WHEEL OF FORTUNE - SCRUM

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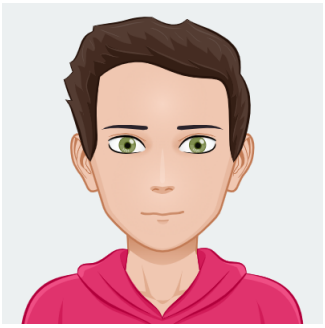
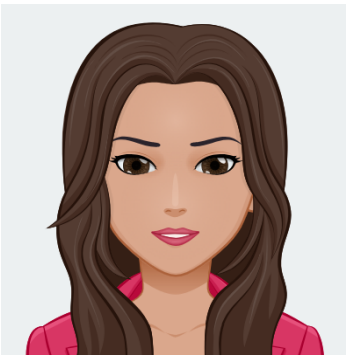
1.STRUCTURE AND OPERATION OF THE SCRUM TEAM

In our project, we adopted the Scrum methodology, an agile framework that emphasizes iterative development, team collaboration, and continuous improvement.
Our Scrum team was composed of five key roles: Git Expert, Scrum Master, Product Owner, Team Advocate and (el de Gon).



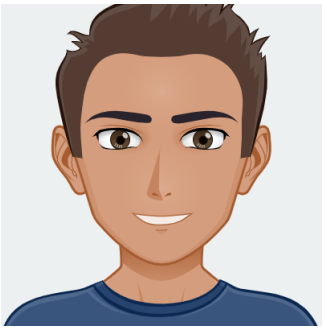
- **Git Expert** (Alejandro): version control was managed by him to guarantee seamless cooperation via Git. He helped a lot, especially in the beginning guiding us through everything regarding Git.

- **Scrum Master** (Adrián): he facilitated the dailies, helped if anyone was blocked and ensured the team followed Scrum principles.



- **Product Owner** (Eva): responsible for defining the product vision, managing the backlog and prioritizing tasks based on value.

- **Team Advocate** (Bogdan): he helped to settle domestic problems and guaranteed team cohesion.



- **Documentation Lead** (Gonzalo): Monitored all project deliveries to ensure they met the final submission requirements.

📅 Sprint workflow

Each sprint began with a planning session where we selected user stories from the backlog and defined our sprint goals. Tasks were self-assigned based on interest and skill, aiming for the most equitable distribution possible. We held our daily stand-ups mainly via WhatsApp because of the flexibility, and concluded each sprint with a review and retrospective meeting.

🌐 Communication and collaboration

We used a hybrid approach combining in-person and online collaboration. Most coordination occurred online using:

- GitHub: for code version control, issue tracking, and to manage the sprint backlog and tasks visually.
- WhatsApp: for the dailies.
- Google Docs: to collaborate on documentation and share materials.

Because we saw each other almost everyday at university, we naturally used those moments to plan or solve problems in person, especially when something complex came up or to get ready for a presentation.

🔁 Comparing to Agile Inception Document

Talking into account what we wrote in the Agile Inception document, it's interesting to evaluate how closely we followed our original goals.

The team members have remained the same, even though throughout the project new roles have been given to each one of us.
Our project goal didn't change either, we developed an interactive digital version of the wheel of fortune game based on the spanish TV show.
Also, how we communicated with each other, and the tools we used were maintained throughout the whole process.

🤝 Team Dynamics and growth

We initially did an icebreaker activity (two truths and a lie) to get to know each other better. However, what truly strengthened the group over time was working together during the project. With all of our meetings, moments of miscommunication and different opinions about how to approach certain tasks, we still managed to find common ground, adapt to each other's working styles and stayed focused on our shared goals.

🧠 Weaknesses and New challenges

We initially listed these weaknesses: procrastination, impulsive decision-making, resistance to change, and some more.
Were they helpful to identify? To some extent, yes. While a few of the initial concerns ended up being less critical than expected, recognizing them early still helped us stay aware. For example, we quickly became comfortable with Git thanks to the guidance of our Git Expert, and our decision- making process naturally improved as we gained experience working together.
However, there were more relevant challenges that emerge:

- Underestimating task complexity, especially with the new THINGS that were suggested in Sprint 4. This led to delays in certain sprints.

- Maintaining motivation and engagement consistently was challenging, especially as we had other academic responsibilities.
- Dependency between tasks. This slowed us down at certain points, because someone could continue with his part until another member had completed theirs.

These challenges pushed us to improve our coordination, communicate more proactively, and adapt our planning to be more realistic and flexible.

2.USER STORIES

ID	USER STORY	PRIORITY	WEIGHT	STATUS
#1	As a developer I want to implement a random selection of phrases in the game.	P0	L	Done
#15	As a player, I want to be able to choose a letter after spinning the wheel.	P1	S	Done
#24	As a player, I want to win the game if I solve the word correctly.	P0	S	Done
#30	As a developer, I want the game to display a message if a player tries to use a repeated letter.	P2	M	Done
#50	As a player, I want to be able to save and load the game.	P1	S	Done

Sprint 1

#1. As a developer I want to implement a random selection of phrases in the game.
The game should randomly choose a phrase or sentence from a predefined list each time a new game starts. This ensures variety and replayability, making each round feel unique.

- Priority: P0
- Size: L
- Estimate: 2h
- Status: Done

#2. As a developer I want to implement console action for the next turn.
This feature allows the game to detect when a player's turn is over and display an appropriate message, signaling the next player to take their turn.

