

Potion Perplexion - Game Design Doc



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Theme / Message / Core value:

**This game goes beyond a simple liquid sorting game.
It's polished and fun!**

Gameplay

The gameplay is about crafting and selling potions, having the liquid sorting gameplay as the main mechanic of the game. While the liquid sorting gameplay stays as is, we will have another parallel gameplay where the player can craft magical potions with the sorted liquids. This is the [current game on Google Play Store](#).

3Cs

- Camera : fixed, eye level.
- Character: first person view, no character design needed.
- Control : screen touch.

Mechanic 1 “Sorting the liquids”:



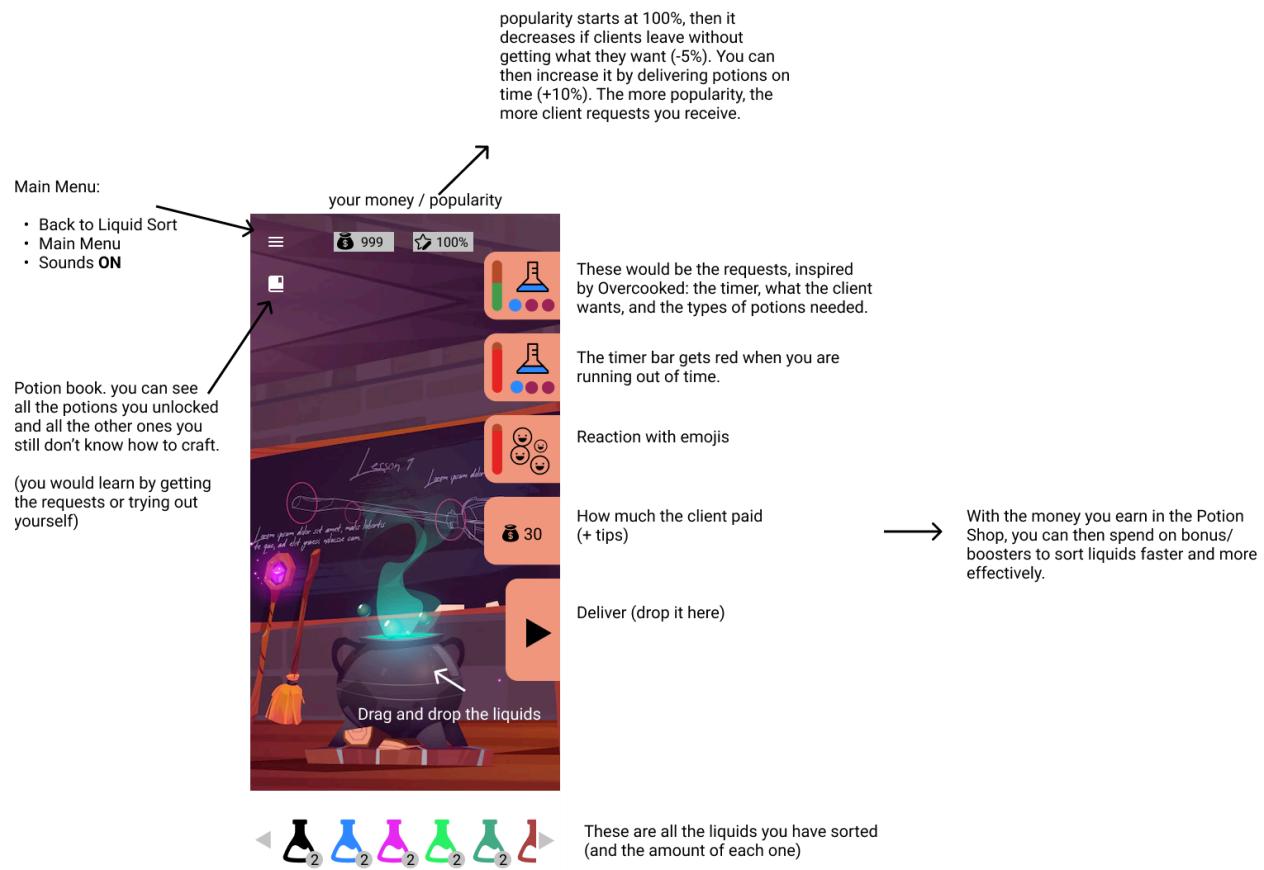
- Player Action:

- Click on a bottle containing a certain liquid, then click on another bottle to mix that liquid with another that matches.
 - This mechanic will remain similar to all liquid sorting games, except that some liquids may have textures (see below), so that can help blind-color people to see the difference between colors.
- Items that are related to this mechanic : bottle, liquid.
- Rules:
- You can only pour a liquid of a certain color/textures with another color/textures of the same type.
 - The goal is to fill the whole bottle with the same liquid. By doing so, that bottle is complete, and there is a visual and sound feedback to celebrate that ;
 - The levels may have different mechanics as explained below.
 - The amount of each liquid sorted is stored and will be used in the Crafting Game.
- Stat Change:
- When this mechanic is activated, the bottle is highlighted and it floats upwards, so you have a visual feedback of the active bottle. There can also be a subtle sound feedback for this.

Reward

You earn coins that can help you improve equipments in order to better craft potions.

Mechanic 2 “Potion Crafting”:



- Player Action:
 - Drag any of the potions available in the bottom bar and drop them into the cauldron according to the client's request.
 - When it's ready, drag and drop on the delivery section (▶)
- Items that are related to this mechanic : cauldron, the liquids sorted, client requests.
- Rules:
 - In order to create a potion, you need to pour the liquids in the order displayed on each client request, and some of the ingredients may have to go through an equipment, so you can get a “crystallized” or “dusted” outcome.
 - Without knowing the recipe, you can still try out some other combinations, but there is no certainty to result in anything. In the book recipe, you will see all the potions you can create, too.

- If you create a potion that the client didn't order, you just lose the materials and time, and the client's requests stay there until you finish their orders (requests disappear when the timer reaches 0) .
- All requests are timed (15 seconds), so if the requests expire, you lose 5% of popularity, and the request disappears. If you do deliver it on time, you earn 10% of popularity.
- **Popularity:** at 100% popularity, requests keep coming every 5 seconds.
- If **popularity** is below 75%, the amount of requests decreases, they arrive every 10 seconds.
- If **popularity** is below 50%, the amount of requests decreases, they arrive every 15 seconds
- There is a limit of 4 requests displayed at once on the screen.
- You earn **tips** if you deliver the potion while the timer is green. **Reward:** random amount between 1 to 5 coins.
- **Timer :** Each request lasts 15 seconds, and it's represented by a vertical green bar. When there are 5 seconds left, the timer bar gets red. If the request is not met on time, the request goes away and the player loses 5% of popularity.
- **Client requests:** it contains a timer, the ingredients needed to craft the potion (sorted liquid, dust or crystal), and it features the potion requested (the result of crafting all these ingredients). When the potion needed is delivered, some emojis will appear on it (check image above) to display how satisfied the client was, and right after that, the money paid is revealed (potion's price + tips if applicable)
 - You can dismiss the request by swiping it to the right if you want. You lose 2% of popularity.
 - The requests evolve as you unlock new levels in the liquid sorting game. (check **Liquid Combinations** below)
- **Reactions** with emojis : **happy** if the potion was delivered correctly, **angry** if the potion wasn't delivered on time.

- Stat Change:
 - When this mechanic is activated, all the sorted liquids and their amounts will be displayed at the bottom of the screen. You can use them to craft potions.

Reward

You earn coins that can help you improve equipment in order to better craft potions.

To access any of these two screens, you need to click on the Main Menu button and tap on Crafting Potion or Liquid Sorting. That pauses the current game, so you can play another one.

