

#ODDBALL

Phase 2 - Generate: CSC 591, Spring 2024

Client: Professor Patrick Fitzgerald, NC State Design

Team:

Name	UnityID
Aditya Iyer	asiyer2
Anish Rao Toorpu	atoorpu
Bahare Riahi	briahi
Mahathi Kolishetty	mkolish
Mery Harika Gaddam	mgaddam

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Demos of inspirational products or solutions:

Aditya Iyer:

Differences - Find Them All:

https://play.google.com/store/apps/details?id=com.eidoloncorp.differences&hl=en_US&gl=US&pli=1

- This game challenges players to spot the differences between pairs of images, requiring keen observation and attention to detail. "Oddball" can draw inspiration from the concept of visual discrimination and apply it to its gameplay mechanics.
- In "Oddball," players could be presented with sets of images where one image differs from the others in subtle ways. Players would need to carefully compare the images and identify the odd one out based on the observed differences. This would encourage players to sharpen their observation skills while enjoying the gameplay.

Match The Memory:

<https://matchthememory.com/play>

- The memory matching game tests players' ability to remember the location of matching pairs of images. "Oddball" can draw inspiration from this game's emphasis on memory and pattern recognition.
- In "Oddball," players could be presented with a grid of images, similar to a memory match game, but with one image being the odd one out. Players would need to remember the location of the odd image while flipping over pairs of cards to find matching pairs. This would challenge players' memory and observation skills in a fun and engaging way.

Colorzzle:

<https://www.crazygames.com/game/colorzzle>

- "Colorzzle" challenges players to match colors and shapes based on specific criteria, requiring them to use their observation skills to identify similarities and differences. "Oddball" can draw inspiration from the concept of visual matching and apply it to its gameplay.
- In "Oddball," players could be presented with sets of images where one image stands out due to differences in colour or shape. Players would need to carefully analyze the images and identify the odd one out based on these visual cues. This would encourage players to pay close attention to details and improve their visual discrimination abilities.

Anish Rao Toorpu:

The Room:

<https://apps.apple.com/us/app/the-room/id552039496>

https://youtu.be/syiha-lS04g?si=Iom_Vk0bqXdcT-z-

"The Room" series offers intricately designed puzzles within a beautifully rendered 3D world. "Inspired from The Room's approach, 'Oddball' could enhance its puzzles with layers of narrative depth and visual beauty. This strategy will not only challenge the player's cognitive skills but also engage their imagination, offering a richer, more profound gaming experience. It can also inspire "Oddball" to explore puzzles that are not only visually engaging but also encourage deep interaction and exploration by the player, adding a layer of engagement through discovery

Pokemon Go

<https://apps.apple.com/us/app/pok%C3%A9mon-go/id1094591345>

<https://youtu.be/yQCREgz4tQY?si=8MKIAiBkmRVn7hpc>

Pokémon Go is an innovative augmented reality (AR) game that transforms the world around you into a universe full of Pokémons to catch, battle, and train. From Pokémons GO, 'Oddball' could explore ways to make the visual matching experience more immersive and interactive, potentially integrating AR elements to bring puzzles into the real world. Additionally, fostering a sense of community among players can add a new dimension to the game, making it not just a personal journey but a shared adventure

Peak:

<https://apps.apple.com/us/app/peak-brain-training/id806223188>

https://youtu.be/DqJJJe9kbJs0?si=ki3u_cTuyXRB1up7

Peak is a brain training app designed to challenge your cognitive skills through a series of engaging games and puzzles, including visual matching exercises. Peak's use of adaptive difficulty ensures that users are continuously challenged, making each game not just fun but also a step toward cognitive improvement. This adaptability ensures that the game remains accessible yet challenging, a balance we seek for 'Oddball'."

Bahare Riahi:

<https://apps.apple.com/us/app/guess-the-pictures/id907218288>

In this game players guess two pictures which their names constitute one name, and for guessing that players need to be good enough in English language to write their names and guess what the new word is.

<https://wordwall.net/resource/2637008/guess-the-picture>

In this game, a picture of something will appear pixel by pixel and gradually, then players have the opportunity to guess what the picture shows.

<https://apps.apple.com/us/app/4-pics-find-the-odd-one/id835373765>

In this game player should find the distinction in terms of theme and topic and at the same time they write the name. The odd photo can be different in colour, occasion of usage and theme. This game is offered to play in different language English, Francais, etc.

Mahathi Kolishetty:

Lumosity:

https://youtu.be/Fg4YIV62do8?si=zBya9xC_u6zKGfpN

It is a brain game app that helps you sharpen your mind with different puzzles designed by scientists. It's special because it changes the games to match your skill level, so you're always challenged just enough. For "Oddball," Lumosity is a good example of how mixing learning with fun can keep players coming back. It shows us that games can make us smarter and that changing the difficulty based on how well someone is doing can make the game better for everyone.

QuizUp

https://youtu.be/GmkPhSwkfuI?si=GJOqH9gq_MvUaeHQ

It is a trivia game where you could compete with people all over the world on tons of topics. It is really cool because you could play against your friends or meet new people who liked the same stuff you did. This game can inspire "Oddball" to add social features, like challenging friends to matches or creating a community where players can talk and learn from each other. QuizUp shows us that games can bring people together and make learning fun by turning it into a friendly competition.

Monument Valley:

<https://youtu.be/tW2KUxyq8Vg?si=aw3cetIrLdXP7upk>

It's this beautiful puzzle game where you move through impossible landscapes. It's like magic and it makes you think and see things differently. It stands out for its artistic design, making each scene look like a painting. This game teaches us how powerful visuals can make puzzles more engaging and fun. It's a great example for "Oddball" because it shows us that games can be both pretty and smart, encouraging players to think outside the box and explore new ways of solving problems. Imagine our puzzles being not just fun but also a feast for the eyes, making players think out of the box. We want 'Oddball' to be a game where players go 'wow' as they solve puzzles, just like in Monument Valley.

