



HEAT ODE

Gamify-Me

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50.033 Game Design & Development

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1. Introduction

CheatCode is a top-down, 2D puzzle game. It is a single player (player vs. game) game, whereby the player plays the role of a student cheating during an exam in an academic venue. The storyline that centers around a student cheating is vastly different from the generic puzzle games that centers around intellectual problem solving. The gameplay itself is also a mix-match of popular game mechanics, such as skill collectibles from “Tank Trouble” and multiple exam topic management inspired from “Overcooked” applied towards a puzzle game setting. The core game mechanics for our game are puzzle and strategy as players have to analyze invigilators' patterns and utilize his skills effectively at each level to avoid getting caught while cheating, to achieve the long term goal of completing the exam before the time runs out. A storyline is introduced to support level progression, whereby the player will encounter changes in academic venues, invigilator patterns and new skills.

2. Background Study

2.1. Literature Review

Monaco and The Amazing Miss Take are two puzzle-like games that centre around the concept of stealth, similar to the idea behind CheatCode. Both games offer their own unique mechanics and conflicts that contribute to the experience of the game.

2.1.1. Monaco

Monaco is a single or multiplayer game that centers around the lives of eight different characters, each of a specific ability. The level design follows a storyline whereby the various characters' lives intersect, carrying out different types of heist/robbery, starting off from a prison break. Game mechanics allow players to unlock doors, hack computers, dig through tunnels and even flirt with guards. When discovered, the player either runs away or opens fire to kill the guards. Additionally, golden coins can be used to unlock secret levels if 100% of them are collected. These objectives have to be done within time constraints while actively avoiding patrolling guards. Monaco makes use of the line of sight to allow for exploration.^{[1][2]}



Fig.1 Player in Blue Trying to Avoid Guards



Fig.2 Different Abilities

2.1.2. The Marvellous Miss Take

The Amazing Miss Take takes place mainly in a museum with patrolling guards. New characters are introduced at specific points of the level design, adding confrontation and dialogue to the story. The central objective of the game is to steal all artworks in the museum and escape without getting caught. Players can perform several actions to attract guards such as whistling. New weaponry skills are also taught throughout the game to build player confidence and eventually make him feel like a master thief.^[3]



Fig.3 Whistling to Attract Guard

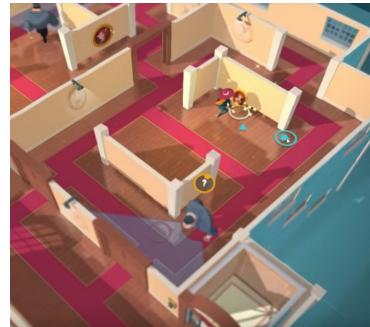


Fig.4 Collecting Paintings

2.2. Game Inspiration & Unique Features



Fig.5 Tank Trouble-Skill collectible^[5]



Fig.6 Overcooked-Multiple Topics for Cheat Bars^[6]

CheatCode takes inspiration from Monaco and The Amazing Miss Take offering a top-down 2D puzzle game. Classical gameplay mechanics that defines the stealth genre centers around allowing players to “heist” while proceeding to a desired location within a time limit. This was adapted to our game.

A combination of unique mechanics from other genres are also mix match into our game. The level-by-level skill collectable that alters player movement or gives him certain abilities was inspired by “Tank Trouble”. The inclusion of several exams topics thus requiring players to juggle copying from multiple sources is inspired from the mechanics of “Overcooked”. Furthermore, the storyline centered around a student’s journey to cheat is designed to bring players back to their youthful school days. This differs largely from the heist/robbery theme of common stealth games.

3 Game Description

3.1. Targeted platform

The platform of choice is PC with keyboard controls.

3.2. Targeted audience

The target audience will be standard, casual players in their teens to late twenties who are interested in stealth games. In terms of octalysis, the player's main core drives are accomplishment (the ability to cheat in exam without getting caught) and unpredictability (the chance of getting caught by the invigilator). The game is suitable for players who want to feel the rush of doing things (i.e. cheating) that they otherwise cannot do in reality.

3.3. Game Mechanics

The diagram below illustrates an analysis of the game mechanics of CheatCode.

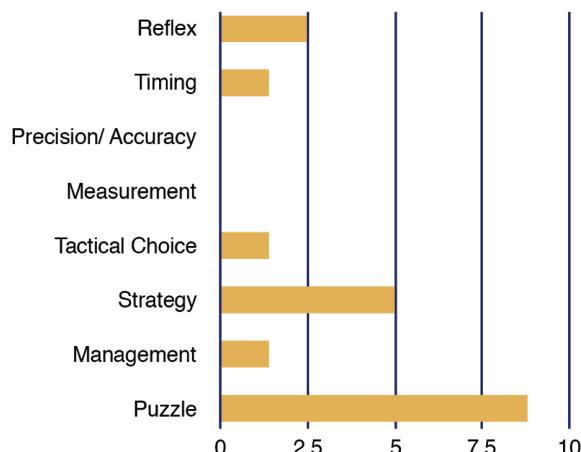


Fig.7 Main Game Mechanics

The main game mechanic of the game is puzzle. In the game, each invigilator will have a fixed and predictable movement pattern in the academic venue. In order to avoid the detection of the invigilator while the player is cheating, he/she needs to fail and retry a few times before figuring out an optimal way of solving the level. Over time, an experienced player would be able to discover the optimal solution for each level.

A secondary game mechanic is strategy. The player needs to plan his route according to his knowledge of invigilator patterns such that he can avoid getting caught while achieving the goal of cheating within the stated time limit.

CheatCode also has other game mechanics introduced. Even though players can predict invigilator patterns through experience, there is no guarantee that he will win the round due to

elements of reflex and timing present in invigilator and snitch movement. There are instances when players have to practise patience and wait for an invigilator to pass before proceeding with his plan. There are also instances when players have to practise skills management to ensure certain skills are available for use at the right time to avoid failing. Therefore, no two gameplays are exactly the same as the player may eventually have to make tactical choices along the way depending on the path he takes.

