0 bugs
* 9c3dd00 2021-03-22 mantifao Update db.ts to import from PP-Common
* aa6ce39 2021-03-22 mantifao auth0Client now in store.ts
* 4d4227e 2021-03-19 mantifao Change default port to 3000
```

Variables in a tree structure are kind of tricky. If you want something to be accessible by two components, you need to go to the parent of each nodes until you find a common ancestor, and then pass the state down to the children. Luckily, Svelte provides a store which simplifies this process. We effectively abused a bunch of global variables.

```
* ec001d6 2021-03-19 Arunscape attempt to start game
* a395ced 2021-03-19 Arunscape moved client side lobby websocket stuff to global scope in store.ts
```

These changes are not really groundbreaking. It's mostly clean up.

```
* ccdf142 2021-03-16 Arunscape why did I change these types lol
* 370549f 2021-03-12 Arunscape delete old stuff
* 895b5d6 2021-03-12 Arunscape format tsconfig
* 7a7f748 2021-03-12 Arunscape idk
* 05fdd37 2021-03-12 Arunscape Revert "install in preinstall?" mistakes were made...
* fbd103e 2021-03-12 Arunscape install in preinstall?
* b22b713 2021-03-12 Arunscape frontend can build now
```

We had a rather large amount of diagrams to make around this time, and I chose to do the sequence diagrams for our system. See below for my explanation on why I like plain text.