Mery Harika Gaddam:

Mysteries of the Past: Shadow of the Daemon (Deep Shadows):

▶ [Walkthrough 1/5] Mysteries of the Past: Shadow of the Daemon - Chapter 1

Reading: [Mysteries of the Past – Shadow of the Daemon Walkthrough - GameHouse](#)

In this hidden object game, the hint system is crucial for guiding players through puzzles and hidden object scenes, offering direct clues to overcome challenges and enhance accessibility. The game's design, including an inventory bar for holding items and additional features like a map and journal, supports seamless navigation and problem-solving, ensuring a smooth and engaging gameplay experience.

Civilization Series (Firaxis Games):

▶ Sid Meier's Civilization VI Gameplay (PC HD) [1080p60FPS]

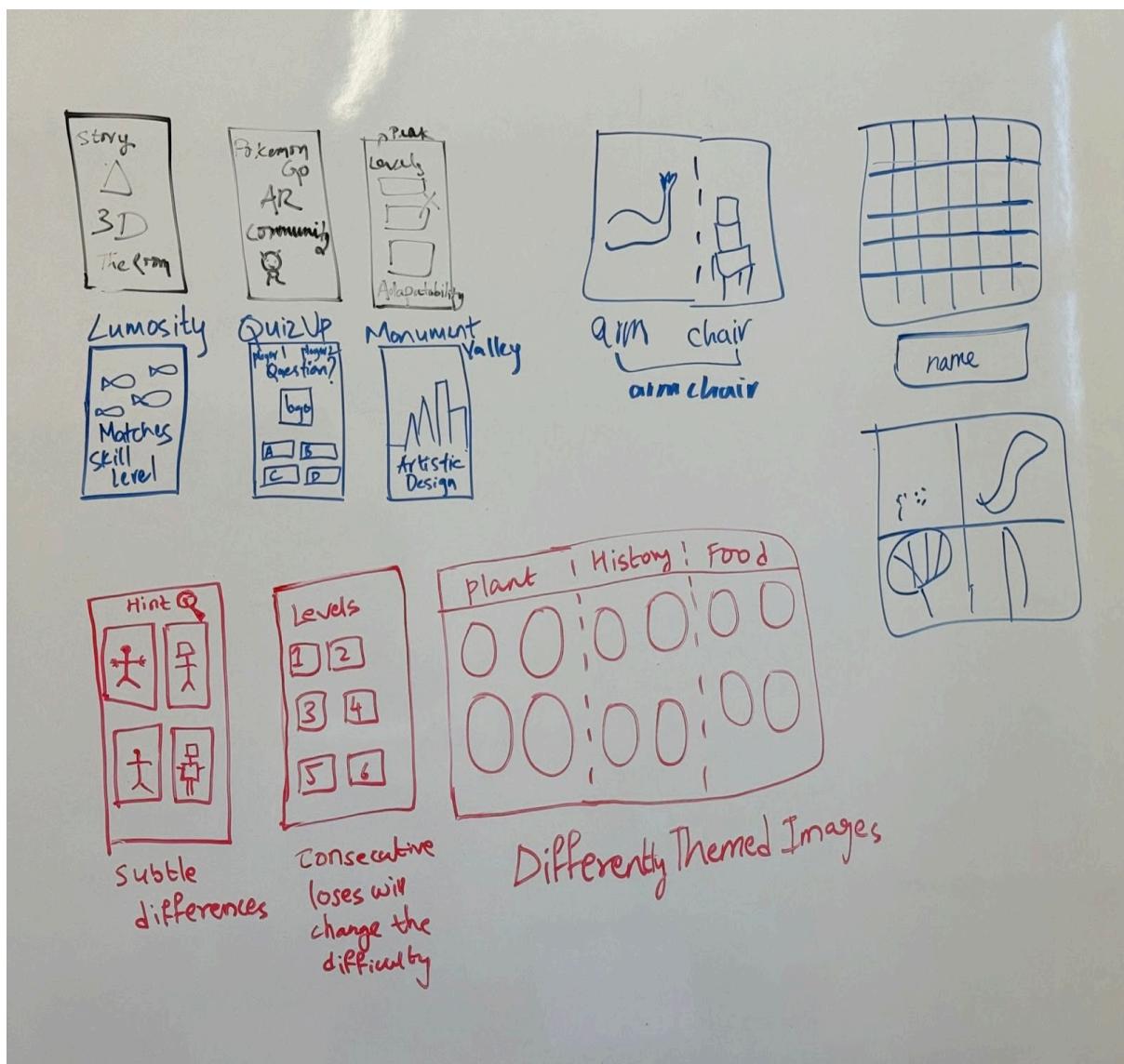
This series of strategy games allows players to build an empire that stands the test of time, exploring themes from history, technology, culture, and politics. Each set of puzzles could represent a different theme, challenging players to identify the odd image that doesn't belong to the depicted era, concept, or genre. This approach not only keeps the game content fresh and engaging but also turns each puzzle-solving experience into an opportunity for learning and exploration, catering to a broad spectrum of player interests and educational backgrounds.

Shadow of the Colossus (Team Ico):

▶ ICO & Shadow of the Colossus Collection - Launch Trailer

In "Shadow of the Colossus" by Team Ico, the AI-driven behavior significantly enhances the gaming experience by dynamically controlling the colossal beings, making each encounter unique. This dynamic AI adjusts to the player's actions and strategies, ensuring that each battle remains challenging and engaging. The AI's adaptability ensures a personalized gameplay experience, maintaining intrigue and challenge across various skill levels and playthroughs.

Sketches:



Ideas for what we could make (one list per team member):

Aditya Iyer:

1. Time Attack Mode:

- We can Implement a time attack mode where players race against the clock to solve as many puzzles as possible within a set time limit. The difficulty gradually increases as the player progresses, challenging their speed and accuracy. Leaderboards could track the fastest times, fostering competition among players.