3.4. Core Drives

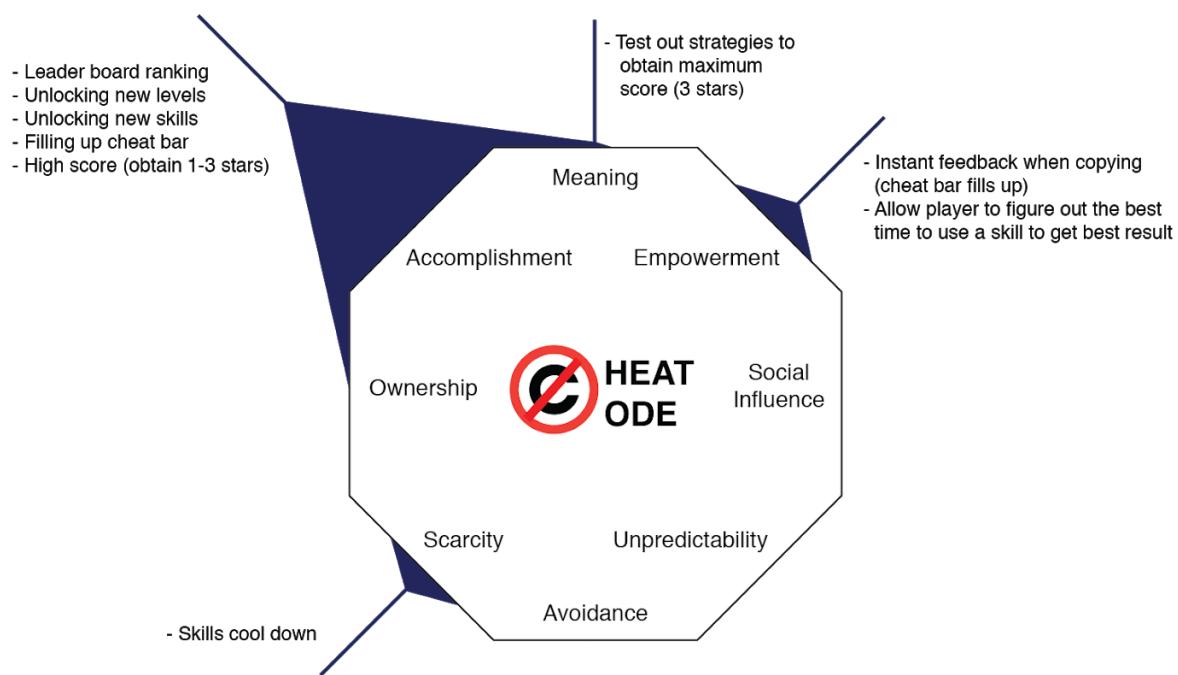


Fig.8 Octalysis Analysis

The main core drive of CheatCode is accomplishment. The game mechanics were designed to make player feel accomplished while progressing through the game. For instance, during the game, the cheat bar will increase when the player is copying from the smart students. This gives the player a sense of progression within each level. In addition, when the player completes a level, he/she will unlock new levels and skills. Furthermore, there is a high score system where players can strive to perfect their skills and get a maximum score. Players will also feel accomplished when they beat other players' high score and climb the leaderboard.

The secondary core drive is empowerment. Players are given the freedom to figure out when is the best time to use a particular skill to get the best results. Additionally, players will have to figure out some things by themselves in order to win the game. For example, the players will have to experience the snitch in order to figure out that they have to copy faster to prevent the snitch from calling them out.

3.5. Narrative Context / Player Backstory

3.5.1. Introduction (to Level 1)

One fine day while you are sitting for a Math quiz, you (Neo) suddenly blanked out and are unable to think of any answers. Out of desperation, you decided to copy answers from your classmate, Nerdy Gary. After copying for the first time, you got addicted to the rush of cheating during exams. Day and night you kept thinking of ways in which you can cheat better. In your dark room, you suddenly had a thought: cheating is fun. And in that moment, you vowed to be the best cheater in the world. Thus begins your adventure to be the best cheater in the world.



Fig.9 Introduction Cutscene

3.5.2. Cutscene 1 (to Level 2)

Having completed your first successful cheat for an exam, you decided to scheme for better ways to conduct more daring tactics. One day, as you were spying on Nerdy Gary, you saw him mixing a misting potion in the Science Lab. You realized you could use it to hide yourself and travel right under the invigilators' noses. When he left for a break, you went in and snatched his potion for your maleficent use.



Fig.10 Misting Skill Cutscene

3.5.3. Cutscene 2 (to Level 3)

During the school annual 20km run, you decided to pull a prank on Nerdy Gary, whom you knew was a faster runner than you. There was no way he will beat you at both running and exams. So you threw a banana peel in his path and caused him to slip. As you crossed the finishing line, you experienced a huge boost in your ego that you decided to bring to the exam room -- making blatant dashes across the room!





Fig.11 Dash Skill Cutscene

3.5.4. Cut Scene 2 (to Level 4)

One day, your teacher approached you telling you that you had been caught cheating during exams. You could not believe it as you had only conducted perfect plots, but the teacher still gave you detention. Then you remember that during your latest cheat, Nerdy Gary warned you to stop cheating when you went to his table to copy his answers. You swore vengeance on him as you were made to copy five hundred times of “I will not cheat again”. However, by the end of detention, you realize you acquired a new skill, the ability to copy fast!

