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Egg, Inc. Vision on UX/UI

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Vision on UX/UI

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1. What is ‘Egg, Inc.’?

1.1 Gameplay & first glance

Egg, Inc. is a singleplayer idle video game for iOS and Android developed by Auxbrain, Inc. in July 2016. The objective of the gameplay loop consists of earning money by tapping a specific button on the screen and upgrading your farm. From building a chicken empire, upgrading hen houses, selling increasingly valuable eggs, to even launching spaceships and collecting artifacts. Egg, Inc. is a small game with wide goals.

1.2 Why choose this game?

Between the different games we could pick between; it was one of the first games I immediately spotted some flaws in the UX/UI design. For a fully launched game this is a major issue as I only needed a couple of seconds of looking at the most common game screen before I saw it. Once the game launched my eye got caught on a hyper-realistic egg in the top left corner. Auxbrain have made a huge mistake, breaking one of the biggest rules of consistency in user interface design. Seeing an art style of realism mixed with low-poly cartoon graphics, it was easy to tell that the UI of this game needed a change or fix in art direction.

2. Target audience

2.1 Mobile idle game players

Mobile games are portable, easy to download, and easy to play, no matter how much time you got to play it. But for the people who like to build something over a longer amount of time without playing too much; Egg, Inc. is the perfect game.

Idle games have been around for a long time with the most acknowledged one being Cookie Clicker by French programmer Julien Thiennot, also known as Orteil back in 2013 (Lars, 2021). One can imagine Egg, Inc. fans are both from the younger generation browsing the app store but also assume they're idle game fans all the way back from the Cookie Clicker times.

It is safe to say that idle games are not built for competitive players with time to waste on games, but rather for players searching for a chill, relaxing experience. This goes for Egg, Inc's target group as well. That is exactly why it is important that the user interface displays the same thought process, that makes it comfortable to understand and minimizes the thinking needs of the player.

2.2 Personas

Personas are often used to get a better perspective of who the potential players of a game could be and look like. It gives an understanding of the players' interests and wants so the developers and designers then can start "tailor" the game to fit their wants and needs.

By creating two personas you can easily understand who the players are and why they want the changes we're about to make to the user interface and experience. It is important that the two personas have different backgrounds, ambitions, age, emotions and locations to represent unique and individual thoughts and opinions. Getting the opinions of people with all these different factors will give a wider view of what the overhaul needs to fit the frustrations and expectations of multiple people and will then gain more players to Auxbrain's game.

Name	Sofie Larsen
Age	19
Location	Groningen, Netherlands
Study	Nursing, university student
Device	iPhone 15
Gaming experience	Play mobile games during study breaks. Do not have a lot of time to game.
Frustrations	Gets overwhelmed by too many buttons or options she doesn’t understand. Doesn’t want long introduction videos.
Redesign needs	Minimal, clean interface. Obvious main action button. Icon placement that makes sense for her mind. Skip button on intro.

Name	Marcus Andersen
Age	24
Location	Oslo, Norway
Study	Graphical design student
Device	Samsung Galaxy S24
Gaming experience	Have played Egg, Inc. for over a year. Familiar with idle game mechanics and strategies.
Frustrations	Accidentally taps wrong buttons because he plays fast and buttons are too close to each other. Annoyed about outdated design and inconsitency in colours.
Needs from redesign	Better button spacing to prevent mis clicks. New and more consistent colour themes and interface design. Cross out button in the same corner always.

3. Problem Identification

3.1 Nielsen & Molich's 10 guidelines

Developed by Jakob Nielsen and Rolf Molich in 1990 and later refined, the 'The 10 User Interface Design Heuristics' are rules designed to make digital interfaces more understandable, user-friendly, and accessible (Nielsen, 2024).

1. **Visibility of System Status:** "The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time."

2. **Match Between the System and the Real World:** "The design should speak the users' language. Use words, phrases, and concepts familiar to the user, rather than internal jargon. Follow real-world conventions, making information appear in a natural and logical order."

3. **User Control and Freedom:** "Users often perform actions by mistake. They need a clearly marked "emergency exit" to leave the unwanted action without having to go through an extended process."

4. **Consistency and Standards:** "Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions."

5. **Error Prevention:** "Good error messages are important, but the best designs carefully prevent problems from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action."

6. **Recognition Rather than Recall:** “Minimize the user's memory load by making elements, actions, and options visible. The user should not have to remember information from one part of the interface to another. Information required to use the design (e.g. field labels or menu items) should be visible or easily retrievable when needed.”

7. **Flexibility and Efficiency of Use:** “Shortcuts - hidden from novice users - may speed up the interaction for the expert user so that the design can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8. **Aesthetic and Minimalist Design:** “Interfaces should not contain information that is irrelevant or rarely needed. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility.”

9. **Help Users Recognize, Diagnose, and Recover from Errors**: “Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution.”

10. **Help and Documentation:** “It’s best if the system doesn’t need any additional explanation. However, it may be necessary to provide documentation to help users understand how to complete their tasks.”

By using these guidelines, we can point out the flaws in the user interface design of Egg, Inc. We can then proceed of better understanding why it’s a great candidate for this assignment before doing the UI overhaul.

All heuristics above are cited in the bibliography under Nielsen, 2024.