- Priority: P1
- Size: M
- Estimate: 2h
- Status: Done

#3. As a developer I want to implement proper letter guessing and turn handling.
This story focuses on ensuring that when a player guesses a letter, the game correctly updates the panel and determines whether the player keeps their turn or passes it, based on the result of the guess.

- Priority: P2
- Size: L

- Estimate: 2h
- Status: Done

#21. As a player I want to enter my name before starting the game.
At the beginning of the game, players should be prompted to input their names. These names will then be used during gameplay to indicate turns and track scores.
- Priority: P0
- Size: M
- Estimate: 1h
- Status: Done

#22. As a developer I want the game to have at least 2 players.
The game must support a minimum of two players to reflect the competitive nature of *Wheel of Fortune*, enabling a proper turn-based experience.
- Priority: P0
- Size: S
- Estimate: 3h
- Status: Done

#19. As a player I want the game to assign me a turn automatically.
When the game starts, the system should automatically decide which player goes first, rather than requiring manual input or selection.
- Priority: P1
- Size: S
- Estimate: 2h
- Status: Done

#20. As a developer, I want the turns to pass to the next player after each action.
After a player completes an action (guessing a letter or failing a guess), the game should automatically move to the next player's turn based on a predefined sequence.
- Priority: P1
- Size: S
- Estimate: 3h
- Status: Done

#18. As a developer, I want to define a panel of words or phrases with blanks.
The developer should implement a system to display phrases with hidden letters, using underscores or blank spaces to represent each unguessed letter.
- Priority: P1
- Size: M
- Estimate: 4h
- Status: Done

#17. As a player, I want to see how many letters the hidden phrase has.
At the start of the game (and during it), the player should be able to view the blanked-out phrase layout, including the number of letters and spaces. This gives players visual clues and context for guessing.
- Priority: P2

- Size: M
- Estimate: 2h
- Status: Done

Sprint 2

#9. As a developer, I want the wheel to have random money values.
The wheel should include various money values randomly assigned to its segments. When spun, the value landed on determines how much a player earns per correct letter guessed.

- Priority: P2
- Size: M
- Estimate: 3h
- Status: Done

#10. As a player, I want the wheel to have a 'Bankrupt' and 'Lose Turn' option.
Some wheel segments should be special cases like **'Bankrupt'** (which resets the player's score) and **'Lose Turn'** (which skips the player's turn). These add unpredictability and challenge to the game.

- Priority: P2
- Size: L
- Estimate: 3h
- Status: Done

#11. As a player, I want the letter to appear on the screen if it is in the word.
When a guessed letter is correct, it should be revealed in the hidden phrase by replacing the corresponding blanks, so players can track their progress visually.

- Priority: P0
- Size: S
- Estimate: 2h
- Status: Done

#12. As a player, I want if I miss the letter, I lose my turn.
If a player guesses a letter that isn't in the phrase, their turn should immediately end, and the next player should be prompted.

- Priority: P1
- Size: M
- Estimate: 2h
- Status: Done

#13. As a developer, I want the game to validate if the letter is in the hidden word.
The system should check whether the guessed letter appears in the hidden phrase and return a result that triggers either a score update or a turn loss.

- Priority: P1
- Size: M
- Estimate: 3h
- Status: Done

#14. As a player, I want to be able to turn the wheel before choosing a letter.
Before guessing a letter, the player should spin the wheel to determine the potential reward or penalty for that turn.

- Priority: P0
- Size: S
- Estimate: 2h
- Status: Done

#15. As a player, I want to be able to choose a letter after spinning the wheel.
Once the wheel is spun, the player should then input a letter to guess. The outcome of this guess is influenced by the result of the spin.

- Priority: P1
- Size: S
- Estimate: 2h
- Status: Done

#16. As a player, I want to win money based on the value of the wheel if I hit a letter.
If a guessed letter is correct, the player should earn money based on the wheel's value multiplied by the number of times that letter appears in the phrase.

- Priority: P2
- Size: L
- Estimate: 2h
- Status: Done

Sprint 3

#23. As a player, I want to be able to try to solve the word when I think I have the answer.
At any point during their turn, the player should have the option to attempt to solve the entire phrase. If correct, they win the game.

- Priority: P1
- Size: S
- Estimate: 1h
- Status: Done

#25. As a player, I want if I fail to solve the word, I lose my turn.
If a player attempts to solve the phrase and gets it wrong, their turn should end immediately, and the next player continues.

- Priority: P1
- Size: M
- Estimate: 2h
- Status: Done

#26. As a developer, I want a message to be displayed with the winner when someone

wins.
When a player successfully solves the phrase, the game should display a clear message showing who the winner is and congratulating them.

- Priority: P2
- Size: S
- Estimate: 1h
- Status: Done

#24. As a player, I want to win the game if I solve the word correctly.
If a player correctly solves the phrase, the game should recognize them as the winner and trigger the end-of-game sequence.

- Priority: P0
- Size: S
- Estimate: 1h
- Status: Done

 # 43. As a player, I want my wallet panel split into avatar and info sections so I can easily see my avatar alongside my name and earnings.
The player's UI section should clearly display both their avatar and their information (name and current earnings) in a well-organized way for better visibility and design.

- Priority: P1
- Size: M
- Estimate: 3h
- Status: Done

 # 27. As a developer, I want the game to end and give the option to play another game.
After a player wins, the game should display a final screen with the option to start a new game or exit, allowing for replayability without restarting the program manually.