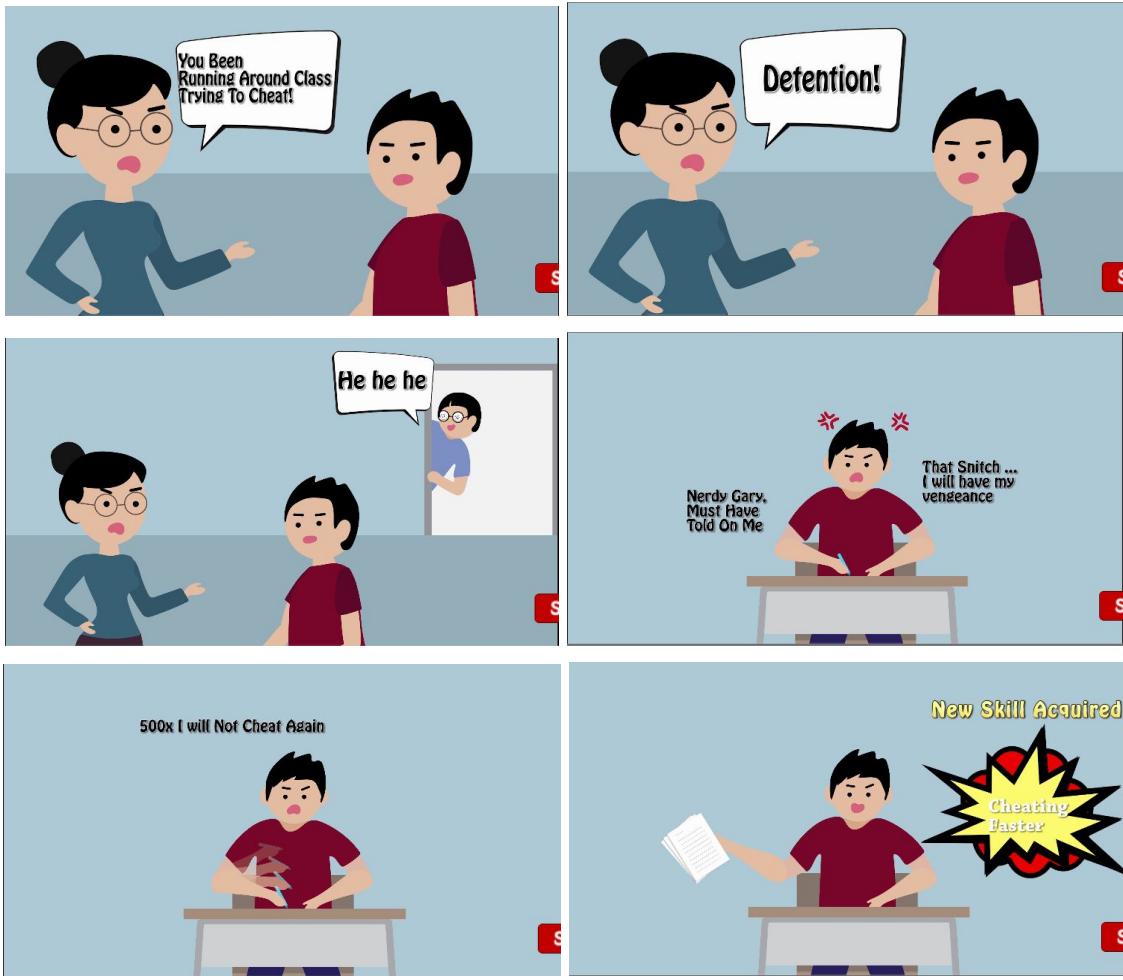


Fig.12 Fast Copy Skill Cutscene

3.5.5. Outro

After your final exam, you received a scholarship to Harvard. You also overheard that Nerdy Gary has just lost his scholarship to Harvard. Your act of vengeance has been restored! As you walk down the path to Harvard, you can't wait to begin your next chapter of cheating...



Fig.13 Outro Cutscene

4. Game Flow

4.1. Play Flow

The following flowchart depicts the player's flow in detail. The player will stealthily move toward the designated "smart students" to copy and increase his "Exam Points". "Skills" collected can alter the player movements for power-ups. Once the player returns to his starting position with all "Exam Point" bars above required benchmarks, he wins. However, if the timer runs out or the player gets caught by an invigilator's line of sight, he loses.

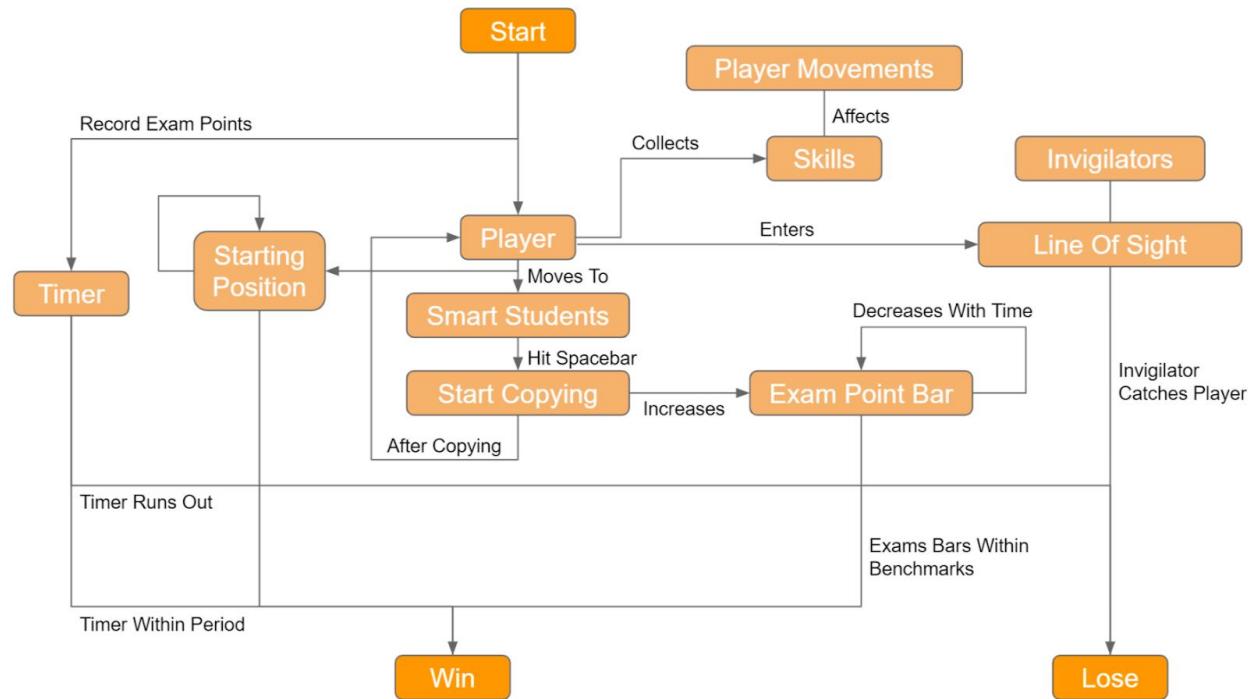


Fig.14 Play Flow

4.2. Screen Flow

The following flowchart shows the flow of the scenes. Generally, after the completion of each level, there will be a cutscene which narrates what happens between the player and Nerdy Gary. In addition, new skills are also introduced through the cutscenes, immediately after the cutscene a skills tutorial page is also added.

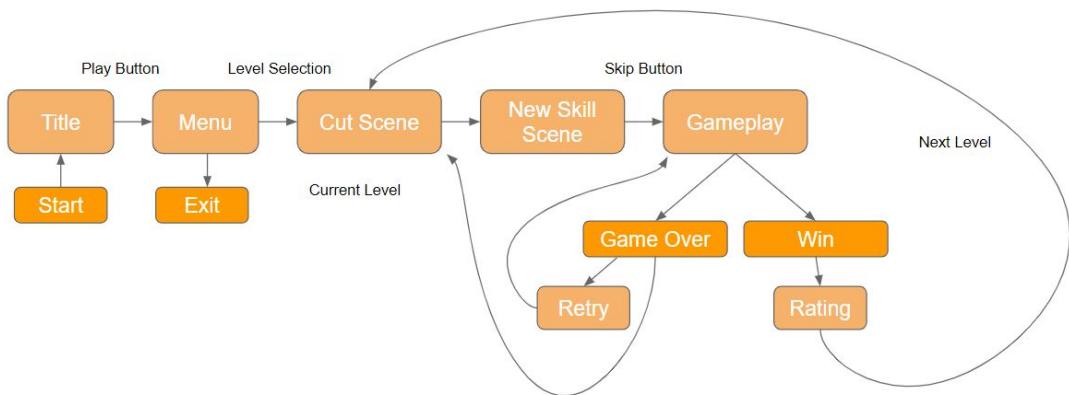


Fig.15 ScreenFlow

| Screens | Description |
|---------|---|
| Title | Starting page, includes the title of the game |
| Menu | Includes a list of level selection, Exit button |

| | |
|-----------|---|
| Cut Scene | Animation/ Static image with Text box to illustrate the story |
| Gameplay | Our Level scenes, Classroom, Lab and Exam Hall Stages |
| Gameover | Allow us to Retry or Go to Menu |
| Rating | Illustrate our performance with stars (in pencil shape) and highscore board |