3.2 Issue recognition and fix intentions

Nielsen & Molich's Heuristics	Issue	Severity Rating	Fix
Visibility of system status	The currency is displayed with a dollar looking emoji which on a small phone screen just looks like a green square. Doesn't really communicate what the player is earning at all. The hen house indicator shows a baby chicken icon without context, so the player has no clue it means the house is full. The hatchery bar is also small and placed too close to the money value.	Mid	Switch the dollar emoji for an egg so the player sees eggs going in and eggs being counted. Add an arrow behind the per second number to show progress. Replace the baby chicken icon with a hen house icon so it makes sense.
Match between the system and the real world	The egg in the top left is hyper-realistic while the rest of the game is cartoony. Breaks the visual connection instantly. The tap button is just a big red circle with a chicken; nothing tells you to press it. Currency uses dollar symbols in a game about eggs which makes no sense for players from different countries. Some buildings like the shipping depot have no signs showing what they are or that you can even tap them.	High	Redraw the egg to fit the cartoony art style. Add a fingerprint on the tap button so the player gets that it should be tapped. Replace dollar currency with eggs. Put indicator icons on buildings so players know what they open.
User control and freedom	The intro video has no skip button. Player is forced to sit through it with no way to bypass it.	Low	Add a skip button in the top left corner following the F-pattern.
Consistency and standards	The "X" exit button jumps between top left and top right depending on which pop-up you open. Icons mix hyper-realistic with flat silhouettes and cartoony styles all in the same interface. The tap button is red which symbolizes danger, but the function is positive. Font is all caps throughout which is not great for accessibility. Pop-up boxes don't have consistent corners or outlines either.	High	Put the "X" always top left. Unify all icons to the cartoony style with thick outlines. Change tap button from red to blue for the calming idle game feel. Use OpenDyslexic font with mixed case. Round all corners using the same egg-carton shape.
Error prevention	The action buttons for research, boosts, challenges and menu are right next to the big red tap button. When tapping fast to spawn chickens you easily hit the wrong button and open a menu you didn't want. Tap button is also way too close to the phone edges which can trigger system buttons and exit the game.	Mid	Move action buttons into a drop-down menu in the top left, far from the tap button. This separates fast tapping from navigation completely.
Recognition rather than recall	Main menu has 8 items in a 3x3 grid with no sorting or categories. Breaks Miller's Law of 7 and creates cognitive overload. Grid layout forces you to scan randomly instead of just reading top to bottom.	Mid	Turn it into a categorized drop-down list. We read from top to bottom, so a list is way easier. Split the items into categories like Settings, Game Features, and Help & About.
Flexibility and efficiency of use	Menu and action buttons sit at the bottom of the screen instead of top left where Nielsen's F-pattern says users look first. No folder system for pop-ups either so every single notification just shows up individually taking up space on the screen.	Low	Reposition the menu button to top left following F-pattern. Add a folder that stacks gifts, packages and notifications together, so they don't clutter everything.
Aesthetic and minimalist design	Home screen can show 20+ buttons when pop-ups appear. Icons on the sides shake and pulse which is super distracting. The shop button takes up space in the top bar for no reason. Chicken counter is a dark silhouette that doesn't match the style. Money icon shows up twice in the top bar.	High	Move shop and action buttons into the drop-down. Remove the chicken counter and the duplicate money icon. Stack pop-ups into a folder to keep the home screen clean. Add thick outlines to all UI boxes to match the cartoon style.
Help users recognize, diagnose, and recover from errors	When going into sub-menus from the main menu there's no visual difference between closing the menu entirely and going back one step. Player can't tell if pressing X will kick them out or just go back.	Low	Use an "X" to close the menu entirely and switch it to a back arrow when inside a sub-menu. Player always knows what will happen before pressing.
Help and documentation	After the intro the player gets thrown into a screen full of buttons with zero explanation of what they do. Theres a help button in the main menu but it's buried among 7 other items with no categories so good luck finding it.	Mid	Categorize the menu so Help & About has its own section that's easy to spot. Add indicator icons on buildings and buttons so the player can understand what things do without searching.

4. Design Requirements

4.1 What are design requirements?

After reviewing the target group, creating personas for a better clarity of who plays the game, going through the UI issues using Nielsen and Molich's heuristics, one may get a better understanding of what to do. But first we need to go through the design requirements.

Design requirements are strict rules and guidelines that makes limits for what to think of or avoid when redesigning. It helps the designer to not step out of the original reasoning for why the redesign is being done in the first place.

4.2 List of all design requirements

- **Consistent art style across all UI elements:** All icons and visual assets match the same style and colours. No mixing of realistic and cartoony icons and images, as well as 3D and flat.

- **Avoid unnecessary buttons and features:** Remove 5-finger tap mode and multiple buttons with the same features. Reduce pop-ups by stacking them together.

- **Make button and icon intentions predictable and understandable:** All buttons with a function should have an icon or element that displays its action to guide the player. All icons will be obvious to what it does.

- **Spacing must have enough pixels to avoid mis clicks:** Keep distance between buttons. Keep buttons that often are tapped away from buttons that will not be tapped as often to prevent mis clicks.

- **Categorize sections and menus to avoid cognitive overload:** Create folders for icons that can stack up to more than seven. Categorize menus and create lists that are comfortable for the human eye.

- **Stick to theme when possible:** Use shapes of egg related products to create consistency and showcase understanding of concept.

- **Clear and thematic currency system:** Replace dollar shapes currency display with eggs to prevent cultural confusion and match the game theme.

- **Add symbols where they're missing:** Indicators and affordances should display buttons that are currently not visible. Buildings that are tappable to open pop-ups must display somehow what it opens when you tap them.

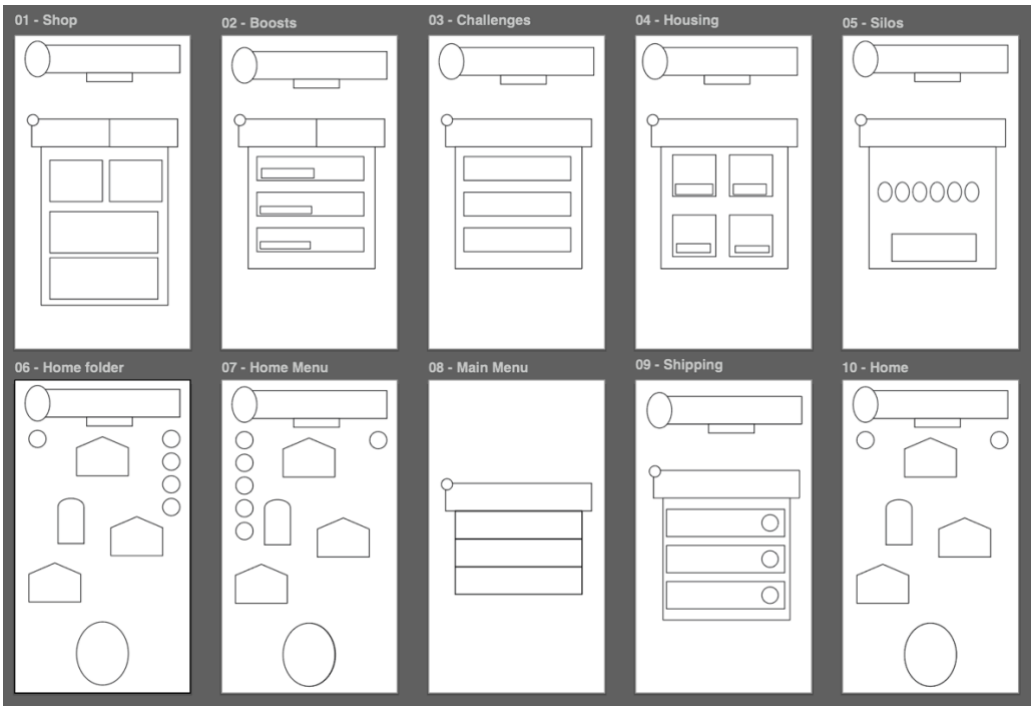
- **Stick to colour theory:** Avoid mixing negative and positive colours. Always use colour theory so players don't misunderstand intentions. Exit buttons should always be red. Buy/upgrade buttons should always be green, and nothing else. Avoid colours that blend into each other or with the background. Stick to a very strict colour theme.