Liquid Combinations (for crafting potions)

In the clients' requests, there will be a combination of different liquids that results in what they desire. I separated these combinations into **sets**. These sets will be unlocked little by little, as players progress in the sorting liquids' levels. **Set 1** will be activated from the beginning, and **set 2** will be available after 10 levels are unlocked in the liquid sorting game (no matter the level of difficulty). **Set 3**, after 20 levels are unlocked. **Set 4**, after 40 levels are unlocked. **Set 5**, after 60 levels are unlocked.

The combinations of each liquid will be displayed in the recipe book and when a player clicks on the request, so they have it displayed on the UI. If any liquid needs to go through a special equipment, it will also display what equipment. You can improve each equipment to make them go faster by buying upgrades on the Shop.

Set 1

	Liquid colors	Price
Health Potion		5

Tonic of Remembrance		10
Elixir of Truth		10
Vitality Potion		10
Elixir of Shielding		30

Set 2

Brew of Chaos		30
Flask of Insanity		35
Philter of Love		15
Energy Potion		30
Tonic of Camouflage		35

Set 3

Elixir of Rage		35
Philter of Immortality		50
Flask of Silence		15
Antidote to Common Poisons		20

Dreamless Night Concoction		30
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Set 4

Developing Solution		15
Elixir to Induce Euphoria		40
Mouth Itching Antidote		35
Jawbind Potion		35
Exploding Potion		40

Set 5

Noxious Potion		50
Fire Protection Potion		60
Liquid Luck		45
Forgetfulness Potion		45
Essence of Dragon		70

The ingredients can be placed in any other order. For the crystals and the dust, you need to use the crystallizer or the dustifier. The outcome of it will float around the equipment, so you can drag and drop it into the cauldron.

Equipments

There are some equipments that help you create special potions.

How to obtain equipments?

All equipments will be available from the beginning in the crafting screen, but they will start at a very low level, so they take some time to finish, you can then improve them by buying upgrades at the shop.

How to use the equipments?

You drag the sorted liquids and drop onto the equipment you want, then you wait until it's done. The outcome of it will be floating on top of it, so you can drag and drop onto the cauldron for the potion. If you want to get rid of it, just drag anywhere else on the screen (except the cauldron).

Equipment	What does it do?	Price
 Crystalizer (level 1 - lvl 3)	<p>This mysterious equipment transforms liquids into crystals. It's a 1:1 relation where you put 1 "sorted liquid" of a certain color, and you get 1 crystal of that same color.</p> <ul style="list-style-type: none">- Timer : 4 seconds- Can be upgraded up to 3 times. The upgrades improve its look and it reduces the -1 sec off the timer.	Upgrade 1 : 50 coins Upgrade 2 : 100 Upgrade 3 : 200
 Dustifier (lvl 1 - 3)	<p>This equipment transforms liquids into magical dust. It's also a 1:1 relation where you put 1 "sorted liquid" of a certain color, and you get 1 crystal of that same color.</p> <ul style="list-style-type: none">- Timer : 5 seconds.- Can be upgraded up to 3 times. The upgrades improve its look and it reduces the -1 sec off the timer.	Upgrade 1 : 70 coins Upgrade 2 : 150 Upgrade 3 : 300

Cauldron Lvl 2	Potion crafting animation is 2 seconds faster + different skin	50
Cauldron Lvl 3	Potion crafting animation is 3 seconds faster + different skin	100
Cauldron Lvl 4	Potion crafting animation is 4 seconds faster + different skin	150
Cauldron Lvl 5	Potion crafting animation is 5 seconds faster + different skin	300
Wooden Laddle	Different skin (completely cosmetic)	20
Enchanted Laddle	Different skin	40
Silver Laddle	Different skin	80
Golden Laddle	Different skin	150

All these equipments will also appear in the request, so the player knows that the final potion needs to go through the equipment. These types of requests would appear more often when you have bought the equipment (otherwise, players may lose too much popularity).