Fig.16a Starting Scene(Title)



Fig.16b Level Selection Scene (Menu)

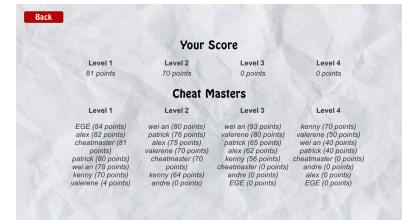


Fig.16c Rating



Fig.16d Skills Tutorial Page after each Cutscene



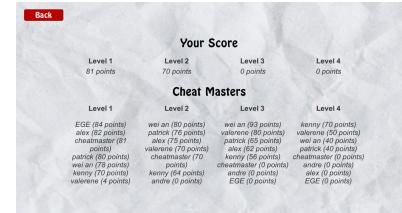
Fig.16e Gameplay



Fig.16f Win Scene



Fig.16g Gameover Scene



5. Formal Elements

5.1. Players

Players of Cheatcode will include voluntary, active participants. They will engage in player vs game interaction (Single Player) for each level.

5.2. Objective

The game's **main objective** is to copy sufficient answers from smart students ("Collect") but not get caught (doing a "Forbidden Act"). The player is tasked to fill up his cheat point bar(s) and return to his original seat before the timer ends in order to win the level. The bar(s) must be filled pass its indicated minimum benchmark in red to be considered passable. In addition to that, the player must ensure that he is not caught by invigilators patrolling the venue during the process.

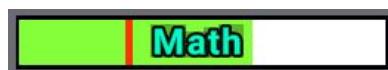


Fig.17 Filling up Cheat Bar

On top of the game core objective, we designed several **secondary objectives** through the game play. First, players have to **locate the smart students** by identifying the game objects located on the student's table. The students also have to **remember their starting positions** by identifying items on their table as well. Secondly, the cheating bars were designed to decrease overtime and only lock when you **return to your seat**. Players will be conflicted to "play it safe" return to their seats or fill up all the bars before returning. Lastly, the game was constructed with highscores tied to the speed at which you complete the level as well as the "fullness" of the cheat bar. Players are thus encouraged to compete and **attain the best highscores**.

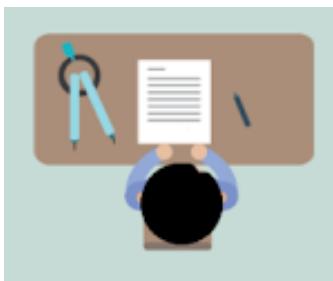


Fig.18 Locating Smart Student



Fig.19 Return To Lock Cheat Bar



Fig.20 Compete For The Highest Scores

5.3. Procedures

The gameplay has three main stages in the game. It starts off with the front interface with the start game button then move on to the inside gameplay. Listed below are the complete stages.



Fig.21 Starting Procedure



Fig.22 Progression: Player Copy From Smart Student

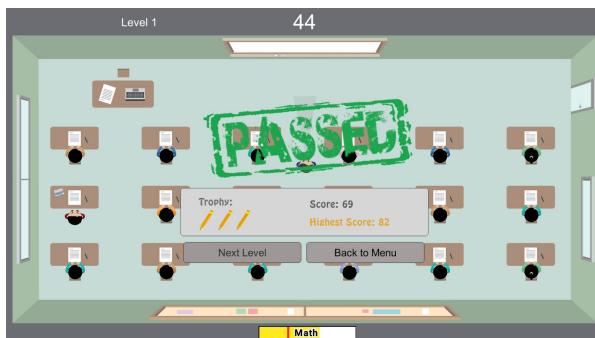


Fig.23 Progression: Player Transfer To Own Exam Script



Fig.24 Special: Player Acquired New Power-Up

| Procedures | Actions |
|-------------|---|
| Starting | <ul style="list-style-type: none"> Player observes teacher's repeated patterns and plans |
| Progression | <ul style="list-style-type: none"> Player moves beside Smart Students and copies his answers (green "Exam Points" increases in the cheat bar). This represents the player trying to memorize the copied answers. The green "Exam Points" for the question that was just copied decreases when player is out of range of the Smart Student. This represents the player forgetting the copied answers as time passes. Player returns to his original seat with the remaining green "Exam Points" ("Exam Points" in the cheat bar turns yellow and locks score). This represents the player has written down his copied answers and need not hold it to memory. |
| Resolving | <ul style="list-style-type: none"> Player wins or loses depending on whether the locked "Exam Points" are above or below the minimum benchmark, indicated by the red |

| | |
|---------|--|
| | line on the cheat bar, by the end of the timer. |
| Special | <ul style="list-style-type: none"> Acquire new power-up after completing each level (refer to 5.4.3.) |

5.4. Mission

The player is supposed to pass their exam by copying other smart students' answers. In order to pass the exam, he has to copy sufficient answers and achieve the minimum benchmark for each question before the exam ends.

5.4.1. Challenges

There are NPC objects in the game acting as invigilators that monitor the academic venue. The player has to stealthily travel across the classroom to other students' tables to copy their answers without getting caught by the invigilator(s). In addition, the player has to return to his desk quickly to write down the answers on his exam script to "lock down" his answers. If not, he will start forgetting them as he continues to snoop around the academic venue.

5.4.2. Conflicts

The **base conflict** of our game is to avoid the sight of our invigilator, a decreasing cheat bar overtime and a time limit for each level.



Fig.25 Avoid Teacher Sight



Fig.26 Time Limit

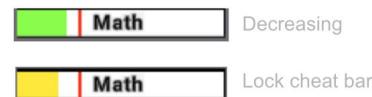


Fig.27 Decreasing Bar

In order to challenge our players, we introduced several elements to **escalate conflicts**.

- Our invigilator was split into 3 distinct modes, namely slow teacher, fast teacher and a security guard. Each invigilator was split based on speed, movements and area of spanning views.

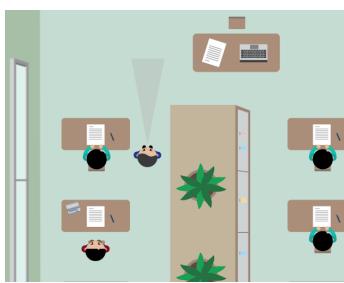


Fig.28 Moving Teacher



Fig.29 Rotating Teacher

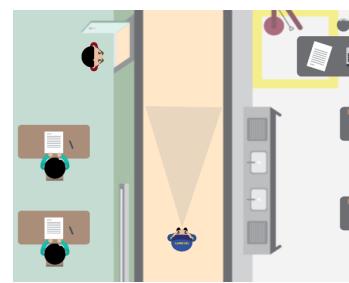


Fig.30 Security Guard

2. The maps were also configured through path obstructions, unique path settings and increasing the distance of the students. Each configuration makes the objectives harder to accomplish.