```
* 603ebdd 2021-03-12 Arunscape if I have to do another UML diagram I'll wanna fucking kms
* a0ca534 2021-03-12 Arunscape render diagrams
* 65c19d3 2021-03-12 Arun Woosaree Create fr26.puml
* 1b90018 2021-03-12 Arun Woosaree Create fr25.puml
* 0ce9d9f 2021-03-12 Arun Woosaree Update fr16.puml
* 82f5fab 2021-03-12 Arun Woosaree Create fr24.puml
* 3dcd30e 2021-03-12 Arun Woosaree Create fr23.puml
* a16f102 2021-03-12 Arun Woosaree Create fr22.puml
* 74b20bb 2021-03-12 Arun Woosaree Create fr21.puml
* 95b4032 2021-03-12 Arun Woosaree Create fr20.puml
* b47b915 2021-03-12 Arun Woosaree Create fr19.puml
* 38a674c 2021-03-12 Arun Woosaree Create fr18.puml
* fed2552 2021-03-12 Arun Woosaree Create fr17.puml
```

* 3402647	2021-03-12	Arun Woosaree	Create fr16.puml
* 747b23f	2021-03-12	Arun Woosaree	Create fr15.puml
* 6b0ac6b	2021-03-12	Arun Woosaree	Create fr14.puml
* 1b2907e	2021-03-12	Arun Woosaree	Create fr13.puml
* 61dd277	2021-03-12	Arun Woosaree	Create fr12.puml
* aa1e2b8	2021-03-12	Arunscape	we have a basic database
* 254af7d	2021-03-12	Arun Woosaree	Update fr27.puml
* 2649182	2021-03-12	Arun Woosaree	Update fr28.puml
* e18eca7	2021-03-12	Arunscape	changes
* d339d94	2021-03-12	Arunscape	delete fr12 for now
* 86248f7	2021-03-12	Arunscape	oops forgot to commit this one
* 5ba66dd	2021-03-12	Arunscape	add docker-compose
* 1f4c0b0	2021-03-12	Arun Woosaree	hopefully last time updating fr1sequence
* 758aaa0	2021-03-12	Arun Woosaree	Update fr1.puml
* f780ed8	2021-03-12	Arun Woosaree	Update fr6.puml
* 53a72bb	2021-03-12	Arunscape	final fr28 hopefully
* db93bfa	2021-03-12	Arunscape	final fr27 hopefully
* 56449d8	2021-03-12	Arunscape	final fr28 hopefully
* 92291c5	2021-03-11	Arunscape	final fr10 hopefully
* 69de270	2021-03-11	Arunscape	final fr9 hopefully
* 36c7fa2	2021-03-11	Arunscape	final fr8 hopefully
* 96d460d	2021-03-11	Arunscape	final fr7 hopefully
* b056895	2021-03-11	Arunscape	final fr6 hopefully
* 8caalaa	2021-03-11	Arunscape	final fr5 hopefully
* ab61aa3	2021-03-11	Arunscape	final fr4 hopefully
* 818bbb0	2021-03-11	Arunscape	final fr3 hopefully
* 7e35a5f	2021-03-11	Arunscape	final fr2 hopefully
* 1d17042	2021-03-10	Arunscape	script to generate power up sequence diagrams when we figure out how they're supposed to work
* 91b3235	2021-03-10	Arunscape	tweaks
* 0875ad3	2021-03-10	Arunscape	remove need for jwt to view leaderboard
* c6a266b	2021-03-10	Arunscape	play game does not involve lobby
* e0930b3	2021-03-10	Arunscape	check for 3+ users fr3
* cbeddbd	2021-03-10	Arunscape	fr12sequence
* c21c408	2021-03-10	Arunscape	fr28sequence
* 7fb4f70	2021-03-10	Arunscape	fr27sequence
* 2879334	2021-03-10	Arunscape	fr10sequence
* 7360541	2021-03-10	Arunscape	fr9sequence
* 4e54651	2021-03-10	Arunscape	fr8sequence
* 51c2cc5	2021-03-10	Arunscape	fr7sequence
* 72d270e	2021-03-10	Arunscape	fr6sequence
* 49b9cd4	2021-03-10	Arunscape	fr5sequence
* 9d5c1ef	2021-03-10	Arunscape	fr4sequence
* 7aad86c	2021-03-10	Arunscape	fr3sequence
* fe90914	2021-03-10	Arunscape	fr3sequence
* dd09d87	2021-03-10	Arunscape	update fr2sequence
* 33bcadc	2021-03-10	Arunscape	update fr1sequence
* 8ac287e	2021-03-10	Arunscape	fr2sequence
* ff37e84	2021-03-10	Arunscape	fr1sequence

With Micheal having added some basic frontend stuff already, we did not have much of a backend yet. I was the most knowledgeable in the area, and this seemed like the next big thing to do, so I started making a lobby system. I had never worked with WebSockets before, so there was a good amount of trial and error here.

* c6c7837	2021-03-10	Arunscape	the websocket is now accessible from anywhere in the application
* 04c6bb7	2021-03-09	Arunscape	use the types I defined for transmitting messages
* de4b815	2021-03-09	Arunscape	add joinsuccesspayload to payload.ts
* c9a8575	2021-03-09	Arunscape	fixed the enter lobby id bug. now uses the textbox input
* e250620	2021-03-08	Arunscape	here's what the communication protocol might look like
* f9e9273	2021-03-08	Arunscape	hey we can now create a lobby, and join it with a unique id!!!
* b180a2f	2021-03-08	Arunscape	add uuid

We mentioned that we chose TypeScript, so that the frontend and backend can depend on the same data interfaces and make our lives easier. We were not doing that yet, so I began the process of separating out types and interfaces that would be shared between both the frontend and backend.

* 0d70162	2021-03-05	Arunscape	package-lock go brrrrrrrrrrrrrrrr
* 95a3d19	2021-03-05	Arunscape	document how to install private package
* f2eb902	2021-03-05	Arunscape	create polypong-common package
* c6d248a	2021-03-05	Arunscape	v0.0.1
* 0a64f51	2021-03-05	Arunscape	move Game types to npm package

Micheal did some good work here. He managed to figure out how to draw to the canvas, and did some geometry math/magic. We could see things coming together here. It was far from a functional game, but we could move one paddle, and see a ball moving.

* 51b2d4e	2021-03-01	mantifao	Player number done; paddles rotate accordingly
* 0d60aee	2021-03-01	mantifao	Ball now scales based on client's window size
* c5d9a42	2021-03-01	mantifao	Added a ball and basic collision detection
* 7cc2cc0	2021-02-28	mantifao	Cleaned up code, paddles have colors!
* ffad707	2021-02-28	mantifao	Paddles are now bounded!
* 0dfdaf9	2021-02-28	mantifao	Bottom paddle moves! No boundary checking yet
* dcccc91	2021-02-28	mantifao	Initial paddles are drawn
* 0fb8f2c	2021-02-27	mantifao	Adding classes but not yet working
* d81ecac	2021-02-27	mantifao	Shapes are drawn again

I committed the work breakdown structure instead of using google drive, because I prefer working with plain text files, and then compiling my drawings from those files. Using a mouse with graphics software is a nightmare. And, plain text works beautifully with git.

\* 6f9fadb 2021-02-25 Arunscape work breakdown structure

In this group of commits, I was working on porting Micheal's vanilla HTML and CSS mockup to using the Svelte framework so that we could start leveraging its features.

\* 345723b 2021-02-17 Arunscape idk what I changed but it works beautifully now. If the user is already signed in, they are no longer prompted for credentials  
\* e07fb58 2021-02-16 Arunscape getting somewhere  
\* 34625da 2021-02-16 Arunscape hm  
\* 61928d8 2021-02-16 Arunscape add auth0 client library again  
\* d158d9c 2021-02-16 Arunscape oh boy lots of changes  
\* 5c62216 2021-02-15 Arunscape add auth0 client library  
\* ccea9cc 2021-02-08 Arunscape frontend mockup but now in Svelte still kind of ugly because we're not reusing components, but hey, it's a start  
\* 739fbe9 2021-02-08 Arunscape actually let's try svelte@next  
\* f51de3c 2021-02-08 Arunscape add lockfile to gitignore for now  
\* 3573a86 2021-02-08 Arunscape use typescript  
\* 0acc958 2021-02-08 Arunscape init svelte

These last two commits were just me copying over the mockups that Micheal had made to the master branch

\* 4369d8e 2021-02-08 Arunscape move frontend mockup  
\* bd0191d 2021-02-08 Arunscape copy over stuff from main branch

I had started work just a day later, however, I used a different branch than Micheal's. It turns out GitHub changed their default branch name from 'master' to 'main' and I was still using the old convention. From past projects, like for hackathons and such authentication has always been a huge time sink, so I decided to start with that. At this point, I had a basic sign in demo that I could show to Micheal and Josh.

\* 7b293ed 2021-02-06 Arunscape signin works  
\* d38e4b4 2021-02-06 Arunscape signin works

Micheal kicked off the project with the first few commits. Being new to web development, he took the time and effort to familiarize himself with basic HTML and CSS knowledge, knowing that there was a mountain of work ahead to do.

\* 026077b 2021-02-05 mantifao Create README.md  
\* 61a93f6 2021-02-05 mantifao Delete .DS\_Store  
\* 279df4a 2021-02-05 mantifao Delete .DS\_Store  
\* c3a08ef 2021-02-05 mantifao Delete .DS\_Store  
\* 58569af 2021-02-05 mantifao Delete .DS\_Store  
\* 1d00abd 2021-02-05 mantifao Delete .DS\_Store  
\* 1aab6ff 2021-02-05 mantifao Delete .DS\_Store  
\* fe524da 2021-02-05 mantifao Add gitignore  
\* 72beaa3 2021-02-05 mantifao Initial mockups

I created the original git repository.