- **Always stay loyal to fonts and keep text sizes large:** Keep in mind the game is made for mobile which often include a small screen, keep text sizes large and easily readable for the players eyes. Use the Golden Ratio rule to create good header to subtitle differences in text sizing. Stay loyal to fonts (maximum 2 per screen) to prevent cognitive overload.

5. Lo-Fi

5.1 Lo-Fi wireframe and introduction

To begin with the UI overhaul, it is important to create low fidelity (Lo-Fi) sketches of the changes, so it's simpler to change the detailing without having to redo the Mid-Fi and Hi-Fi design. Lo-Fi shall be extremely minimalistic and only show shapes and display the placement of elements. Using simple shapes to portray the intentions of spacing and design elements will guide the functions to make more sense in the player's head. Lo-Fi is the perfect opportunity to do this.

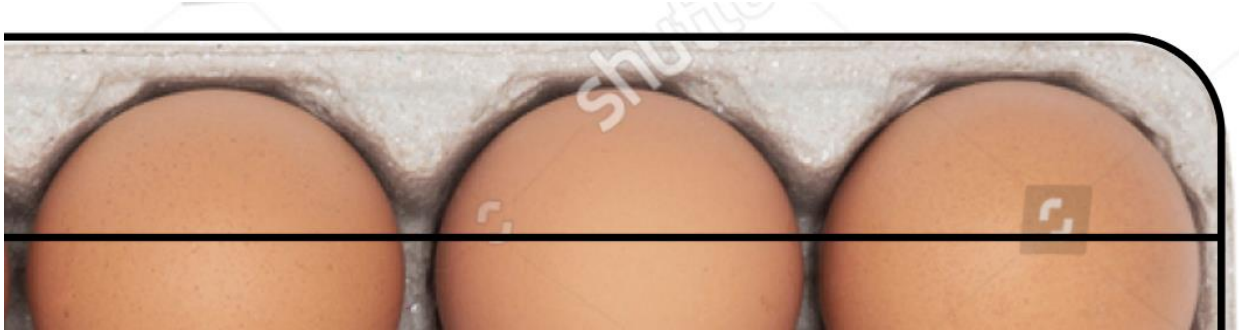


5.2 Exit buttons

In many of these screen overhauls you can see a circle in the top left corner; this displays the exit button which will always be in the top-left corner. According to Nielsen's eye-tracking research, users follow an F-shaped scanning pattern, spending 80% of their time focused on the left half of the screen (Fessenden, 2017). By placing the "X" top-left, will mean that the players will easily recognize the button and intentionally know where not to press until they want to exit. This also follows Nielsens' flexibility and efficiency of use heuristic as the players already know where to press to exit before anything else.

5.3 Thematic shapes and consistency

Lo-Fi's are made with simple shapes. In this case, some are egg-shaped to match the theme of the game. The goal was to try not to change the design more than necessary; something you can see from the top bar on the home screen. But one of the biggest inconsistency issues was the hyper realistic egg in the top left corner which does not match the cartoony art style. The shape was kept but made fitting to the art style. Using the same egg-shape for the tap button is one of the biggest if not the biggest change of the UI in the entire game. It was done to represent that this will gain eggs for the player but also fit the theme.



For every square you can see in the Lo-Fi, the idea was to have rounded corners, again to match the art style and cartoony look. But also, because it's more comfortable for the player's eyes. The corners were rounded on top of a real-life egg cartoon to be a match between the system and the real world, which also is one of the heuristics mentioned earlier. These corners were copied and used for every corner to keep consistency.

5.4 Drop-down menu, folder, and categorizing

On the home-screen of the original game you had a bunch of buttons. Matter of fact, seven even without any pop-ups, and up to 20+ with pop-ups. Breaking George Millers law of seven, which says “the average person can only keep 7 (plus or minus 2) items in their working memory” (Yablonski, n.d.). Which in this case creates an insane amount of cognitive overload for the player.

The fix for this was adding drop-down for the main menu including the chemistry lab, boosts, challenges, and main menu. As this is an often-used button, it got placed in the top left corner, again using Nielsen’s F-pattern ideology. Now the player can simply press to open a drop-down menu which shows all these options.

For the pop-ups of gifts, packages, and notifications; a folder would be the perfect choice when stacking more than 3 pop-ups.