Fig.31 Path Obstructions

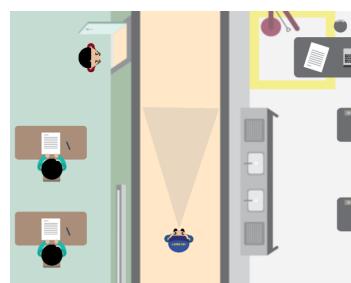


Fig.32 Unique Path Settings



Fig.33 Increasing the distance

3. In the final levels, the snitch ability was added to Nerdy Gary. As a player stays in range of the snitch, the exclamation mark will fill up. Upon filling up completely, the snitch will complain to the teacher and the player will lose the game. This adds another layer of difficulty where players have to copy quickly from the snitch.



Fig.34 Snitch

5.4.3. Power-Ups

There are three different power-ups players will acquire as the game progresses to a higher-level design. It will be skills that can be activated repeatedly with a cooldown attribute.

| Icons | Power-ups | Abilities |
|-------|-----------|---|
| | Mist | Allows the player to shield from being spotted by invigilators for 3 seconds. |

| | | |
|---|-----------|---|
|  | Dash | Allows the player to move quicker for 3 seconds. |
|  | Fast-copy | Allows the player to fill up an “Cheat Point Bar” more quickly for 3 seconds. |

5.4.4. Game Balance & Asymmetry

Our game design goals were to ensure that the game remained challenging but not too difficult. We had to balance it along with user testing. The introductions of power-ups made the players more powerful, and the introduction of conflicts made the game more challenging.

1. Each skill was designed with an opposing conflict in mind. Unique path settings forces players to use the mist skills. Longer distance requires players to dash. Snitch nerves Fast-copy as players need to exit after a certain time.



Fig.35 Mist

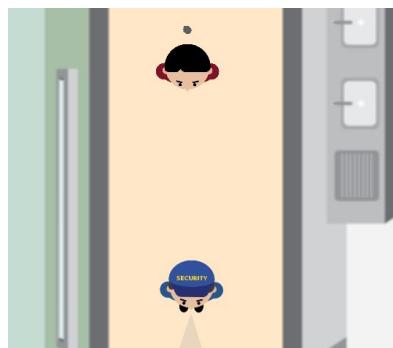


Fig.36 Dash

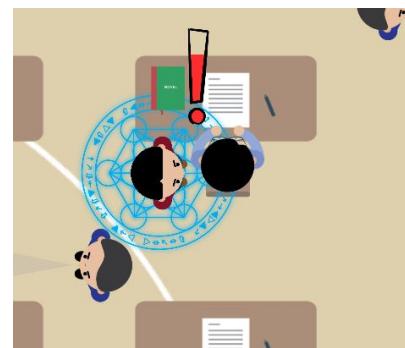


Fig.37 Fast-copy

2. The speed of decreasing cheat bar, teacher movements and level design were all adjusted accordingly following user testing to ensure the game was balanced.
3. Every action has a consequence, not timing the skills accurately meant having to wait for the cooldown to reuse the skill. Choosing to return to your seat and play it safe meant taking more time and getting a lower highscore. Rushing the game without observing the invigilator patterns meant risking getting caught.

5.4.5. Level Design

There are four main levels in the game which are grouped into three stages. These levels are designed in increasing order of difficulty, designed as a tutorial for the next stage to equip players with core game mechanics so they can be better prepared for the final exam. Game difficulty at each stage increases with the size of academic venue, number of questions, and

number of invigilators. The game begins in a classroom setting, the smallest venue size, with the purpose of getting the player to familiarise with the objective and basic mechanics of the game. Progressively, greater challenges are introduced for players to steadily learn new skills, while the academic venue transits along with the storyline. The diagram below describes the elements of difficulty and types of skills players can unlock at each level.

LEVEL DESIGN / STORYLINE

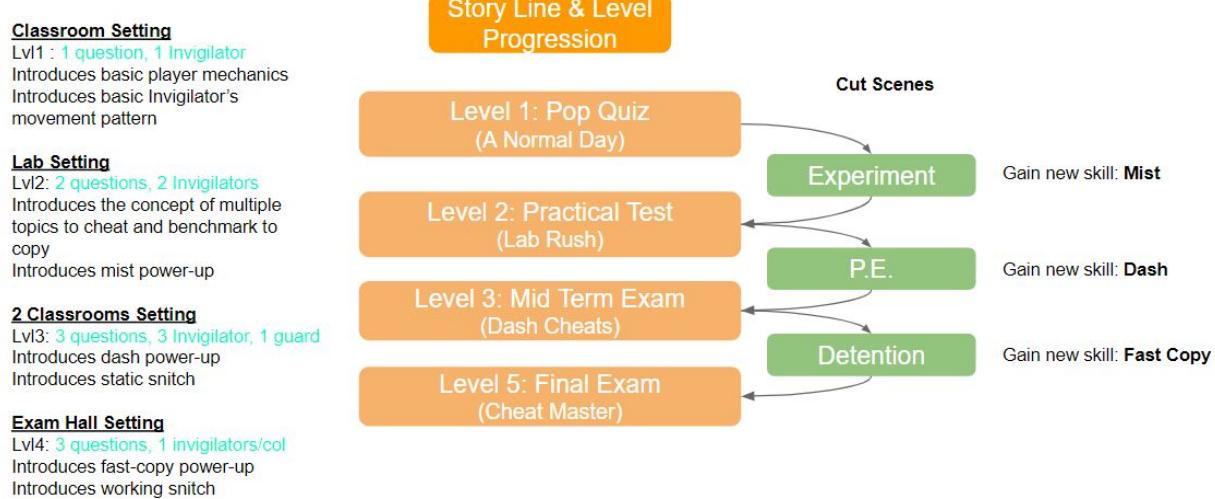


Fig.38 Level Design Progression

Each invigilator will have his own triangular line of sight (visible to players) that are meant to catch the player if he falls within that particular region. However, different invigilators are designed to have unique attributes from one another to introduce variation and excitement in the game. Other than variations in travelling and turning speed, there could be differences in range of vision and reaction time of the invigilators. Each of the map design are shown below.

Level 1 was designed with the following goals in mind. The premise of the level was to get players accustomed to the basic game mechanics. The teacher movement was timed so it will move in the player path at exactly the 5th sec.