- Priority: P2
- Size: M
- Estimate: 2h
- Status: Done

#44. As a player I want to be able to buy vowels.
Players should have the option to buy a vowel (A, E, I, O, U) during their turn in exchange for a fixed amount of money. This adds strategic depth and encourages players to manage their earnings wisely.

- Priority: P1
- Size: S
- Estimate: 2h
- Status: Done

#42. As a player I want to be able to guess only consonants.
During the standard letter-guessing phase (after spinning the wheel), players should only be allowed to choose consonants. Vowels should be restricted to the "buy" mechanic.

- Priority: P1
- Size: XS

- Estimate: 1h
- Status: Done

#41. As a developer I want to add the Singleton Pattern.
To ensure consistent game state management, the Singleton design pattern should be implemented for classes that must have a single instance
- Priority: P1
- Size: M
- Estimate: 2h
- Status: Done

Sprint 4
#31. As a player, I want to see a final screen with the winner and the correct word.
At the end of the game, a final screen should display the name of the winner along with the fully revealed correct phrase, providing closure and feedback for all players.
- Priority: P2
- Size: S
- Estimate: 1h
- Status: Done

#30. As a developer, I want the game to display a message if a player tries to use a repeated letter.
If a player selects a letter that has already been guessed, the game should notify them with a clear message and prompt them to choose a new letter instead.
- Priority: P2
- Size: M
- Estimate: 2h
- Status: Done

#29. As a player, I want the game to show me which letters have already been used.
The interface should display a list or panel showing all the letters that have been guessed so far (both correct and incorrect), helping players avoid repetition and strategize better.
- Priority: P2
- Size: M
- Estimate: 1h
- Status: Done

#32. As a player, I want to be able to play another game without closing the game.
After a game ends, players should be given the option to start a new game from the final screen without having to restart the application.
- Priority: P1
- Size: L
- Estimate: 1h
- Status: Done

#28. As a player, I want the game to clearly show my score each turn.
At the end of each turn, the player's current score should be clearly displayed, so they can track their progress and earnings throughout the game.

- Priority: P2
- Size: S
- Estimate: 2h
- Status: Done

#51. As a player, if I make a mistake playing the game, I want to be able to undo the move.
The game should include an undo feature that allows the player to revert their most recent move, restoring the previous game state and allowing them to try again. This improves usability and gives players more flexibility during gameplay.

- Priority: P1
- Size: M
- Estimate: 3h
- Status: Done

Sprint 5

#47. As a player, I want to play against an AI automatic player.
The game should include AI-controlled players that can take turns automatically, allowing for solo play or mixed human-AI games.

- Priority: P0
- Size: L
- Estimate: 2h
- Status: Done

#53. As a player, I want to be able to read better the messages that appear in the BottomPanel.
Messages displayed in the BottomPanel should be clear, well-formatted, and visually distinguishable. Improvements include adjusting font size and color contrast to ensure better readability and a more user-friendly experience.

- Priority: P2
- Size: S
- Estimate: 1h
- Status: Done

Sprint 6

#50. As a player, I want to be able to save and load the game.
Players should be able to save their current game state and return to it later by loading the

saved data, allowing for longer games and pausing between sessions.
We started implementing this user story in Sprint 5, but completed it in this Sprint.

- Priority: P1
- Size: S
- Estimate: 1h
- Status: Done

#57. As a player, I want the AI not to be able to guess vowels.
The basic AI should be restricted to guessing consonants only, making it behave more like a real player and keeping vowel-buying as a strategic action for human players.

- Priority: P1
- Size: XS
- Estimate: 2h
- Status: Done

#49. As a developer, I want to be able to play against other players not on my computer.
This feature would allow multiplayer games over a network or online connection, enabling users to play together remotely.

- Priority: P0
- Size: XL
- Estimate: 3h
- Status: Done

#46. As a developer, I want my code to follow more or less the MVC model.
The project should be structured following the **Model-View-Controller (MVC)** design pattern to promote clean separation of concerns between logic, UI, and data handling.

- Priority: P0
- Size: M
- Estimate: 3h
- Status: Done

#58. As a player, I want the Medium and Hard AI to be able to buy vowels.
Advanced AI difficulty levels should include logic for buying vowels when appropriate, mimicking more strategic player behavior and increasing game challenge.

- Priority: P1
- Size: S
- Estimate: 2h
- Status: Done

#59.As a developer, I want to write JUnit tests to verify that the core game logic works correctly.
To ensure the reliability of the game's mechanics, developers should implement automated unit tests using JUnit. These tests will cover key functions such as letter validation, score

updates, turn transitions, and phrase completion, helping detect bugs early and support future changes with confidence.

- Priority: P2
- Size: M
- Estimate: 2h
- Status: Done

3.SPRINT PLANNINGS

Sprint 1 (104/02/2025 - 18/02/2025)
During this Sprint we selected the following user stories to work ion:

User Story 1

- Description: As a player, I want to enter my name before starting the game.
- Estimated time: 1 hour.
- Acceptance criteria:
    - The game should prompt the player to enter their name before beginning.
    - The game should be stored and displayed during gameplay.
- Reason for selection: This functionality is essential for personalizing the game experience and ensuring players can identify themselves.

User Story 2

- Description: As a developer, I want the game to have at least two players
- Estimated time: 3 hours.
- Acceptance Criteria:
    - The game should require at least two players before starting.
    - If fewer than two players are present, a warning should be displayed.
- Reason for selection: This ensures the game is played as intended and avoids single-player issues.