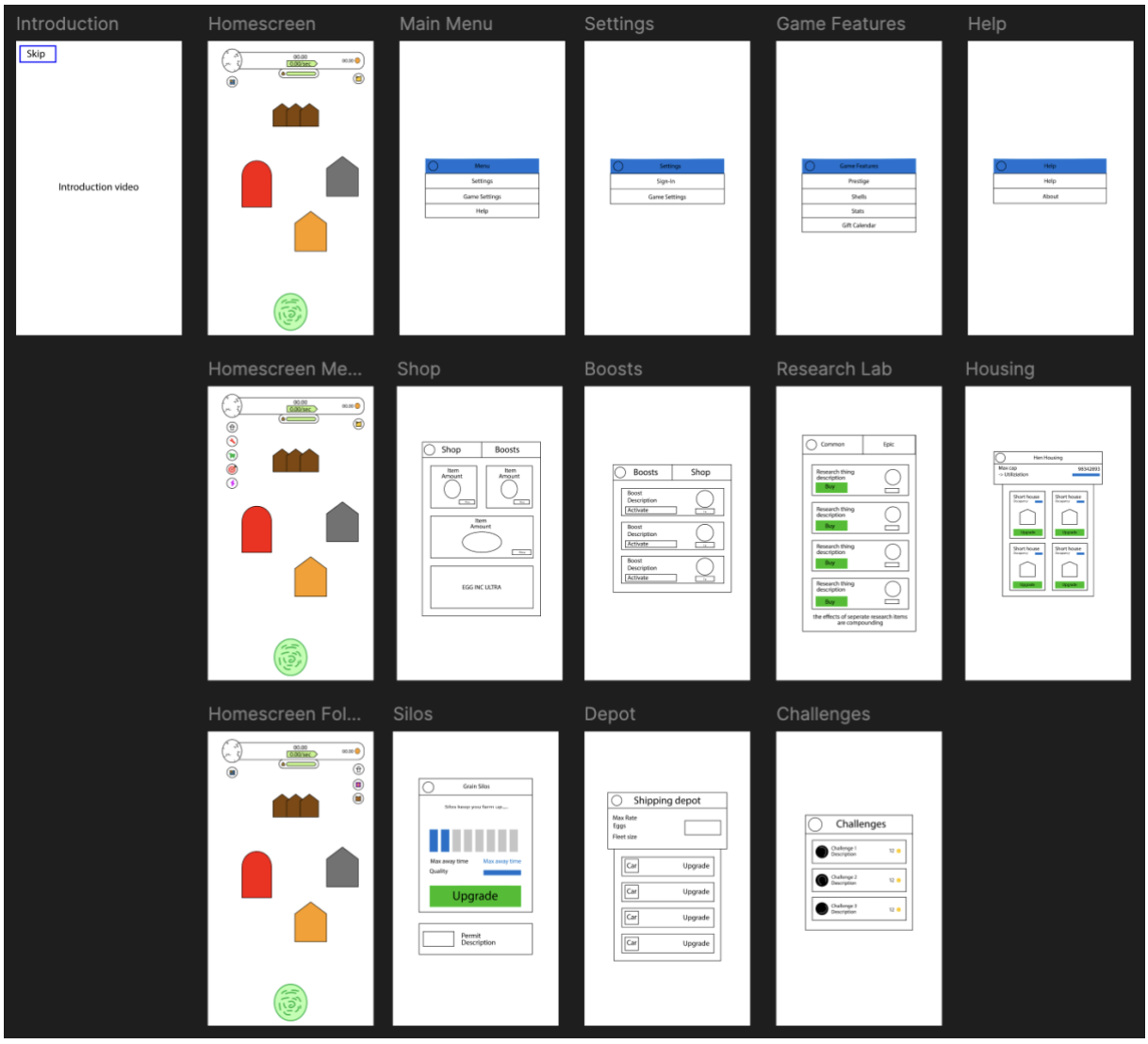
Original game *Lo-Fi*

6. Mid-Fi

https://www.figma.com/design/PRzznJZFvzBEYJdt9VOpm2/Mid-Fi?node-id=0-1&t=Eqs2hoLM80S6JcAd-1

6.1 Mid-Fi wireframe and introduction

Mid-fidelities are a step up from Lo-Fi and should include what the different buttons do and are for as well as some simple colouring to give a better understanding of the colour theme. While still sticking to quite simple shapes, they should still be more understanding than the Lo-Fi shapes with symbolizing the action of pressing the shape somewhat.



6.2 Intro skip button

Nielsen's third heuristics rule, user control and freedom is about letting the player roam free around in the game without being attached or stuck to something they want to exit or skip. The first thing you see when you open Egg, Inc. is an introduction video. By adding a simple skip button in the top left corner (again using the F-pattern trick) this can spare the player's time and improve their control and freedom.

6.3 Colour theory

One huge instantly noticeable issue with the UI of Egg, Inc. is the use of colour in the game. A good example is the main action button of the entire game which does a simple function, spawn chickens. The button is the most tapped throughout the game and is necessary to progress as that is what gains the player's currency. The issue is that the button is coloured red. In 2025, Cherry stated in an article: "In colour psychology, red provokes the strongest emotions of any colour" and "Conveys Danger and Warning", while "cool colours like green and blue are generally considered peaceful and calming". In the game, the button is red which symbolizes wrongly. Switching this out for a blue colour to also fit the pop-up menus of the game, will create a sense of colour theme consistent throughout the game, as well as give the feeling of peacefulness. This is exactly what the game needs as an idle game is not made to be stressful.

Making all buy buttons and only buy buttons the colour of green gives the player a connection between buying and the colour. They then instantly know it is some sort of positive button which works as an upgrade for their game. Green is often associated with permission to act. Like a traffic light, green acts as a "green light" or a "go" signal, creating a feeling of approval or safety.

6.4 Tap button affordances

Another issue with the tap button is that there is no affordance as to what to do with it. It's currently just a big red button with a chicken on. Yes, one may argue that this symbolizes the spawning of chickens, but it's not clear enough especially with the big red colour. Switching the symbol out for fingerprint marks, this will build the understanding for the player that he/she has to press it with their finger.