- | | |
|---|-----------------------------|
| <ol style="list-style-type: none"> 1. Learning to walk 2. Teacher is bad 3. Holding space to cheat 4. Cheat Above red threshold to win. | (1-5th sec) (5-10th sec) |
|---|-----------------------------|

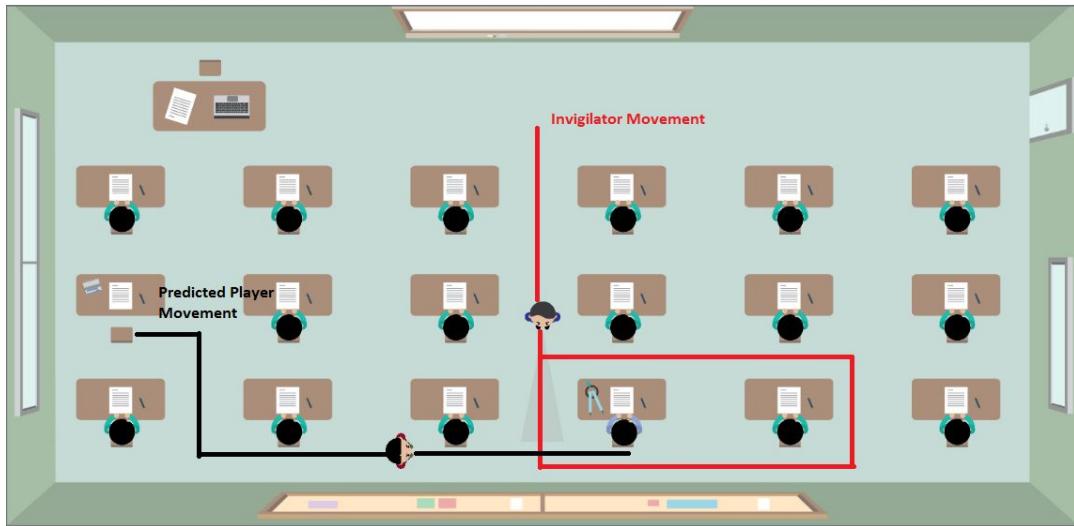


Fig.39 Level 1 Map Design

Level 2 main premise was now to teach players to pattern recognise and skills activation mechanics. Invigilators were faster and path obstructed to ensure player skill was required.

1. Pattern Recognition
2. "Q" Misting Skill
3. 2 Subjects to cheat

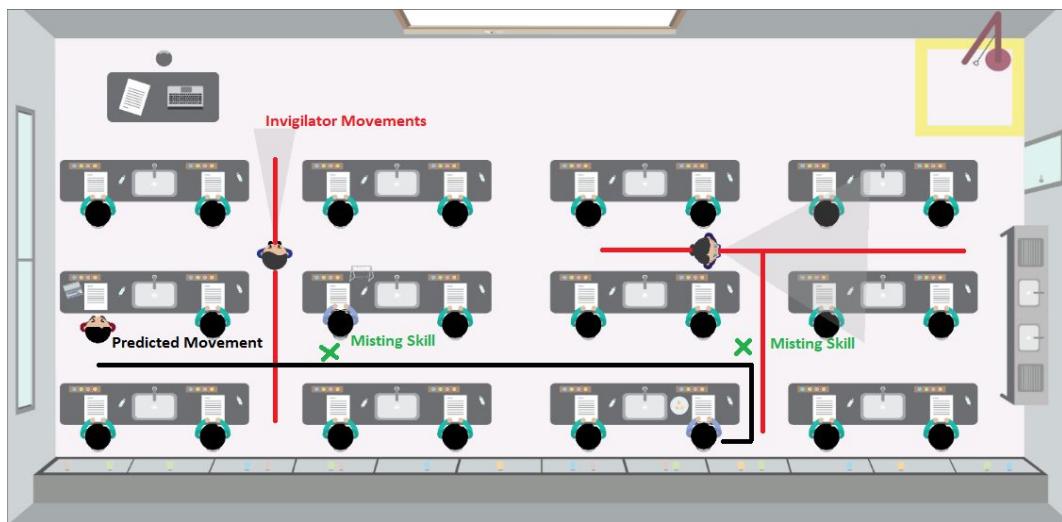


Fig.40 Level 2 Map Design

Level 3 set the stage for a new Dash Skill. The map was deliberately adjusted twice the size of the previous map. Different types of invigilators were also subsequently introduced with security guard worth highlighting. The security guard was set in a corridor, this forces students

to either go round him or use a skill. Level 3 also set a prequel to the introduction of the Snitch ability.

1. Introducing moving teacher, security guard.
2. Snitch that will not cause player to lose, “Teach” players of snitch abilities
3. Distance of map increased

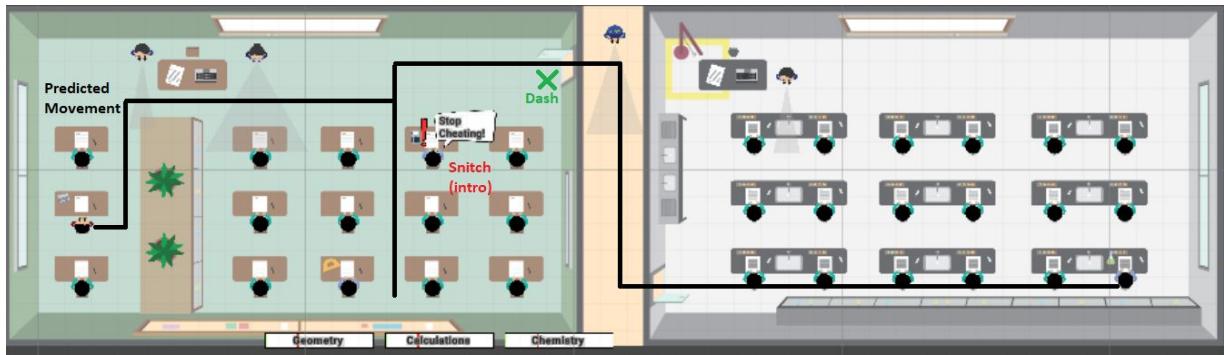


Fig.41 Level 3 Map Design

Level 3 is the final round and has the rotating teachers , snitch elements added. Fast-copy was also added into the gameplay.

1. Avoid teacher when snitch exclamation mark fills up.
2. Fast-copy skill



Fig.42 Level 4 Map Design

The play time of each level is set to be one minute for level one to two and two minutes for level three to four. Therefore, having four levels and cut scenes incorporated, the maximum game duration is around 15 minutes.

5.5. Actions and Controls

The game uses mouse control for the game starting UI and keyboard when playing the game itself. These are the keyboard control buttons included as a player inside the game:

| Keys | Actions |
|-------|--|
| ↑ | Move up |
| ↓ | Move down |
| ← | Move left |
| → | Move right |
| Q | Activate mist power-up |
| W | Activate dash power-up |
| E | Activate fast-copy power-up |
| Space | Increase cheat point bar (only applicable when near a cheating spot) |

5.6. Rules

Both operational and constitutive rules are used to limit the actions of each player. The main bulk of the rules set the winning and losing condition of the game. Below are some of the rules included inside the game.