User Story 3

- Description: As a player, I want the game to assign me a turn automatically.
- Estimated time: 2 hours.
- Acceptance Criteria:The system should assign the first turn randomly or to the first player who joined.
- Reason for selection: Turn assignment is crucial for the flow of the game, it determines the sequence of actions.

User Story 4

- Description: As a developer, I want the turns to pass to the next player after each action.

- Estimation: 3 hours.
- Acceptance Criteria:
    - After a player takes an action, the turn should automatically move to the next player.
    - Players should be informed when it is their turn.
- Reason for selection: Ensures smooth and fair gameplay for all players.

User Story 5

- Description: As a developer, I want to define a panel of words or phrases with blanks.
- Estimation: 4 hours.
- Acceptance Criteria: The game should allow the developer to configure words or phrases with missing letters.
- Reason for selection: This feature is a core part of the game's challenge and mechanics.

User Story 6

- Description: As a player, I want to see how many letters the hidden phrase has.
- Estimation: 2 hours.
- Acceptance Criteria:
    - Players should be shown the number of letters in the phrase.
    - Undiscovered letters should be represented with underscores.
- Reason for selection: Helps players understand the scope of the puzzle and strategize their guesses.

Sprint 2 (18/02/2025 - 04/03/2025)

During this Sprint we have selected the following user stories to work on:

User Story 1

- Description: As a developer, I want the wheel to have random money values.
- Estimation: 3 hours.
- Acceptance criteria: The wheel should generate random money values each time it is spun.
- Reason for selection: This feature adds unpredictability and excitement to the game.

User Story 2

- Description: As a player, I want the wheel to have a ‘Bankrupt’ and ‘Lose Turn’ option.
- Estimated time: 3 hours.
- Acceptance Criteria: The wheel should include 'Bankrupt' and 'Lose Turn' options, and their effects should be applied to the player who spins them.
- Reason for selection: These options are essential for increasing the challenge and strategic elements of the game.

User Story 3

- Description: As a player, I want the letter to appear on the screen if it is in the word.
- Estimated time: 2 hours.
- Acceptance Criteria: If a player guesses a correct letter, the letter should be revealed in its correct positions on the screen.
- Reason for selection: It provides visual feedback to the player and is a key game mechanic.

User Story 4

- Description: As a player, I want if I miss the letter, I lose my turn.
- Estimated time: 2 hours.
- Acceptance Criteria: If a player selects an incorrect letter, their turn should automatically pass to the next player.
- Reason for selection: This feature ensures fair gameplay and maintains game flow.

User Story 5

- Description: As a developer, I want the game to validate if the letter is in the hidden word.
- Estimated time: 3 hours.
- Acceptance Criteria: The game should check whether the chosen letter is part of the hidden word and return the result accordingly.
- Reason for selection: This functionality is necessary for the correct implementation of the game rules.

User Story 6

- Description: As a player, I want to be able to turn the wheel before choosing a letter.
- Estimated time: 2 hours.
- Acceptance Criteria: The game should prompt the player to spin the wheel before making a letter guess.
- Reason for selection: This ensures the correct sequence of actions and increases the game's strategic depth.

User Story 7

- Description: As a player, I want to be able to choose a letter after spinning the wheel.
- Estimated time: 2 hours.
- Acceptance Criteria: Players should be allowed to select a letter only after spinning the wheel.
- Reason for selection: It enforces the game's rules and maintains consistent gameplay.

User Story 8

- Description: As a player, I want to win money based on the value of the wheel if I hit a letter.
- Estimated time: 2 hours.
- Acceptance Criteria: If a player guesses a correct letter, they should receive money equal to the wheel's value multiplied by the occurrences of the letter in the word.
- Reason for selection: This feature rewards players for correct guesses and adds a strategic element to the game.

Additionally, during this Sprint, we will work on creating UML class diagrams for the existing code, representing the classes, attributes, methods, and their relationships.

Sprint 3 (4/03/2025 - 18/03/2025)

During this Sprint we have selected the following user stories to work on:

User Story 1

- Description: As a player, I want to be able to try to solve the word when I think I have the answer.
- Estimated time: 1 hour.
- Acceptance criteria: Whenever a player knows the answer to a panel, he or she should be able to solve it, it has to be their turn.
- Reason for selection: This feature helps to determine who wins.

User Story 2

- Description: As a player, I want if I fail to solve the word, I lose my turn.
- Estimated time: 2 hours.
- Acceptance Criteria: If the answer is wrong, regardless of upper and lower case letters, the player loses its turn.
- Reason for selection: It is fundamental for the game not only to be able to win, but also to lose.

User Story 3

- Description: As a developer, I want a message to be displayed with the winner when someone wins.
- Estimated time: 1 hour.
- Acceptance Criteria: If a player wins, a message should be displayed indicating the victory.
- Reason for selection: It provides visual feedback to the player and is a key game mechanic.

User Story 4

- Description: As a player, I want to win the game if I solve the word correctly.
- Estimated time: 1 hour.

- Acceptance Criteria: If a player solves correctly the panel, he or she should win that round.
- Reason for selection: This feature is of the utmost importance for the game, it goes hand in hand with US1 and US2 of this sprint.

User Story 5

- Description: As a player, I want my wallet panel split into avatar and info sections so I can easily see my avatar alongside my name and earnings.
- Estimated time: 3 hours.
- Acceptance Criteria: The wallet should be updated each and every time the player wins or loses money.
- Reason for selection: This feature is of paramount importance to improve the game's playability.

User Story 6

- Description: As a developer, I want the game to end and give the option to play another game.
- Estimated time: 2 hours.
- Acceptance Criteria: The game should show a display with two plausible options, end game or play another game.
- Reason for selection: This ensures that a game could be exited or replayed whenever finished.