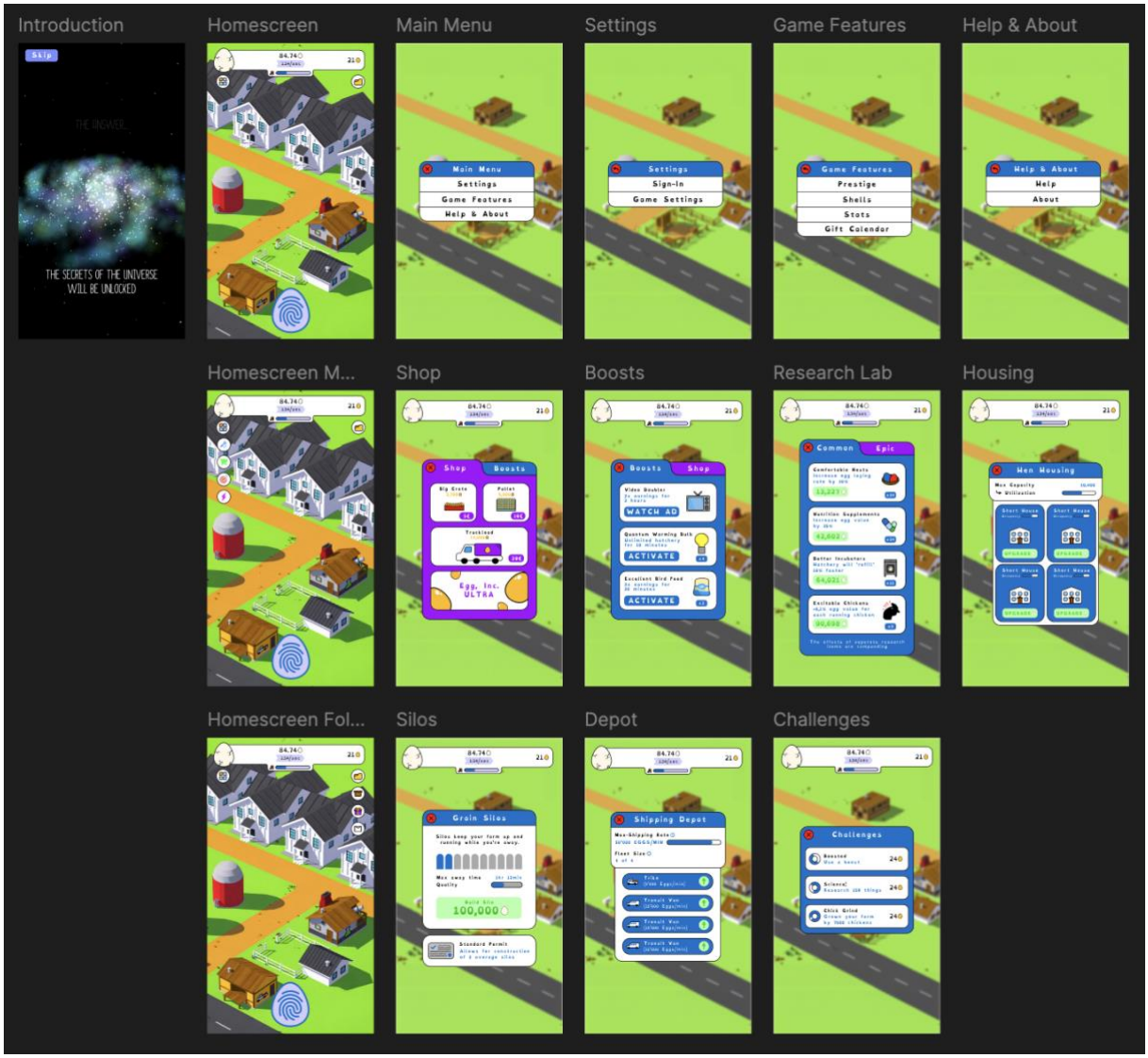
7. Hi-Fi

https://www.figma.com/design/3tJINl7QpEnYpEoIKBoVIg/Hi-Fi?node-id=0-1&t=KB681Ki7wGRvZjrz-1

7.1 Hi-Fi wireframe and introduction

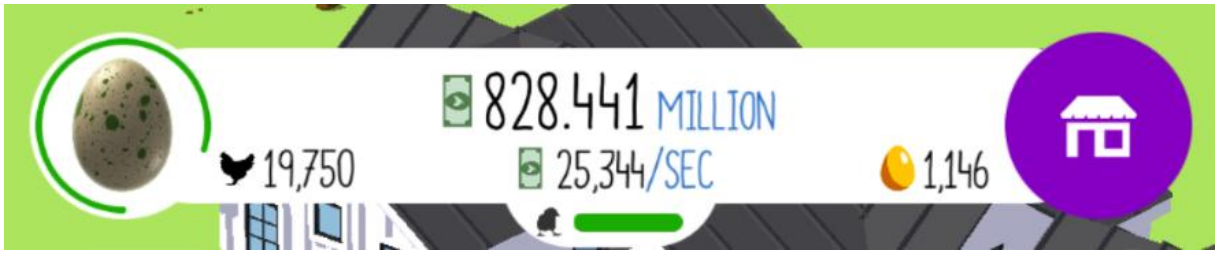
High fidelity is the finished product. After doing both low and mid fidelity, one should finally have a good design. Building on the two fidelities, the game will have a substantially better interface design and give an experience of a finished and well-made game to the player.

After doing the overhaul that has been done, it is easier to see exactly why this game needed change. And after the Hi-Fi, it is clear to see exactly why it was necessary for Egg, Inc.



7.2 Informative top-bar

Maybe the most important asset is at the top of the screen. The bar that holds 5 different information details in one small space. Now, of course this is a tricky task to change, but changing it was not really the goal either. It was rather to improve it.



- Egg on the left: One big flaw in the game as it was, is the hyper-realistic texture of the egg. This was 100% inconsistent to the rest of the game. Changing this to a minimalistic cartoony looking egg was a big move and made the game fit more together. Instead of the progress bar, it was easy to feel that there was enough with one progress bar (besides the small chicken below) in the top bar. Switching the green bar that goes around the egg with cracking lines, as if the egg was about to break increasingly the further you progress; builds on the heuristic of a match between the system and the real world.

- Removal of the chicken counter: The chicken counter was kind of pointless and did not look very good as it also was not consistent to the rest of the game. A dark silhouette in the middle of this cartoony art style did simply not fit the style.