5.6.1 Operational Rules

Basic operational rules are included to instruct players what to do. These rules are taught to the players through the game tutorial. The operational rules includes:

- The player can only move front, back, left and right between tables.
- The player can only press spacebar near the smart students to fill up the “Exam Points” for specific questions.
- The players have to go back to their seats to lock down the “Exam Points”.
- The player can only press Q, W, E to activate the respective power-ups.

5.6.2 Constitutive Rules

There are several constitutive rules that are not explicitly stated. They include:

- The player does not need to go back to their seat to lock down the “Exam Point” every time they copied one question. They have the freedom to go round copying multiple questions before going back to their seats to lock down the “Exam Points”.
- The player wins when all cheat bars have “Exam Point” that are above the minimum benchmarks.
- The player loses when he goes within an invigilator’s line of sight.
- The player loses when the timer runs out and his locked answers fall below the minimum benchmark for any of the questions.

5.7. Resources

The main resources to be obtained and maintained within the game include “Exam Points” and “Skills”/power-ups.

5.8. Boundaries

The lower level design contains smaller rooms and simple NPCs and as the level goes higher, there will be more extended spaces on the screen, hence increasing the player boundaries over time.

5.9. Outcome

The game’s winning and losing conditions are based on the stated rules. In addition to that, the game has a star scoring system (up to three stars can be awarded) which will pop out at the end of each level to indicate the player’s score as feedback.^[6]

6. User Testing

6.1. Testing for Degenerate Strategies

Through the user testing conducted, there was no obvious degenerate strategies found. CheatCode do not possess a degenerate strategies as the game is based on a fixed pattern movement and constrained by the same obstacles all the time. (see Section 5.4.5.) The following shows the design consideration to prevent degenerate strategies.

| Category | Design Consideration |
|--------------|--|
| Power-ups | Made sure that the player do not abuse the power-ups. Therefore, a cooldown time was added to or delay the next activation. |
| Invigilators | Made sure that there is no blind spot in area where obstruction to player’s movement is intended. Therefore, invigilators are placed in a position to fully obstruct the path to cheating spots. |

| | |
|--|--|
| Smart Student/ Nerdy Gary & Decreasing Cheat Bar | Made sure that the smart students are placed far away from the player's seat so that players will have to strategize the best solution. Additionally, decreasing cheat bar is included to prevent players from copying all questions in one shot and exploiting shortcuts. |
|--|--|

6.2. Results & Improvements

Three rounds of user testing were conducted at different stages of the game development. In each round of testing, 5 players were asked to evaluate and provide feedback. Two main evaluation techniques was used. Firstly, thinking aloud allows players to identify problems while playing the game. Secondly, interview was conducted at the end of testing to get feedback on the game experience.

6.2.1. First Round of User Testing

The first round of testing was conducted on the preliminary game prototype. The main objective of this testing was to test our main game mechanics as well as the game concept.

| Category | User Feedback | Improvement |
|---------------------------|--|---|
| Timer | Not obvious | Increased font size and changed top-screen UI design |
| Smart Student/ Nerdy Gary | Not obvious who to copy answers from | Put subject text beside smart student/ Nerdy Gary |
| Cheat Bar | Not obvious that the "Exam Points" is decreasing | Add blinking animation to show that the "Exam Points" is decreasing |
| Invigilator | Unobservable movement pattern (randomized) | Changed & re-designed random algorithm to fixed pattern algorithm |
| Level Design | Too simple/ easy | Introduced more obstacles (refer to Section 5.4.2.) |
| User Experience | Luck based more than skill | Reduced element of randomness inside the game |

6.2.2. Second Round of User Testing

The second round of testing was conducted on a fully implemented game to test the user interface and user experience.

| Category | User Feedback | Improvement |
|-----------------|--|--|
| Action Control | Power-ups button are not clear | Increased power-ups icon size and put closer to the timer |
| Action Control | Spamming of power-ups | Only allow one power-up to be activated at a time. In addition, cooldown is implemented. |
| Cheat Bar | No clear mapping to the smart students/ nerdy Gary | Changed the subject text to relatable object placed on the smart student/ nerdy Gary's table (e.g. protractor for geometry question) |
| Main Camera | Static camera for all levels | Implemented moving bounded camera for bigger maps, include level 3 and 4 |
| Game Menu | Not matched with the theme | Implemented new UI design for the game menu |

6.2.3. Third Round of User Testing

The third round of testing was conducted on a fully implemented game with improvements based on the second user testing to test the level design to see if it is working the way we intended.

| Category | User Feedback | Improvement |
|-----------------|-------------------------------------|---|
| Action Control | Unclear game key presses usage | Implemented a tutorial section in the intro cutscene of the game |
| Level Design | Extreme difficulty on level 3 and 4 | Re-balance the moving speed, turning speed, line of sight size, and the placing of the invigilators for level 3 and 4 |

6.2.4. Final Review Feedback

The following was the feedback that we have gotten from the final review and the improvements that was made.

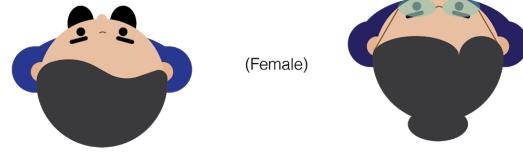
| Category | User Feedback | Improvement |
|-----------------|---------------------------------|---------------------------|
| Action Control | Power-ups button are not within | Placed the power-ups icon |

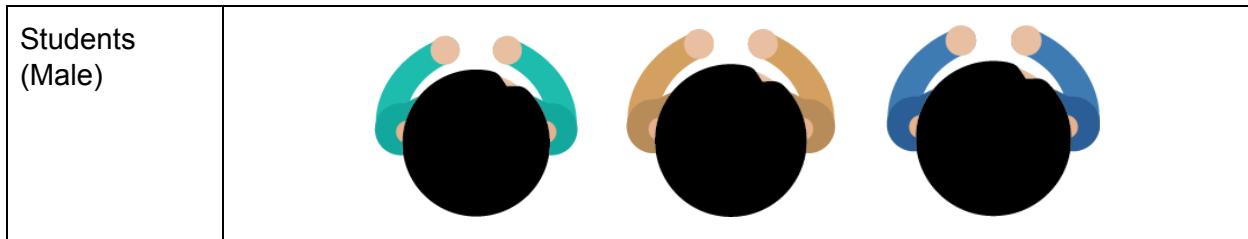
| | | |
|--------------|--|--|
| | eye travel friendly distance | near the cheat bars |
| Sound Effect | To have more positive feedback when locking the cheat bars | Implemented sound effect when locking the cheat bars |

7. Assets

The game assets are created in house using Adobe Illustrator and incorporated into Unity game engine.