2. 3D or Augmented Reality Integration:

- We can utilise augmented reality (AR) technology to overlay puzzles onto the player's surroundings, creating a more immersive and interactive experience. Players could physically move around to examine the images from different angles, adding a new dimension to the gameplay.

3. Audio-Visual Experience:

- We can offer a dynamic audio-visual experience where backgrounds evolve and sound effects adapt as they progress. Backgrounds shift to match puzzle difficulty, transitioning from serene scenes to abstract landscapes, while soundscapes adjust accordingly, from soothing melodies to suspenseful tunes. This synchronised immersion enhances player engagement, creating a seamless and captivating gameplay journey.

4. Multiplayer Mode with players asking questions to each other:

- Adding a multiplayer feature that enables users to play in a more collaborative way instead of against each other. The players can ask each other questions about the one image being displayed on their screen and they have to conclude which one of the players is the oddball.

5. Gen-AI integration techniques:

- The following parameters are considered for difficulty adjustment:
 - 1. Brightness: The image's brightness can be manipulated to hinder recognition, posing a challenge for players.
 - 2. Color: Introduce complex color patterns that challenge users in identifying the matching elements within the image.
 - 3. Scaling: Modify the size of the image to provide scalable challenges, ensuring suitability for both beginners and advanced players.
 - 4. Speed/Blurring: Incorporate dynamic elements like image blurring or rapid appearance and disappearance to test users' visual acuity and memory retention.
 - 5. Memory: Exploit memory principles such as primacy, recency, and repetition to create challenges that are not easily memorizable, ensuring sustained engagement.
 - 6. Gestalt Principles: Apply gestalt principles to manipulate visual elements, leveraging figure-ground, similarity, proximity, common region, continuity, closure, and focal points to add complexity and diversity to the challenges.

Anish Rao Toorpu:

1. Rewarding progress system: A rewards system that celebrates your milestones and achievements, making every level completion feel special.
2. Customizable game modes: Lets players change the game to fit their style, like picking themes or how fast they want to go, creating a unique challenge just for them.
3. Community challenges: Host regular challenges or competitions within the game community, encouraging players to engage, compete, and collaborate.
4. Changing music and sounds: Use background tunes and sound effects that change as you move forward and as puzzles get tougher, making the game more absorbing.
5. Collaborative solving: A mode where players can work together to solve complex levels, promoting teamwork and communication.
6. Seasonal leaderboards: Leaderboards add a competitive edge, with rewards attracting players to compete for top rankings each season.
7. Real-time puzzle generation keeps the game fresh and engaging, offering dynamically updated challenges inspired by current events and trending topics using Gen AI.

Bahare Riahi:

1. The game can have selecting level option among those levels that the player had unlocked by winning before, otherwise there is only one level for the very beginner players
2. The player can select what picture they prefer to be related to. For example the picture can be collected from nature, technology, culture, food, etc.
3. The game is in three mode including play with another player, with computer and solo
4. For a player with another player the player can select based on the other player profile, level of difficulty they play and the score they achieved.
5. For playing with solo and computer it is clear there is no mapping player option.
6. For playing other than solo, players one after the other guess what the picture is and every time some percentage of the picture disappears, so it will be easier for next round and next player.
7. The player's score, progress, log of data and graphs related to their progress will be shown at the final stage.

Mahathi Kolishetty:

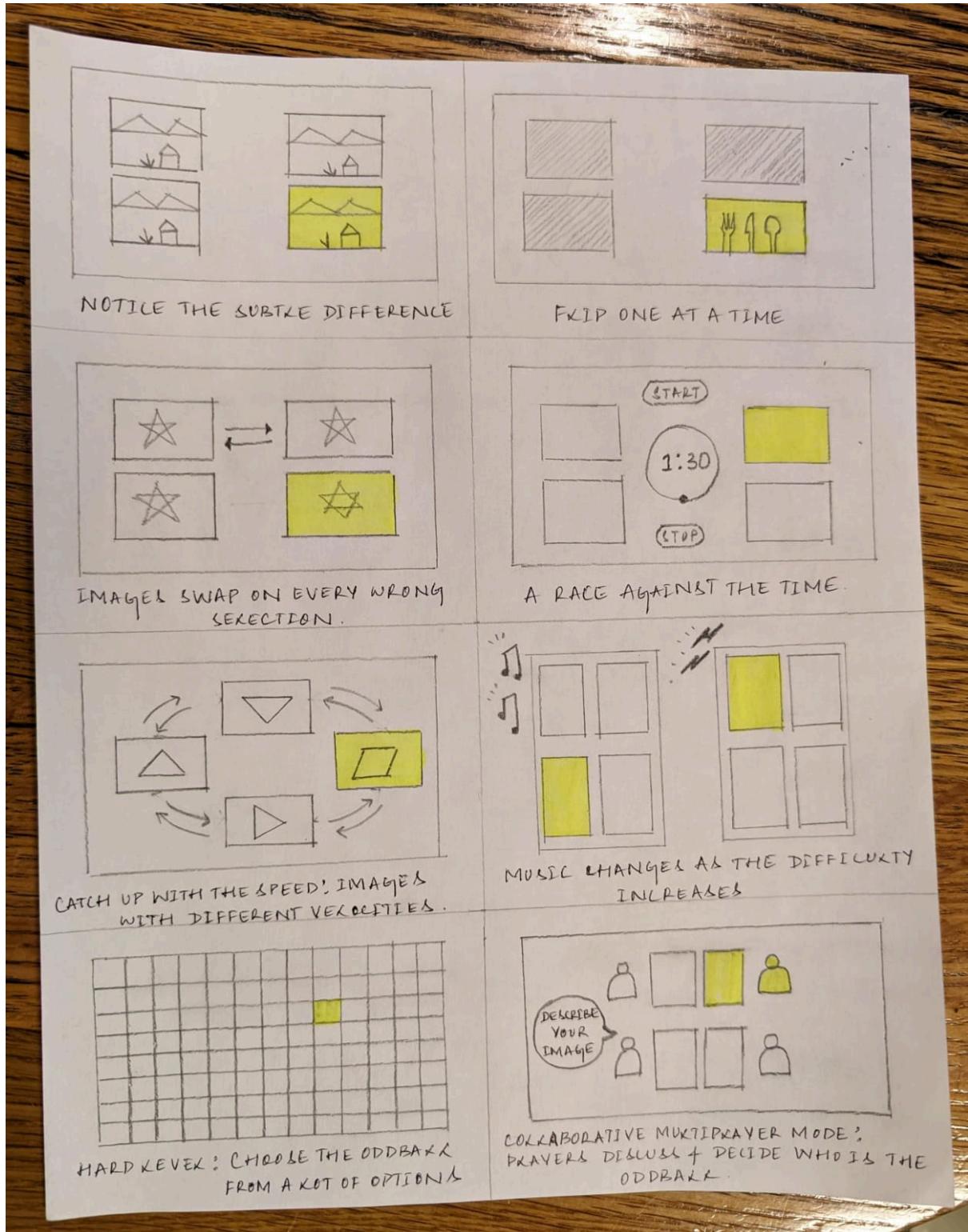
1. Smart difficulty adjustment: The game learns from the player's play style and adjusts the challenge level so it's just right for the player, whether he is a beginner or a pro.
2. Skill-Based matchmaking: A system that matches players for collaborative puzzles based on their skill levels and preferences. This ensures that teammates are well-matched, making it more enjoyable.
3. Fun reveal mechanic: Keep players alert with a clever way of slowly showing images that keeps the game exciting and engaging.