- Currency and amount: One of smallest but still biggest changes in the game was switching out the currency from a dollar looking emoji to just eggs. This creates a match between the system and the real world and makes the visibility of system status more clear by it simply being an egg game and not confusing the player as to where the money comes from or how much it is they're getting. For players from different countries and cultures, it may be unclear what currency currently was being used, or what the green-

box (dollar emoji) really meant. Switching it for an egg makes a better connection of gaining exactly what it looks like you're getting from a chicken when it enters the hen house.

- Per second timer: Adding an arrow behind the number of eggs generated per second creates a visibility of system status, giving the player a feeling and understanding that progress is made and that something is going the right way or forwards.

- Bottom hen house indicator: There was a big issue with what the hen house indicator bar was displaying. It showed a picture of a baby chicken without any context as to what it does. It's easy to think that it means when this bar is filled up; some chicken is grown up? This is not the case. When the bar fills up that means the hen house is full and needs an upgrade (while this is the case, you can't progress). Switching the baby chicken icon out for a hen house makes much more sense in every way.

- Repositioning of the shop: A big circular purple store was taking up a lot of space in the top bar. But why is it really in the top bar? It would make much more sense to have it away from all the currency and information and reposition it next to the rest of the action buttons. Also putting it in the drop-down menu to prevent cognitive overload.

7.3 Indicator icons on buildings

All buildings in Egg, Inc. are tappable to open its individual pop-up. But some of the buildings don't have any indicators as to what they are. This also rejects the player of getting information that they are tappable. By simply putting some icons on the side of the buildings, one can easily spot its actions.

7.4 Main menu categorization

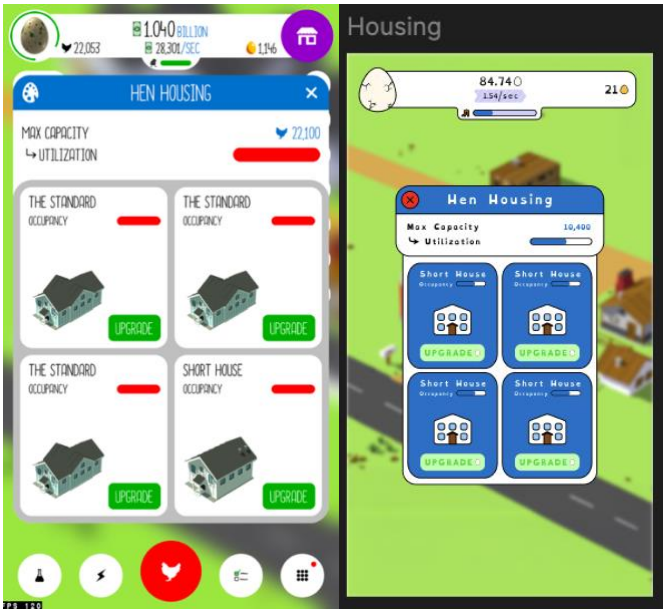
The main menu consists of eight different buttons that either have effects on or showcases status of the game progress. The issues with this are multiple. One thing that is nice with it, is the F-pattern it's layer out, following Nielsen's philosophy. But it just about breaks Miller's law of 7, creating cognitive overload, as well as it is not categorized and breaks Nielsen & Molich's recognition rather than recall. There is a simple fix to both these issues, while still following Nielsen's F-pattern in a way. "By nature, humans tend to process information in a sequential manner, which the list view supports; on the other hand, the grid view doesn't provide this linear flow, making it potentially confusing for some customers to navigate and locate their desired products" (Kwemo, 2025). By also categorizing the menu it guides the player easily to where to look, this prevents cognitive overload and follows Miller's law.

Another change on the main menu is the "X" exit button in the top left corner (again following the F-pattern). In the first pop-up you can see the cross for exit, but after moving on from there into one of the sub-menus; the cross turns to an arrow back. This shows that you don't exit the menu entirely, but you go back to where you were before which Help users recognize, diagnose, and recover from errors (Nielsen- & Molich's 9th heuristic).

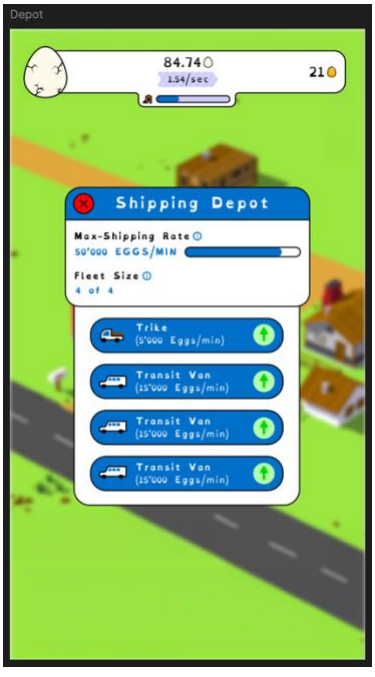
7.5 Gestalt's proximity principle

Gestalt is a German psychology school especially known for their studies and logic around the human brains pattern recognition. The school had a bunch of principles about symmetry, similarity, and proximity.

In the overhaul of Egg, Inc.'s user interface there was a lot of Gestalt's psychology that needed to be kept in mind while redesigning. Proximity is one of the main principles that were most important because it was missing in the game.



When pressing one of the hen housings, the player opens a pop-up showing all the owned hen housing. As the interface is now; it does not look like the information of "Max capacity" and "Utilization" has anything to do with the houses below even though it's the main and only information that tells how much your houses stores in total. By using Gestalt proximity principle saying: "Elements close to each other are perceived as belonging to the same group" (Hodent, 2017), you could argue that they're close, but the curves of the corner around the grey box outside of the houses tells a different story. Because the corners are curved like that, it looks like it's in front of the top pop-up instead of a part of it when it really should be the other way around. That's why in the redesign it makes sense to switch it around and even scale the box around the houses down to even more show that there is a connection; and the top pop-up is the real statistics the player should focus on.



The same techinique being used on the "Shipping Depot" pop-up.