Additionally, during this Sprint, we will work on different issues that we found by the time we were programming, we created a singleton in the game class as well.

Sprint 4 (18/03/2025 - 1/04/2025)

During this Sprint we have selected the following user stories:

User Story 1

- Description: As a player, I want to see a final screen with the winner and the correct word.
- Estimated time: 1 hour.
- Acceptance criteria: Whenever a player solves the panel, a screen should be shown with its name and the panel.
- Reason for selection: This feature improves the game's playability.

User Story 2

- Description: As a developer, I want the game to display a message if a player tries to use a repeated letter.
- Estimated time: 2 hours.
- Acceptance Criteria: If the letter is guessed, regardless of its correctness, a message should be displayed.

- Reason for selection: It is key to a better playability.

User Story 3

- Description: As a player, I want the game to show me which letters have already been used.
- Estimated time: 1 hour.
- Acceptance Criteria: If a letter is guessed, regardless of its correctness, it should appear on the screen.
- Reason for selection: It is fundamental for the game.

User Story 4

- Description:As a player, I want to be able to play another game without closing the game.
- Estimated time: 1 hour.
- Acceptance Criteria: If the game ends, a new game should be at your disposal without closing it.
- Reason for selection: This feature helps players who want to play more than one game.

User Story 5

- Description: As a player, I want the game to clearly show my score each turn.
- Estimated time: 2 hours.
- Acceptance Criteria: The amount of money you have should be shown.
- Reason for selection: This makes the game more clear, and it makes the playability better.

Sprint 5 (1/04/2025 - 22/04/2025)
During this Sprint we have selected the following user stories to work on:

User Story 1

- Description: As a player, I want to play against an AI automatic player.
- Estimated time: 2 hours.
- Acceptance criteria: Whenever a player is able to play against AI and it does it more or less like a human.
- Reason for selection: This feature improves the game's playability.

User Story 2

- Description: As a developer, I want to be able to play against other players not on my computer.
- Estimated time: 2 hours.
- Acceptance Criteria: If the connection works and the player can play against other players.
- Reason for selection: It is key to a better playability.

User Story 3

- Description: As a player, I want the game to show me which letters have already been used.
- Estimated time: 1 hour.
- Acceptance Criteria: If a letter is guessed, regardless of its correctness, it should appear on the screen.
- Reason for selection: It is fundamental for the game.

User Story 4

- Description:As a player, I want to be able to save and load the game.
- Estimated time: 1 hour.
- Acceptance Criteria: If once the game is closed and opened again you can continue in the exact same point.
- Reason for selection: This feature helps players who cannot continue playing in that exact moment.

Sprint 6 (22/04/2025 - 06/05/2025)

During this Sprint we have selected the following user stories:

User Story 1

- Description: As a player, I want the AI not be able to guess vowels
- Estimated time: 2 hours.
- Acceptance criteria: Whenever a player is able to play against AI, it should not guess vowels.
- Reason for selection: This feature improves the game's playability.

User Story 2

- Description: As a developer, I want to be able to play against other players not on my computer.
- Estimated time: 3 hours.
- Acceptance Criteria: If the connection works and the player can play against other players.
- Reason for selection: It is key to a better playability.

User Story 3

- Description: As a developer, I want my code to follow more or less the MVC model.
- Estimated time: 3 hours.
- Acceptance Criteria: If a MVC is more or less seen, despite the fact that it is not perfect.
- Reason for selection: It makes the code more clear.

User Story 4

- Description: As a player, I want to be able to save and load the game.(Improvement)
- Estimated time: 2 hours.
- Acceptance Criteria: If once the game is closed and opened again you can continue in the exact same point.
- Reason for selection: This feature helps players who cannot continue playing in that exact moment.

User Story 5

- Description: As a player, I want the Medium and Hard AI to be able to buy vowels.
- Estimated time: 2 hours.
- Acceptance criteria: Whenever a player is able to play against Medium/Hard AI, it should be able to buy vowels.
- Reason for selection: This feature improves the game's playability.

As the sprints progressed, our planning became more realistic and focused. We learned to estimate better, account for individual availability, and consider technical dependencies between stories

4.SPRINT REVIEWS

Sprint 1 (104/02/2025 - 18/02/2025)
During this sprint, we worked on the following aspects:

- We designated the Scrum Master and Product Owner roles.
- Under the supervision of the Product Owner, we structured the product backlog and selected the user stories for Sprint 1.
- We held a sprint planning meeting to refine and clarify the implementation of selected user stories.
- We conducted daily stand-up meetings to resolve questions regarding implementation.

Sprint 2 (18/02/2025 - 04/03/2025)
During this sprint, we worked on the following aspects:

- Implementation of the selected user stories.
- Designing UML class diagrams to visualize the code structure and relationships.
- Continuous integration using GitHub for version control.

Sprint 3 (4/03/2025 - 18/03/2025)
During this sprint, we worked on the following aspects:

- Implementation of the selected user stories.
- Implementation of a singleton in the game class.
- Continuous integration using GitHub for version control.

Sprint 4 (18/03/2025 - 1/04/2025)
During this sprint, we worked on the following aspects:

- Implementation of the selected user stories.
- Continuous integration using GitHub for version control.

Sprint 5 (1/04/2025 - 22/04/2025)
During this sprint, we worked on the following aspects:

- Implementation of the selected user stories.
- Continuous integration using GitHub for version control.