Example potion alchemy

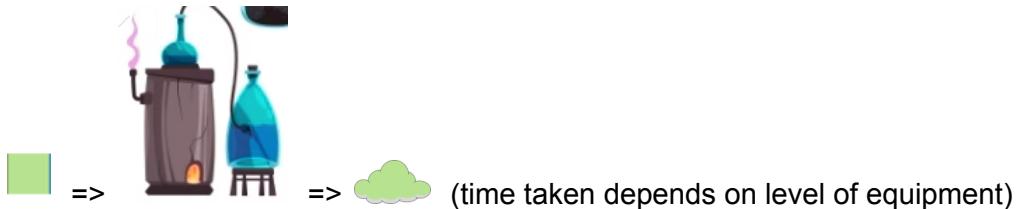
Potion crystallizer: (or whatever we want to call it)



Example use of crystallized potion:

Vitality Elixir		10
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Potion gasifier:



Usage:

Philter of Love		10
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Win/Lose Conditions (Liquid Sorting):

- Win:
 - Sort out all the different liquids in the level.

- Lose:
 - Depending on the level and its requirements, you may lose by not sorting the liquids within a certain time, by using more steps than they should, or when they pour the liquid in the wrong bottles.

Win/Lose Conditions (Potion Crafting):

- Win:
 - Deliver the potions to the clients on time.

- Lose:
 - Missing the client requests would make you lose popularity, but there is no game over state.

Even though there are two different gameplays, both of them are intertwined in the sense where the crafting gameplay needs the liquids sorted for the combinations, and the liquid sorting gameplay needs the coins that you can use to buy bonuses and

finish up the levels more easily. Also, the score is combined as we can see below.

Score

This is the **combination** of the amount of **coins** you earn every time you sell a potion **and** the score of your finishing a liquid sorting level (Score per Level or SL).

- A = Coins earned by selling potions
- B = For completing the liquid sorting level, there is an equation where the result is rounded up to avoid fractions. **SL = (level/0.9)^2**)

A + B = The score that will be displayed in the leaderboard.

Level Selection Screen (Liquid Sorting)

Levels are unlocked progressively: as you finish one, the following level is unlocked.

Premium Levels

Some special levels are only unlocked with the virtual currency. Something like, 50-200 coins.

Difficulty Parameters (Liquid Sorting)

Easy: accessible from the start.

Normal: accessible after completing at least 3 levels from the Easy mode.

Hard: accessible after unlocking at least 3 levels from Normal mode.

Expert: accessible after unlocking at least 3 levels from Hard mode.

The levels in general need to bring something different every 10 levels at least. The amount of bottles may not be enough in the long run. Ways to make it more challenging :

1. **Timed levels.** Levels can last between 15 and 20 seconds.
2. **Hide and Seek.** The colors are displayed at first for 5 seconds, then they all become a “neutral” color, so you have to remember where to put the liquids. When you make a mistake, all the colors get back and stay for 5 seconds and so on.
3. **Swapping Flasks.** Bottles get swapped with random ones every 5 seconds, preventing you from pouring in the right bottle.
4. **Think Twice.** Limit the amount of Steps that are allowed, then if they exceed, the level restarts. According to the level, the amount of steps will be displayed on the screen showing how many steps are possible.

Reward system

Bonus

1. Virtual currency
2. Time booster for levels that have timers
3. Reveal spell for revealing the colors in certain levels.
4. Freeze Spell (prevents bottles from swapping for 10 seconds)
5. Gain More Steps Spell

These bonuses can be bought directly in the bottom of the Liquid Sorting Screen, as we can see in the image below.