7.1. Characters

| Type | Sprites |
|----------------------|---|
| Player |  (Standing) (Sitting) |
| Nerdy Gary |  |
| Invigilator NPC |  (Male) (Female) |
| Security Guard |  |
| Students (Female) |  |

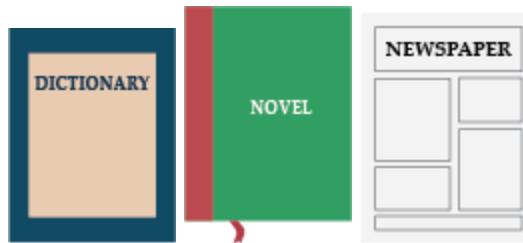
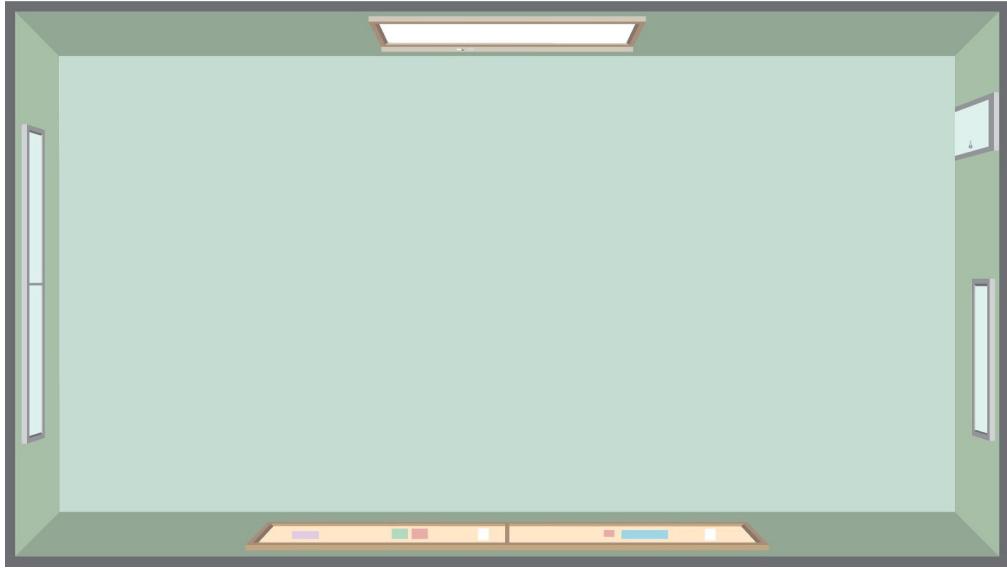


7.2. Powerups

| Assets | Display |
|----------|---------|
| Powerups | |

7.3. Game World

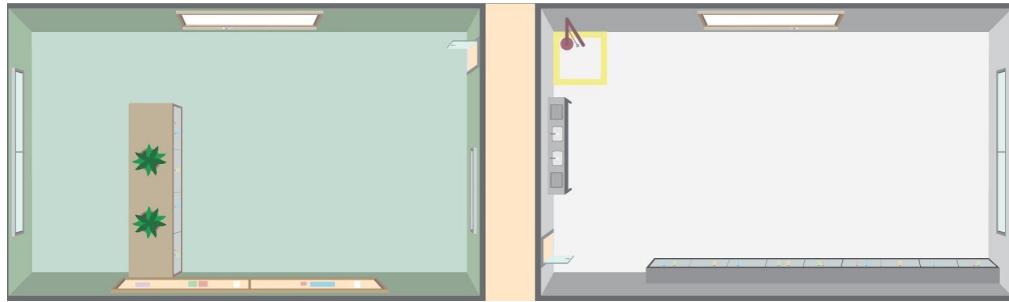
| Assets | Display |
|---------------------------|---------|
| Classroom's Table & Chair | |
| Lab's Table & Chair | |

| | |
|---------------------------------|---|
| Smart Student's Items (Math) |  |
| Smart Student's Items (Science) |  |
| Smart Student's Items (English) |  |
| Classroom Game Set |  |

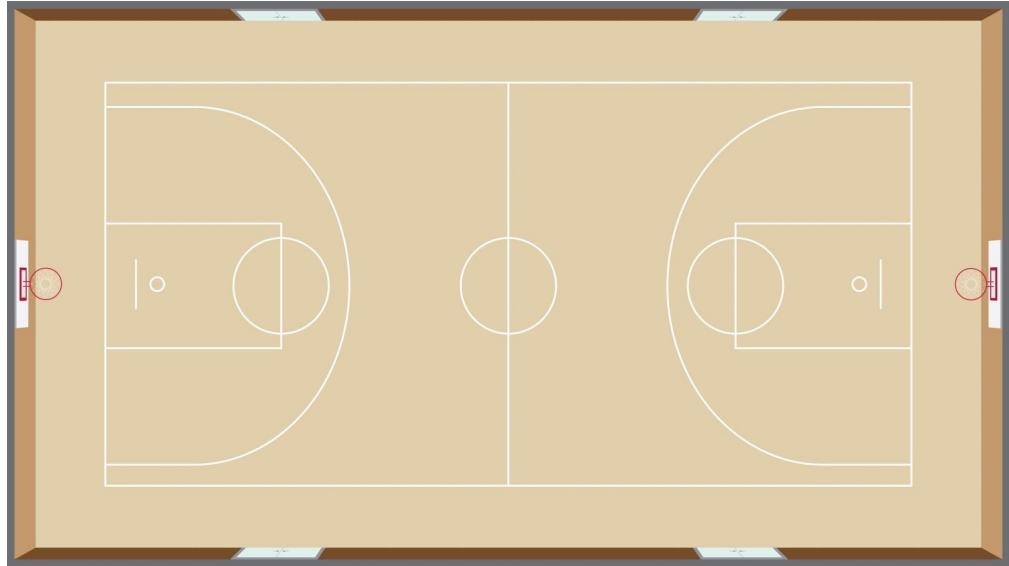
Lab Game Set



Classroom & Lab Game Set



Hall Game Set



8. Schedule

8.1. Game Development Timeline

| Timeline | Development Goal |
|----------|---|
| Week 7 | Tutorial & Basic Gameplay |
| Week 8 | GDC Consultation, Level 1 Design, Power-ups, User Testing 1 |
| Week 9 | Level 2 Design, User interfaces |
| Week 10 | Level 3 Design |
| Week 11 | Level 4 Design |
| Week 12 | Level 5 Design, User Testing 2 |
| Week 13 | Code Refinement, Final Report, User Testing 3 |

8.2. Tasks Division

| Name | Role |
|----------|----------------------------|
| Andre | Game Designer & Programmer |
| Kenny | Game Designer & Programmer |
| Wei An | Game Designer & Artist |
| Valerene | Game Designer & Programmer |

9. Major Changes to Game Idea

The concept of the game has remained consistent since the mid-term GDD. The gameplay and main mechanics still remain largely the same with only minor tweaks made according to the user feedback (see Section 6).

10. References

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