Sprint 6 (22/04/2025 - 06/05/2025)
During this sprint, we worked on the following aspects:

- Implementation of the selected user stories.
- Continuous integration using GitHub for version control.

Definition of Done: A user story was considered done when:
- It was implemented and committed in GitHub
- It met all its acceptance criteria.
- It was reviewed and validated by at least one team member.
- The game functioned as expected without errors during testing.

5.SPRINT RETROSPECTIVE

Sprint 1 (104/02/2025 - 18/02/2025)
What worked correctly during the sprint?
Definitely something to highlight about this sprint was how the workload was divided equitably. We took into account the time each and every member of the time had available to work on the project.

What did not work correctly during the sprint?
When talking about things that did not go as expected, we should point out the problems we encountered working with github. Since it was our very first time using github, issues arose as we wanted to make commits. Be that as it may, our git expert (Alejandro) managed to find easy explanations so we understand properly how to work with github.

What do we need to improve for the next sprint?
As pointed out in the previous paragraph, the vast majority of our problems were related to how to work with github. Despite the fact that our git expert helped the team a lot with his knowledge, there is clearly room for improvement in the use of github, so we will try not only to ask Alejandro for help anymore, but also to try to find by ourselves more about how to work with github.

Sprint 2 (18/02/2025 - 04/03/2025)

What worked correctly during the sprint?

One positive aspect of this sprint was the improved use of GitHub compared to the previous sprint. The team was able to make commits and collaborate more effectively.

What did not work correctly during the sprint?

Despite the improvements, some members still experienced minor difficulties with GitHub, especially regarding conflicts during merging. Also, we didn't distribute the tasks equitably and some things were left for the last minute.

What do we need to improve for the next sprint?

We need to have better organization and communication in the team.

Sprint 3 (4/03/2025 - 18/03/2025)

What worked correctly during the sprint?

A positive aspect of this sprint is the fact that we distributed the tasks more effectively, knowing everyone what to do in every moment, which was one of our targets in the previous sprint. Additionally, when referring to the game, we managed to improve significantly in a graphical point of view, as well as including new features more and more similar to the original TV show.

What did not work correctly during the sprint?

The main problems during this sprint are related to the fact that we rely a little bit too much on AI to code, leading to us having to spend more time looking for plausible flaws.

What do we need to improve for the next sprint?

During this sprint we managed to distribute tasks equitably and communication was improved, be that as it may, there is still room for improvement in organizational aspects. We should not only focus on the second sprint week and work as well in the first one.

Sprint 4 (18/03/2025 - 1/04/2025)

What worked correctly during the sprint?

A positive aspect of this sprint is the fact that we were in constant communication, whenever a problem arose,we had no problems in communicating it to our colleagues.

What did not work correctly during the sprint?

The main problems during this sprint were the fact that we had bad planning not managing to complete all the user stories that we wanted.

What do we need to improve for the next sprint?

Since we did not manage to finish all we had for this sprint we want to finish it for the next one, as well as adding other functionalities.

Sprint 5 (1/04/2025 - 22/04/2025)

What worked correctly during the sprint?

A positive aspect of this sprint is that, thanks to the extra time Easter provided us, we were able to finish off with key points in our game, as well as we managed to have good communication despite the distance.

What did not work correctly during the sprint?
The main problems during this sprint were the fact that we relied so much on AI and that we did not make use of all the extra time awarded.

What do we need to improve for the next sprint?
We still need to work on some functionalities to make it more similar to the real life game.

Sprint 6 (22/04/2025 - 06/05/2025)
What worked correctly during the sprint?
A positive aspect of this final sprint is that we managed to program all the requirements given during the elaboration of the project. We as well worked on communication and we helped each other whenever it was needed.

What did not work correctly during the sprint?
The main issue during this sprint was the fact that, even though we programmed all the requirements, some of them were not done as perfectly as we wished due to the lack of time.

Over the six sprints, our team improved its application of Scrum practices. Daily communication became more natural, roles were respected, and retrospectives became key moments to adjust our workflow. Although we initially struggled with version control and time management, we became more efficient with each iteration.
Our productivity increased notably from Sprint 3 onwards, when we started organizing our work better and took more advantage of in-person coordination.

6.PRODUCT BACKLOG

We tracked the Product Backlog using GitHub Projects, where each user story was created as a card with labels for priority, estimated time, size, and sprint assignment. The backlog evolved throughout the project based on team discussions, internal testing, and technical discoveries.

🏁 Initial Backlog (Sprint 1)
The first sprint focused on establishing the core gameplay loop:
- phrase randomization
- turn logic and player rotation
- Basic UI for names and phrase display.
All this stories were high priority (P0-P1) and they were all completed as planned.

🔄Backlog Expansion (Sprint 2-3)
As we progressed we expanded the backlog to include essential mechanisms and user experience elements:
- Wheel mechanics with random values, ‘Bankrupt’ and ‘Lose Turn’
- Letter display and input validation
- Solving the word and handling win conditions
- UI elements such as the wallet panel and replay option

Some user stories were created in response to testing feedback and new ideas discussed during sprint reviews.

🎯Feature Completion and Refinement (Sprints 4–5)
By Sprint 4, the backlog included quality-of-life features:
- Display of used letters
- Warnings for repeated guesses
- Score display per turn
- Undo move functionality
- Improved BottomPanel readability
In Sprint 5, we added the AI player, initially limited to guessing consonants. This significantly improved the solo player experience.