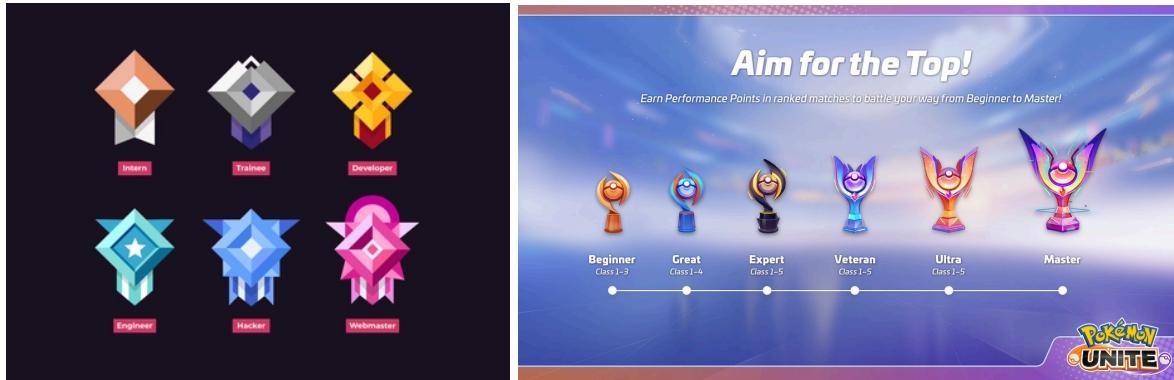
Achievements

In order to motivate players further, there can be some achievements that allow them to see their progress along the way. Each achievement awards them with a new title (shown in the Ranking screen).

Achievement List	
Title	What has to be done
Love is in the air 🎵	First love potion crafted
I'll put a spell on you	After having activated the 3rd Big Sales Day
The Herbalist	Harvest all the existing herbs
Witch Apprentice	First 10 levels finished
Wizard	Finish the 50 first levels
Mage	Finish the 100 first levels

The Illusionist	Craft 5 Alluring Potions
Eye of Toad	Sharing the app (1/3)
Ear of newt	Sharing the app (2/3)
Oh My Cauldron	Sharing the app (3/3)
Magic Potion Specialist	Craft all 10 different potions
Cursed	Sell 10 Invisibility potions

Leaderboard / Progress Screen



The more players see their progress, the more engaged they will be. We can have a screen to show their general progress, and an [online Leaderboard](#) for Android.

Progress Screen

This can be very similar to Pokemon's Unite, where you can advance from Beginner towards Master, depending on the high score.

Leaderboard

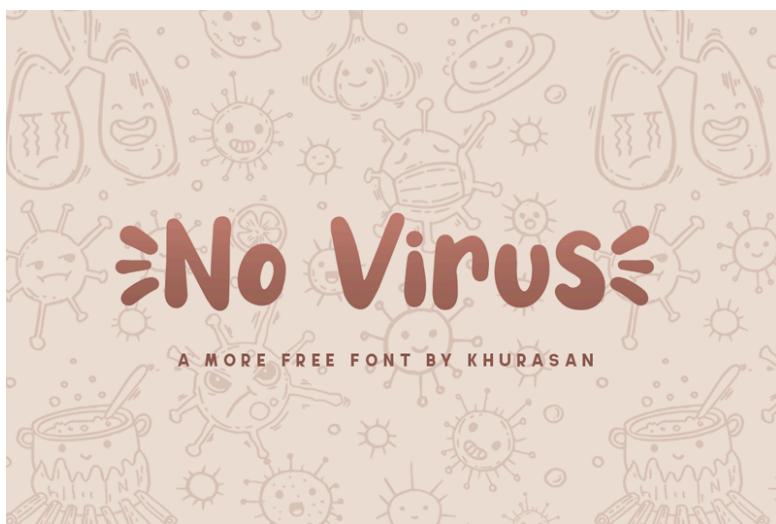
Whenever you open the leaderboard, it will display the player's name wherever it is in the list, so if you want to see the other entries, you need to scroll up or down. There will be the **order number**, an **avatar** (These could be 5 or more small and simple character portraits if possible. It has a potential to sell more avatars in the Shop), the **nickname** (we can simply prompt them for their nicknames when they open the game for the first time), a **title** if any, the **score (as mentioned above)**.

Fonts

These are some of the fonts that can work for the game. The first one is paid, and the other ones are free to use for commercial use.