4. Educational paths: Allow players to choose specific learning tracks, such as history, science, or art, turning game time into a tailored educational journey. Sneak in interesting facts related to the game's images, making it a sneaky way to learn something new without it feeling like homework.
5. Safe and Sound Content: Feed Gen AI with input from players to make sure the images stay fun and appropriate for everyone.
6. Player suggested content: We can let the players pitch in by suggesting new images or challenges, making the game more varied while keeping players involved.
7. Customizable Avatars and Game Spaces: Allow players to create and customise their avatars and personal game spaces. This personal touch can increase emotional investment in the game, making each achievement more satisfying.
8. Include secret levels that players can unlock only by achieving certain milestones or completing specific educational tracks. This adds an element of surprise and curiosity.

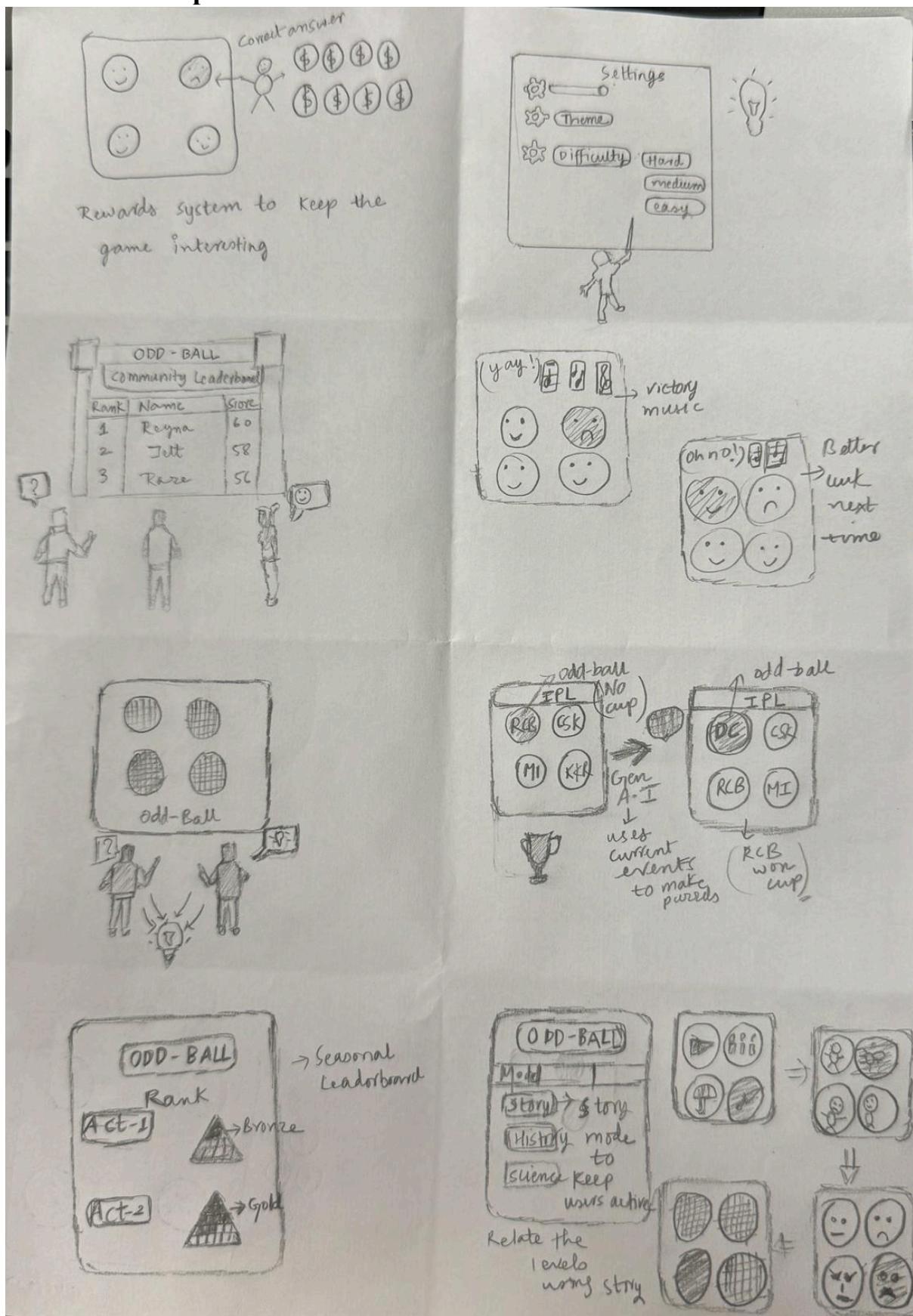
Mery Harika Gaddam:

1. The zoom-in feature enhances puzzle images, allowing a closer look at small details, which is particularly handy for solving more intricate puzzles.
2. The "Theme-Specific Tasks" feature ensures that the challenges within puzzles are directly connected to their themes. This approach enhances the coherence and engagement of the puzzle-solving experience by ensuring that the tasks fit seamlessly with the puzzle's subject matter, making the overall experience more intuitive and enjoyable for all players.
3. Customized Puzzle Themes: Themes adjust based on past interactions, choices, and preferences, ensuring a fresh and relevant challenge that aligns with their interests or recent achievements in the game.
4. Story-Driven Puzzles: These puzzles are part of a larger narrative. Unraveling them gradually reveals more about the overarching story, the game world, and its characters.
5. Learning Through Play: Puzzles cover a wide array of topics, including history, science, art, and mythology, making the game not only entertaining but also informative.
6. Option to Remove One Wrong Answer: If stuck, this feature allows removing one incorrect option, simplifying the decision-making process and enhancing the chance of success.
7. AI-Created Puzzle Images: The game uses advanced AI to generate the images for each level, making it more challenging to spot the odd one out. This ensures that every level presents a new and intricate set of images, keeping the gameplay continuously engaging. The use of AI for image creation means players are always faced with fresh puzzles, eliminating the need for manually selecting images.

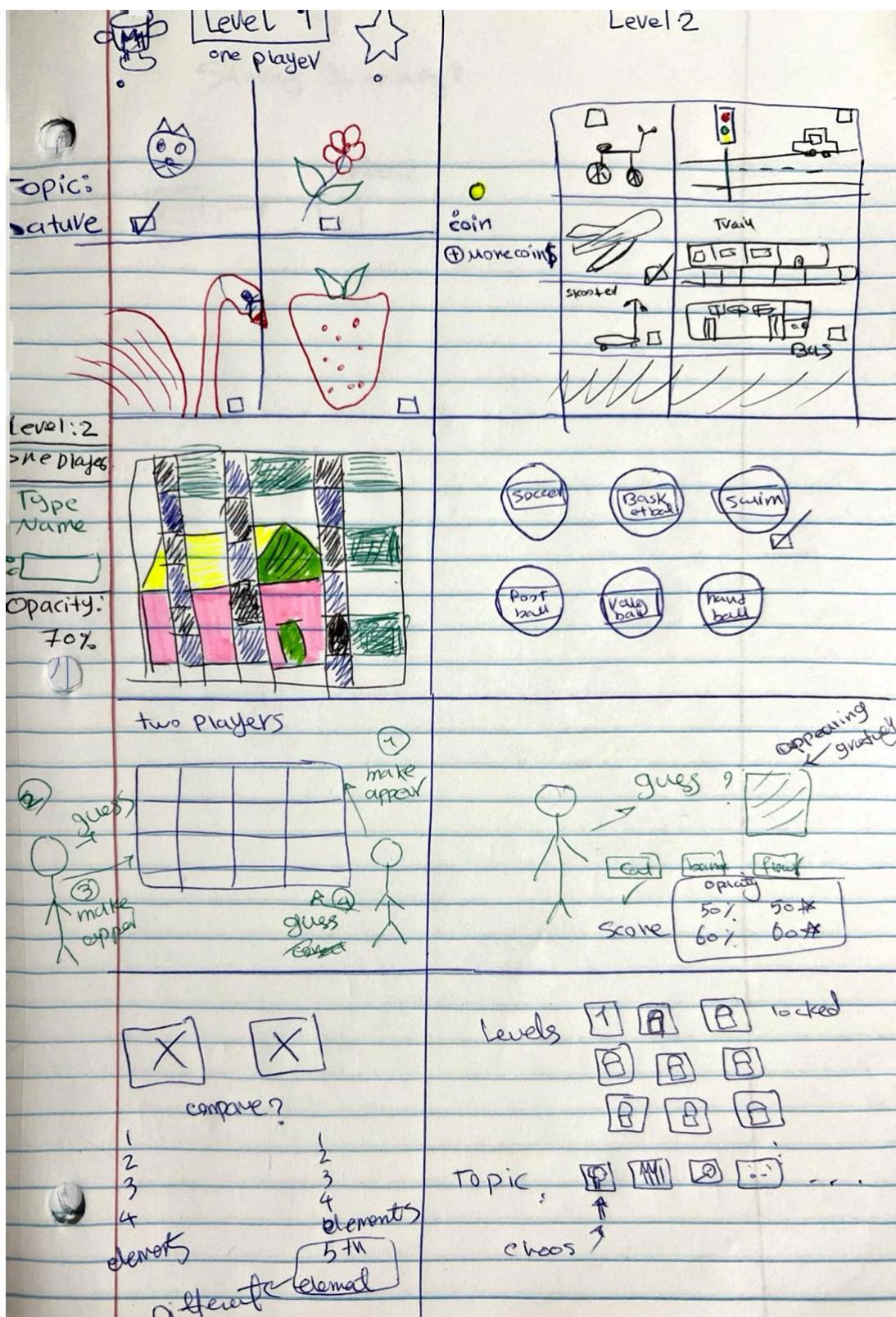
Crazy 8s: Aditya Iyer:



Anish Rao Toorpu:



Bahare Riahi:



Mahathi Kolishetty:

Slow-reveal

Blocks fade away with attempts

Difficulty bar:

Pass this high difficulty level to reach secret level.

level 99 level 100

Skill bars

Players with same skill level are matched.