🧠 Advanced Features and Structure (Sprint 6)
Sprint 6 focused on advanced improvements and architecture:
- Save/load functionality
- Medium and Hard AI buying vowels
- Ensuring the code followed the MVC pattern
- Writing JUnit tests for core game logic
- Planning for future multiplayer over network (added but not fully implemented)

🧭 Tracking and Adaptation
Thanks to GitHub Projects, we had a clear view of the evolution:
- Cards moved across columns (Ready → In Progress → In review → Done)
- New user stories were added sprint by sprint based on review feedback
- Estimates and priorities helped us balance workloads across sprints

7.SPRINT BACKLOG

Sprint 1

ID	USER STORY	RESPONSIBLE	STATE
#1	As a developer I want to implement a random selection of phrases in the game.	Adrián	Done
#2	As a developer I want to implement console action for the next turn.		Done
#3	As a developer I want to implement proper letter guessing and turn handling.		Done
#21	As a player I want to enter my name before starting the game.		Done
#22	As a developer I want the game to have at least 2 players.	Adrián	Done
#19	As a player I want the game to assign me a turn automatically.	Bogdan	Done
#20	As a developer, I want the turns to pass to the next player after each action.	Gonzalo	Done
#18	As a developer, I want to define a panel of words or phrases with blanks.	Adrián	Done
#17	As a player, I want to see how many letters the hidden phrase has.	Adrián	Done

Sprint 2

ID	USER STORY	RESPONSIBLE	STATE
#9	As a developer, I want the wheel to have random money values.	Adrián	Done
#10	As a player, I want the wheel to have special slices.	Bogdan	Done
#11	As a player, I want the letter to appear on the screen if it is in the word.		Done
#12	As a player, I want if I miss the letter, I lose my turn.		Done
#13	As a developer, I want the game to validate if the letter is in the hidden word.		Done
#14	As a player, I want to be able to turn the wheel before choosing a letter.	Adrián	Done
#15	As a player, I want to be able to choose a letter after spinning the wheel.	Adrián	Done
#16	As a player, I want to win money based on the value of the wheel if I hit a letter.	Gonzalo	Done
#33	As a player, I want a Bankrupt slice that resets my balance to $0 and ends my turn.	Bogdan	Done
#33	As a player, I want a Lose Turn slice that ends my turn immediately when landed on.	Bogdan	Done

Sprint 3

ID	USER STORY	RESPONSIBLE	STATE
#23	As a player, I want to be able to try to solve the word when I think I have the answer.	Adrián	Done
#25	As a player, I want if I fail to solve the word, I lose my turn.	Adrián	Done
#26	As a developer, I want a message to be displayed with the winner when someone wins.	Eva	Done
#24	As a player, I want to win the game if I solve the word correctly.		Done
#43	As a player, I want my wallet panel split into avatar and info sections so I can easily see my avatar alongside my name and earnings.	Alejandro	Done
#27	As a developer, I want the game to end and give the option to play another game.	Eva	Done
#44	As a player I want to be able to buy vowels.	Bogdan	Done
#42	As a player I want to be able to guess only consonants.	Bogdan	Done
#41	As a developer I want to add the Singleton Pattern	Gonzalo	Done

Sprint 4

ID	USER STORY	RESPONSIBLE	STATE
#31	As a player, I want to see a final screen with the winner and the correct word.	Eva, Gonzalo	Done
#30	As a developer, I want the game to display a message if a player tries to use a repeated letter.	Eva	Done
#29	As a player, I want the game to show me which letters have already been used.	Eva	Done
#32	As a player, I want to be able to play another game without closing the game.	Eva	Done
#28	As a player, I want the game to clearly show my score each turn.		Done
#51	As a player, if I make a mistake playing the game, I want to be able to undo the move.	Bogdan	Done
#35	As a player, I want a ×2 slice that doubles my reward on a correct guess	Bogdan	Done

Sprint 5

ID	USER STORY	RESPONSIBLE	STATE
#47	As a player, I want to play against an AI automatic player.	Eva	Done
#53	As a player, I want to be able to read better the messages that appear in the BottomPanel	Eva	Done
#50	As a player, I want to be able to save and load the game	Gonzalo	In progress
#49	As a developer, I want to be able to play against other players not on my computer.	Alejandro	In progress
#36	As a player, I want an Extra Turn slice that lets me retain my turn after an incorrect letter guess.	Bogdan	Done

Sprint 6

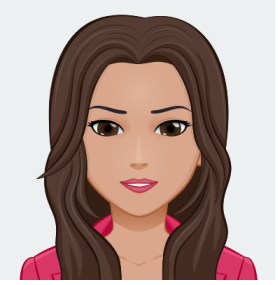
ID	USER STORY	RESPONSIBLE	STATE
#50	As a player, I want to be able to save and load the game	Gonzalo	Done
#57	As a player, I want the AI not to be able to guess vowels.	Adrián	Done
#49	As a developer, I want to be able to play against other players not on my computer.	Alejandro	Done
#46	As a developer, I want my code to follow more or less the MVC model.	Adrián	Done

#58	As a player, I want the Medium and Hard AI to be able to buy vowels.	Adrián	Done
#59	As a developer, I want to write JUnit tests to verify that the core game logic works correctly.	Alejandro	Done
#37	As a player, I want spins to include Mystery Prize effects and a zero-balance clamp applied correctly.	Bogdan	Done

8.WORK DESCRIPTION

- **Adrián**: As scrum master, he was the one in charge of the daily meetings and making sure everything was being done correctly. Additionally, he provided the group with ideas to make the game more realistic, as well as updating the wiki each sprint. Adri helped with coding too, he was in charge of the MVC, wheel slices, wheel phrases, spinning the wheel and many other functions. Last but not least, he was responsible for the vast majority of the pitch presentations, even though he wasn't always the one presenting them.
  He was as well responsible for the most part of the final document, handling the scrum pdf and uml pdf almost entirely.