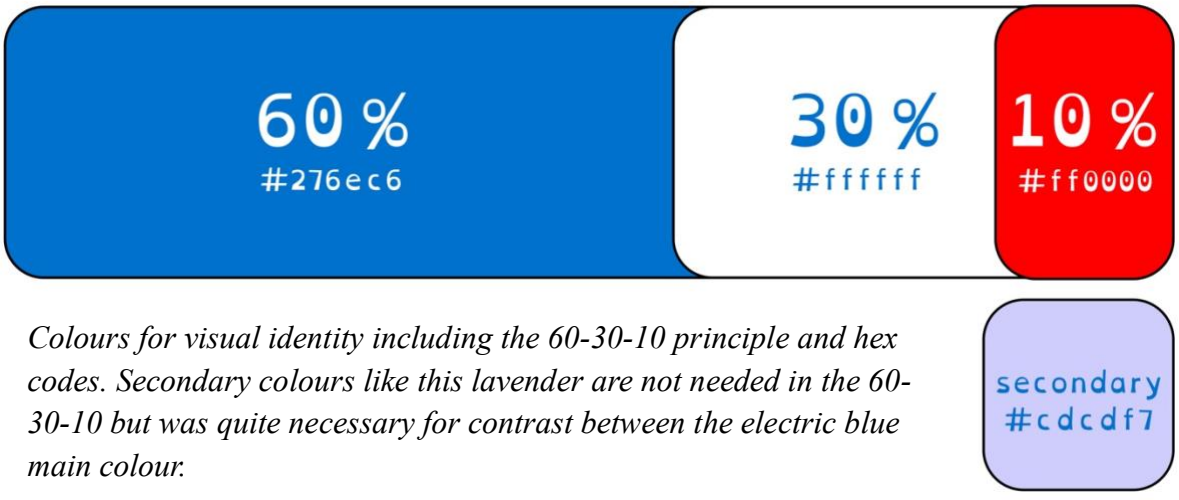
7.6 Consistency is key

Throughout this whole project, one word has stood out a lot: Consistency. This was what noticeably was missing a lot in the game and is therefore what has been one of the focus points through the overhaul. From icons, elements and assets to art style, outlines, and colours. It's one of the most important aspects in design. This is also why design requirements are extremely important as it sets barriers that prevents the designer to do inconsistent work.

7.7 Colour Theory, emotional design and 60-30-10

Colour isn't just decoration. It communicates meaning and triggers emotions through design to create a better experience for the player. The problem with the colours used in Egg, Inc. is what they symbolize. Earlier mentioned issues were the colour red being used for a positive button. Which was an issue as red symbolizes negativity. The game does not have one primary colour that puts everything together and again; creates consistency. Instead, there is no proper system which indicates that the designer has not made a visual identity to match the branding of the game or company.

In design there is a principle called the 60-30-10. This is an interpretation of the Golden Ratio or Fibonacci sequence often used by interior designers to create balance in colours of a room. This principle is often used in designs such as logos, posters, and websites. The principle consists of finding 3 different colours and trying to even them out in a 60%, 30% and 10% ratio. While this is not a design requirement set before creating this game - it is still a good principle to keep in mind when redesigning UI and was used for the Egg, Inc. overhaul's Hi-Fi.



Colours for visual identity including the 60-30-10 principle and hex codes. Secondary colours like this lavender are not needed in the 60-30-10 but was quite necessary for contrast between the electric blue main colour.

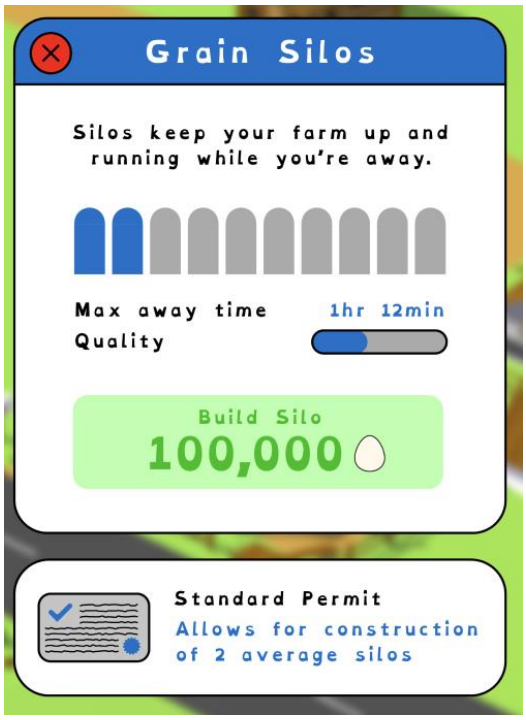
7.8 Choice of colours according to theory

There should always be a reasoning to why a colour is chosen. As talked about earlier, different colours trigger different emotions. Cherry, MS, is a psychosocial rehabilitation specialist, psychology educator, and author of the "Everything Psychology Book". In her article for verywellmind in 2025 she stated that "colours like green and blue are generally considered peaceful and calming". And what is more fitting to an idle game than peaceful and calming colours? To keep this throughout the game, will give the player a unique relaxing experience in middle of this big chicken/egg mess.

A good example to where this comes into play can be in the science lab pop-up. Once you open the pop-up, you're met with a bunch of photos and colours. But what Egg, Inc. does great here is the use of colours. They separate it into a blue section for common, and purple for epic. With almost the entire pop-up being blue it creates a calming experience for the player, leaving the purple in a small corner but still a visible contrast. Purple's rarity in nature historically made its dye expensive, creating associations with royalty, wealth, and exclusivity (Iron Dragon Design, 2025). Using purple for the "epic" research tier and blue for "common" justifies this psychological hierarchy. Blue is seen daily in sky and water, while purple feels rare and premium.

7.9 Art style

The UI of Egg, Inc. is inconsistent in the art style especially when showcasing the eggs and small icons on the informational top-bar. It switches between hyper-realistic and the cartoony/wobbly quirky art style Auxbrain initially are going for. Other than that, the cartoony look is done well. Except, it feels like something missing to fully experience the nostalgic cartoon network look they're almost aiming for with this game. Since it is by purpose created to look a bit silly, why not go all the way? Adding a thick outline around all boxes will fit perfectly into the art style the UI designers tried to accomplish while creating Egg, Inc. It is also a great way to contrast and separate the background from the pop-ups to really make them pop.