Difficulty Adjustment Bar

Slow-reveal

Images are blurred in the beginning but are revealed slowly with each attempt.

Report

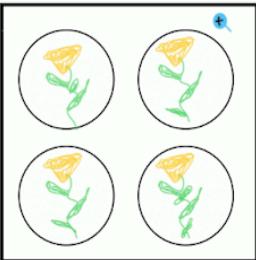
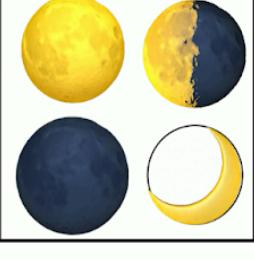
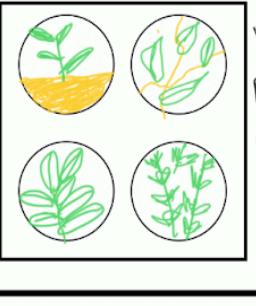
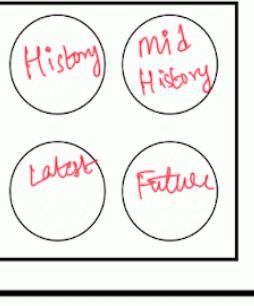
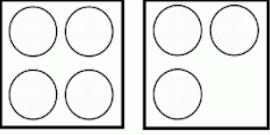
As AI is integrated, humans/players can report harmful, inappropriate

Levels

Different pathways

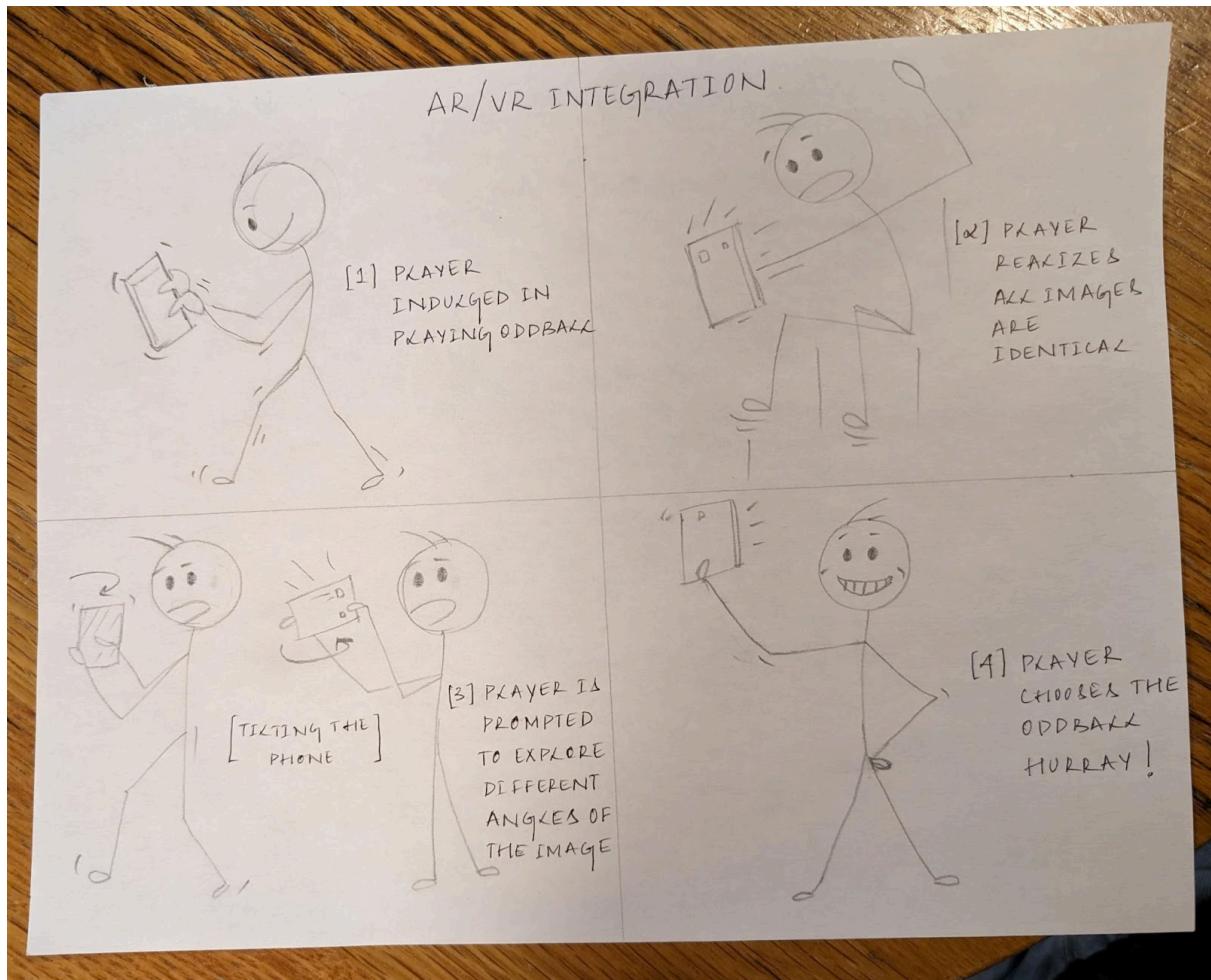
Customizable avatars

Mery Harika Gaddam:

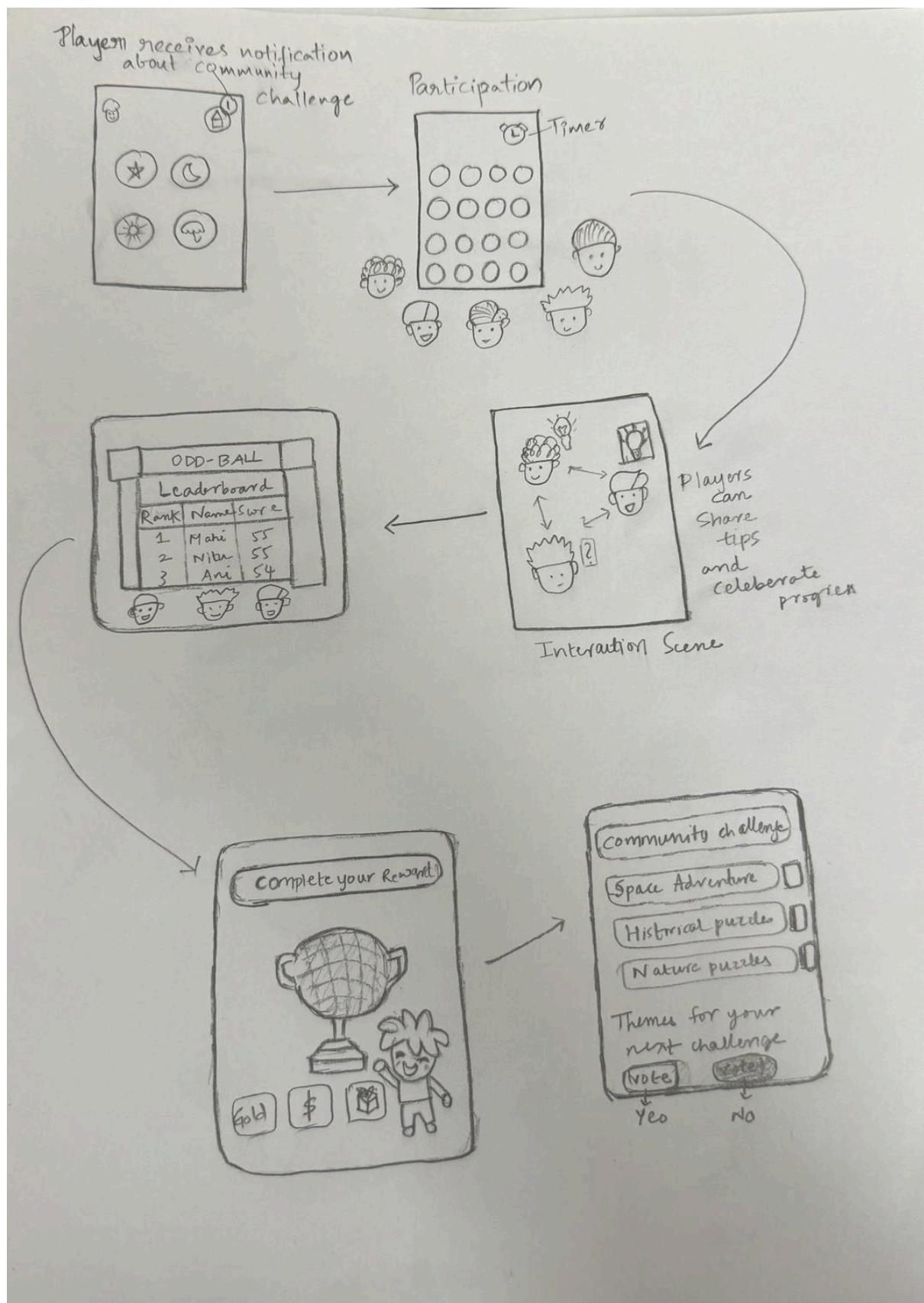
	<p>magnify the subtle differences</p>	 <p>Select the odd one based on context</p>	<p>Thematic context Selection</p>
<p>Historical evaluation based selection</p>	 <p>medical plants (finding odd one out)</p>	 <p>Images generation themes are mentioned</p>	<p>Themes change based on previous attempts</p>
<p>Game world changes based on levels</p>			<p>Remove one option if game difficult for user</p>
<p>AI-generated Images</p>		<p>generating new avatars using AI</p> 	
			

Storyboards:

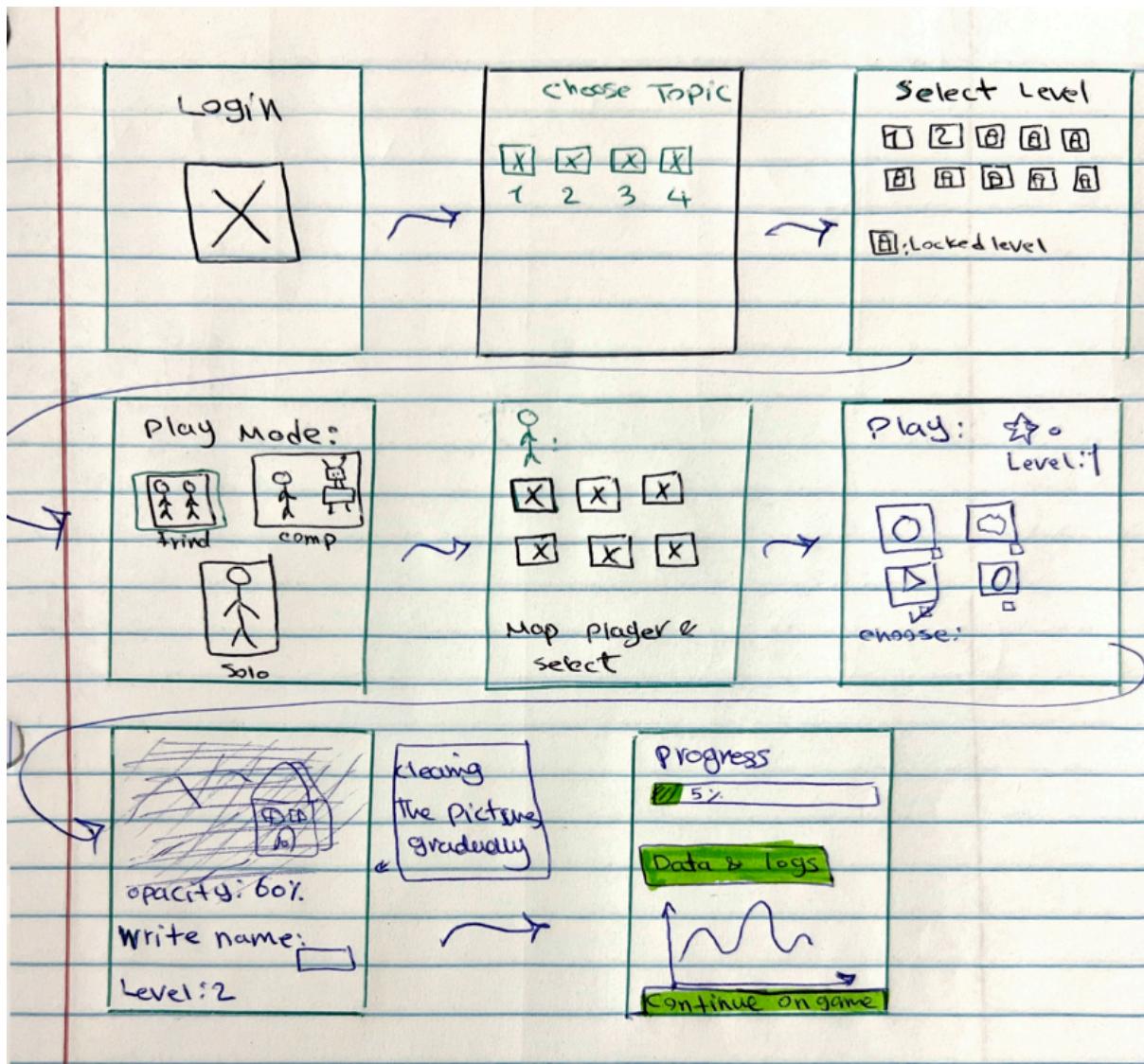
Aditya Iyer:



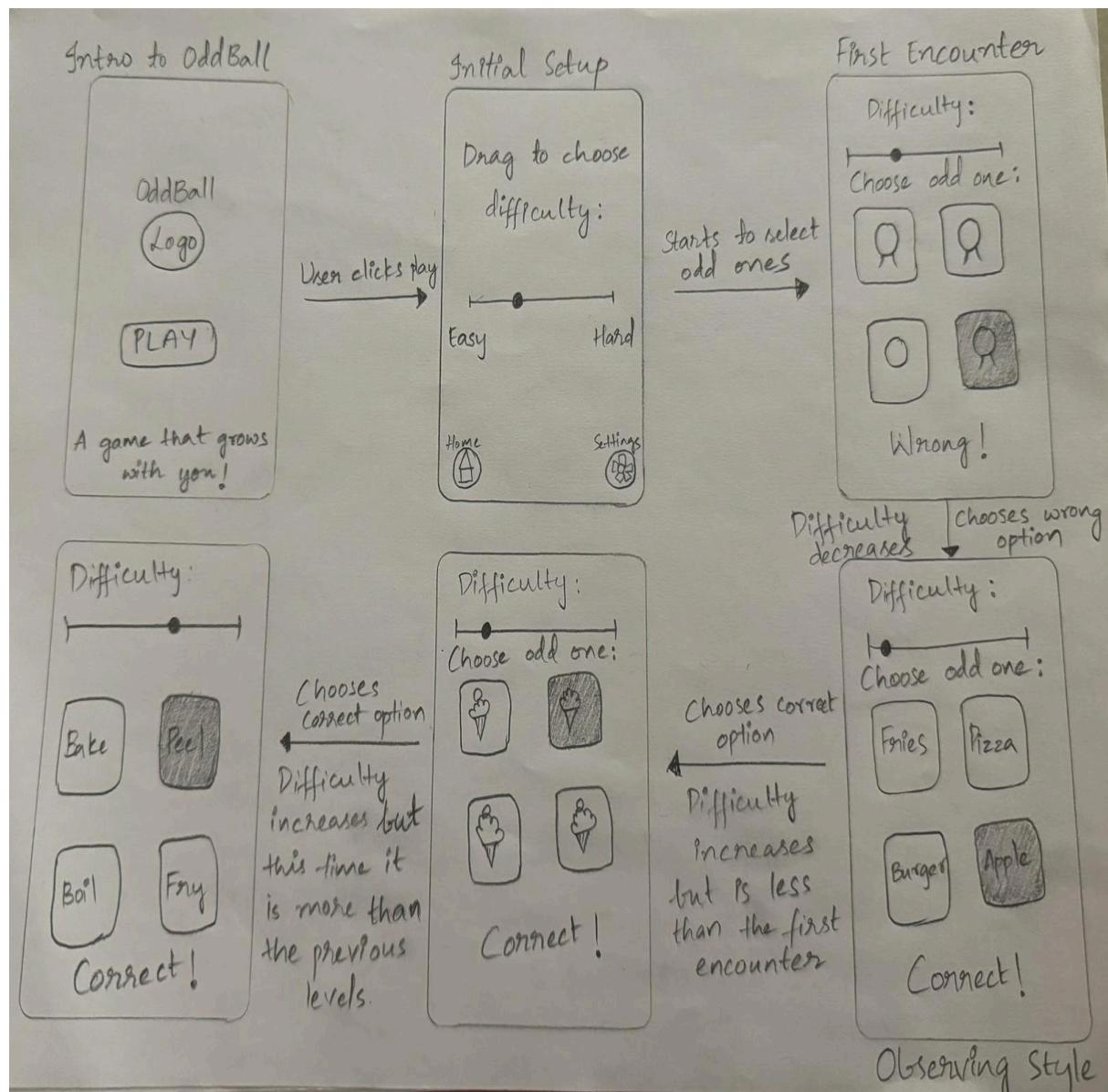
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