- **Gonzalo**:As the Documentation Lead, Gonzalo ensured that the project's documentation was consistently updated and aligned with the team's progress. He proposed and helped document the implementation of the Memento design pattern for the SAVE/LOAD functionality.As part of his QA responsibilities, Gonzalo carefully reviewed documentation and commits to ensure clarity, completeness, and adherence to quality standards. He also coordinated the preparation of final delivery items throughout the semester, ensuring the team stayed on track and nothing was left for the last minute.



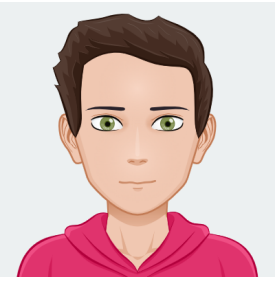
- **Eva**: As the Product Owner, Eva was responsible for managing the product vision and ensuring that the user stories aligned with the game's goals and priorities. She took the lead in maintaining the backlog and making sure the team stayed on track during each sprint.

  In addition to her organizational role, she also contributed to the codebase. Eva was in charge of developing the automatic player with three difficulty levels, along with other functionalities of the

game, such as the panel for the used letters. She also made sure that the feedback given by the professor and the teammates was implemented in the program, especially the interface things, such as making everything more readable for the players of the game. She also participated in some of the pitch presentations.

Eva played a key role in preparing the Scrum-related content of this document. She focused on explaining in detail the structure and functioning of the Scrum team, the user stories, and the evolution of the product backlog. Additionally, in the design patterns section, she contributed by describing the Strategy Pattern, which she applied when implementing the AI player's behavior.

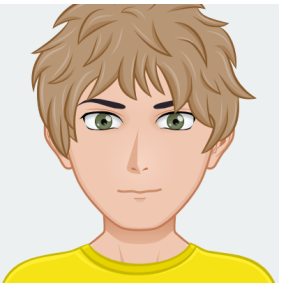
- **Alejandro**: As the Technical Lead and GitHub Manager, Alejandro played a crucial role in the project from start to finish. He was instrumental in setting the initial direction by establishing the core game logic and pushing the team forward during the early stages. He was also responsible for implementing the network architecture, including multiplayer functionality and the chat system, laying the groundwork for the game's communication structure.



  Additionally, he led the development of the user interface, designing most of the panels and ensuring a cohesive, engaging experience for players. Alejandro managed the GitHub repository, overseeing version control, organizing branches, and handling the release process for each sprint. He was the go-to person for resolving technical issues, assisting teammates with Git commands, debugging complex functionalities, and integrating their work seamlessly into the main project.

  Alejandro actively participated in several sprint presentations and ensured that the feedback provided by the professor was effectively implemented, contributing significantly to the project's overall quality and consistency.

- **Bogdan**: As part of the Wheel of Fortune project, some of my technical contributions focused on implementing robust undo functionality for all player actions (spin, guess, buy vowel, solve), ensuring each action could be fully reversed along with its associated UI updates and messages. I also designed and added all the special slices to enrich gameplay, including "Extra Turn" and "Mystery Prize" (with randomized effects like bonus money, turn loss, and penalties), "Lose Turn", "Bankrupt" and "x2" . I implemented the logic that allows players to buy vowels, just guess consonants, and ensured that turns are automatically assigned to players so the game flows without manual intervention among. Additionally, I ensured that player balances could never go below zero for a more balanced experience, among other contributions to the code.



As the Team Advocate, I supported team morale and motivation throughout the project. I held regular check-ins to ensure engagement, encouraged consensus during decision-making, and made sure everyone's voice and efforts were acknowledged. I also monitored individual contributions to ensure everyone had the opportunity to earn participation and commit-based grading. When necessary, I acted as a mediator and provided constructive feedback to all roles, including Scrum Master and Git Expert. Finally, I suggested improvements during retrospectives and organized informal team interactions to foster camaraderie and trust.

9.CONCLUSIONS AND SELF-ASSESSMENT

To bring this project to an end, we, as a team, would like to share our conclusions about it. Firstly, we should mention the introduction to the SCRUM methodology, something that was new to us. At the beginning we found it really hard to use this working method, we struggled to have the daily meetings, sometimes the workload was heavier than what we could cope with. Be that as it may, as time went by, we were able to adapt to SCRUM, managing to release a final version of the game. This subject goes beyond the academic, giving us insights of how the real world works and how our life might look in a few years. Learning not only about the methodology but also how to apply it in a real life situation is of the utmost importance.

In terms of teamwork, we think we performed well. Communication was key to be able to finish off our project, whenever any doubt arose we had no problems in asking any group member for help. A crystal clear example of this is the problems we experimented in the beginning of the project with github, a tool that was new to us. However, our git expert, Alex, helped us out with each and every doubt, providing us with great guidance through the use of github. But these were not the only problems we encountered during the six sprint period. We over trusted in ourselves sometimes by overloading the sprint planning with too much work. The way we solved this problem was by leaving the non-finished features as a pending task for the sprint that was to come.

In conclusion, we think that, even though the project was tough, it has really been helpful as we look to the future and see ourselves leading or forming part of programming teams that resemble this one.