7.10 Typography

Since Hi-Fi is the final product; settling on a font is important. Now, in a game it should be enough with 2-3 fonts to again keep consistency. Font pairing is hard to pull off, but achievable. But sticking to one font is a smart move to achieve optimal minimalism. Even though Egg, Inc.'s font is a good wobbly "handwritten" type font, it lacks thickness to again match the cartoony aesthetic of the game. It will also fit well in with the thick outlines of the boxes. An issue with the thin font is that it is also all capital letters which is not accessible. According to a study from Harvard University, a prestigious private research university in Cambridge, Massachusetts in USA: "All-caps text is less accessible because it reduces reading speed and comprehension for users with visual, cognitive, or learning disabilities (like dyslexia), as it eliminates familiar word shapes" (Design for Readability | Digital Accessibility Services, n.d.). Since Egg, Inc. is already going for this wobbly design, it fits well to go pro-inclusivity and accessibility using the "OpenDyslexic" font which is designed to improve readability for humans with dyslexia by using weighted, heavy bottoms on letters.

OpenDyslexic font – fontmeme.com

7.11 The Golden Ratio & sizing

In the 60-30-10 principle they use the Golden Ratio or Fibonacci spiral to find a perfect balance between the amount of colour in a colour combination. The spiral is a special number (1.618) that prevents patterns from overlapping. It's often seen naturally in plants, sunflowers, pinecones and shells to save space without breaking itself. This can be used to find balance and space in a lot of design. In this case, seen in text size. To differentiate between headers (h1), titles (h2), and subtitles (h3): it's used in the design websites, posters, logos, and more.

Mathematical equation of how the Golden Ratio is being used for hierarchy in text sizes.

7.12 Icons

Icons is the part of a user interface which is the most important to be a match between the system and the real world. It should explain obvious what it opens even before you tap it. But the hard part is that it should also match the theme in both art style, and somewhat in colours and contrasts. Trying to stick to the cartoony look with a thick outline mostly worked, but there were some cases where it would look weird like for example the challenges (target) design. It would not be fitting because of its many lines in a row creating weird spacing if it was. The same goes for most icons with two objects or items in it like the settings icon for example. For some icons I used shading and some others, this depended on how big the icon was on screen. The bigger it is, the more visible the details will be.

8. Evaluation

8.1 Evaluation explanation

After a successful overhaul of the user interface, it's important to be reminded that the design is not perfect. The American aerospace engineer Murphy had in 1949 the idea of every solution breeding a new problem (Fernandes, 2024). No redesign is perfect and the goal is to see what improved and what could still be better. Going back to Nielsen & Molich's ten heuristics of user interface design we can find out what we fixed and what is still missing.

8.2 Heuristics evaluation and new issues

Nielsen & Molich's Heuristics	Fixed	Severity Rating	New Issues
Visibility of system status	Mostly fixed. The egg currency makes way more sense than the dollar emoji and the arrow behind per second gives a feeling of progress. Hen house indicator with the house icon is clearer than the baby chicken was.	Low	The hatchery bar could still be hard to notice on smaller phone screens. Could be made a bit bigger.
Match between the system and the real world	Fixed. The egg is now cartoony and matches the art style. Fingerprint on the tap button gives a clear affordance. Currency is in eggs. Buildings have indicator icons showing what they are.	Low	Some players might not instantly connect a fingerprint symbol with tapping since it's not something you usually see in games. Could need a small tooltip the first time.
User control and freedom	Fixed. Skip button is added to the introduction video in the top left corner.	None	No new issues found.
Consistency and standards	Mostly fixed. Exit button is always top left now. Art style is more consistent with thick outlines. Tap button is blue instead of red. Font is OpenDyslexic with mixed case. Corners all use the same egg-carton rounding.	Low	The thick outlines might feel a bit heavy on screens with a lot of content like the research lab. Could experiment with thinner outlines on smaller elements.
Error prevention	Fixed. Action buttons are now in a drop-down menu far away from the tap button. No more accidental menu openings when tapping fast.	None	The drop-down menu adds an extra tap to reach research or boosts. For experienced players this could feel slower than having the buttons directly on screen.
Recognition rather than recall	Fixed. Menu is now a categorized list instead of a 3x3 grid. Categories make it easy to find what you're looking for without memorizing icon positions.	Mid	Icons for showcasing what the different buttons are for is missing. Can be hard for people with reading issues or bad eyesight.
Flexibility and efficiency of use	Mostly fixed. Menu is now top left following the F-pattern. Pop-ups stack into a folder instead of showing individually.	Mid	Moving everything into a drop-down means expert players who knew exactly where the buttons were now having to go through an extra step. Could add a way to pin favourite buttons to the home screen for experienced players.
Aesthetic and minimalist design	Fixed. Home screen is much cleaner. Shop moved out of the top bar. Chicken counter removed. Duplicate money icon removed. Pop-ups stacked in folder. Thick outlines separate UI from background nicely.	None	If a lot of notifications stack up in the folder it could become its own cognitive overload when you open it. Maybe limit what's shown or add a "clear all" button.
Help users recognize, diagnose, and recover from errors	Fixed. The "X" icon closes the menu and switches to a back arrow in sub-menus so the player always knows what will happen.	None	No new issues found.
Help and documentation	Partially fixed. Help & about now has its own category in the menu which makes it easier to find. Building indicators help players understand what things do.	Mid	Theres still no onboarding or tooltips for first time players. A new player opening the game still won't know what the drop-down menu or buildings do without exploring on their own or going through the "help" page in the main menu.

9. Conclusion

The goal of this project was to redesign the UX/UI of Egg, Inc. using Nielsen & Molich's heuristics. After creating a table listing all the issues with the design there was noticeably issues with the consistency, cognitive overload, and colour misuse in the game. While redesigning, it was important to stick to one art style, focus on colour theory, reorganized menus, better affordances and indicators. Most high severity issues are fixed but there's still room for improvement in flexibility for experienced players, accessibility for users with reading issues or bad eyesight and there's still no onboarding for first time players. The biggest takeaway from the project is the effect that button placements have on the human brain's perceptions, and how huge of a difference colours can make for the player's emotions and experience in a game.

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