<https://www.myfonts.com/fonts/kenrusseldesign/eeeek-images/>



<https://www.dafont.com/fr/no-virus.font>

No Virus is a free font for commercial use. It can also be combined with a more sharpened edges font, such as this one :



<https://www.dafont.com/fr/bebas-neue.font>

The fonts can also change as the game progress, it has to be tested with the graphics to check its compatibility.

Sound Design

The current music of the game doesn't really match the theme, so the idea is to find a song that says Potion Crafting, Magical moody sort of song that is not depressing. Most or all sounds (CC0) can even be found on music libraries, such as [Freesound.org](#) and [OpenGameArt.org](#).

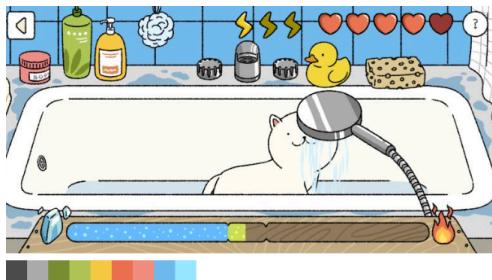
Art assets needed	Sound assets needed
New flasks (at least 10 different ones)	3 Music loops (main screen, liquid sorting, crafting potions screen)
Background	Success/Confirmation sounds
Main Screen	Negative (subtle) sounds
UI elements	UI click
Liquid + patterns	Liquid sounds
Level Select screen	Buy sound
Cauldron screen	Client request arrives
General UI window pop up	Crafted item is dismissed
Google Play Store Thumbnail	Request is dismissed
Crafting Screen	
Liquid Sorting Screen	

Visual References

Ideas for the liquid textures.



Color Palette Suggestions



A pastel color palette would work well, but I suggest picking one that has a bit more saturation to make sure that we can have a good contrast for the gameplay elements.

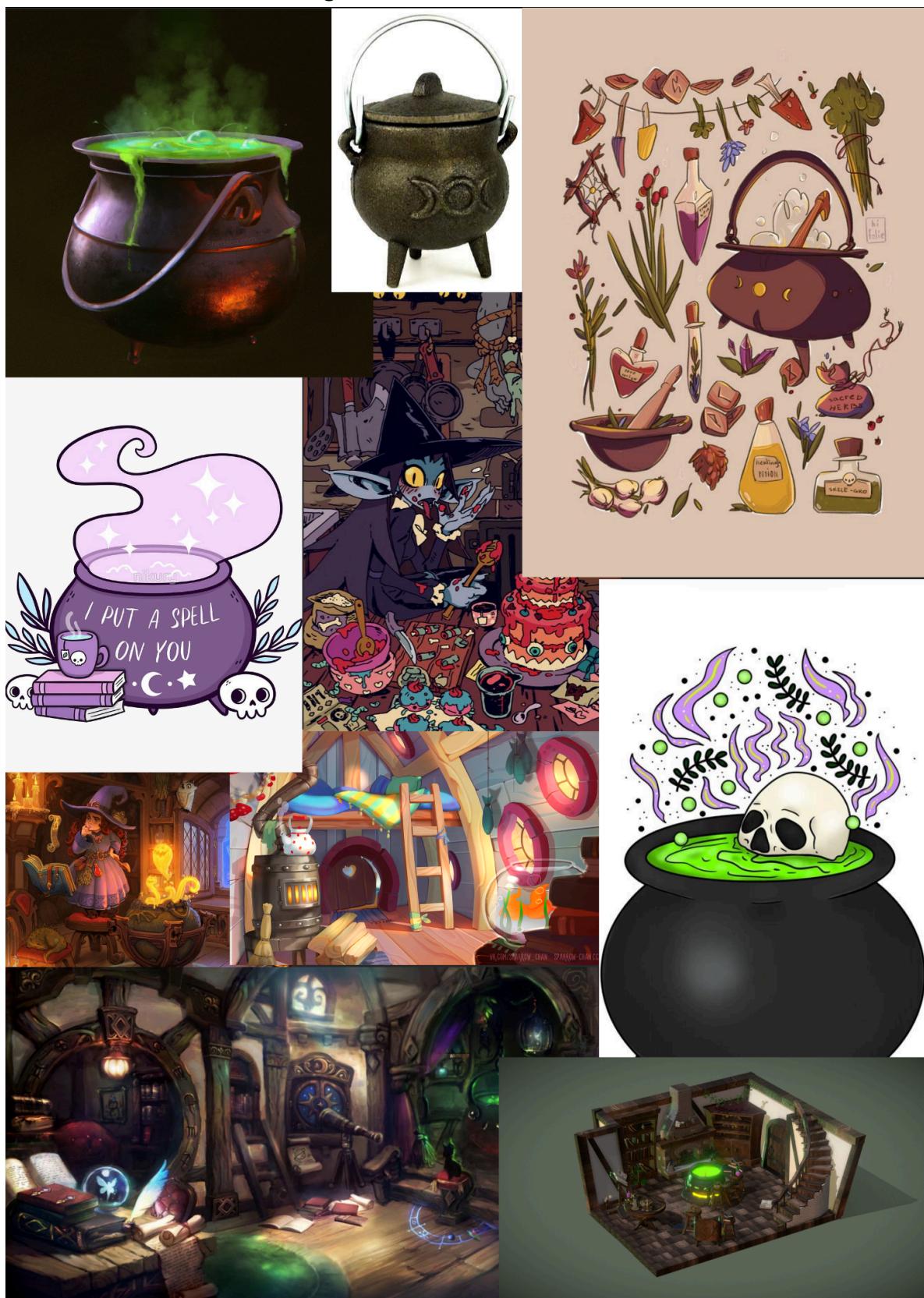
This is the color palette chosen for the project. It can evolve as the art is produced, and the patterns can also be improved:



Potion Flasks



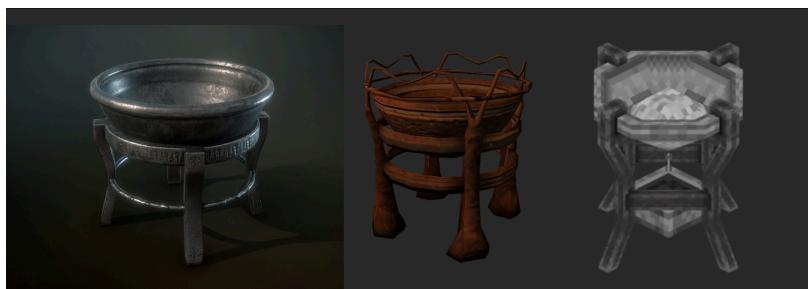
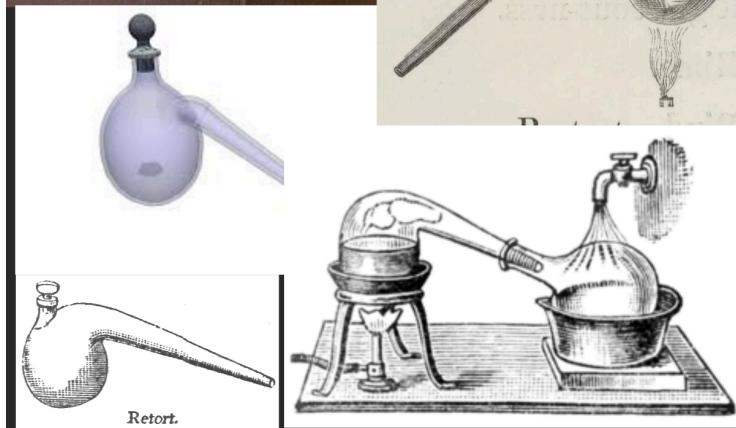
Moodboard for the main backgrounds and assets





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ALCHEMY TOOLS



Sol 170