

Use Case: Set Up a Game (Revised)

Primary Actor: Player

Stakeholders and Interests:

Stakeholder	Interests
Players	Want a smooth and intuitive setup process, ensuring all settings are correctly applied before the game starts.
System	Ensures proper initialization of players, rule enforcement, and game fairness.
AI Player (if applicable)	Must be assigned a difficulty level and function correctly.

Preconditions:

- The game application has been launched.
- The system is accessible for player input.

Success Guarantee (Postconditions):

- The game board is set up correctly.
- Players are registered and assigned appropriate identifiers.
- AI difficulty (if selected) is correctly assigned.
- The first player's turn is determined.

Main Success Scenario:

1. The player selects “**Start Game**” from the main menu.
 2. The system prompts the player to **choose the number of participants** (2–4 players, including AI if desired).
 3. The system asks the player(s) to enter **names** (if applicable).
 4. If AI players are selected, the system asks the player to **set AI difficulty** (Easy or Hard).
 5. The system ensures all players are **registered** and assigned their game components.
 6. The system asks whether **Color Vision Deficiency Mode** should be enabled.
 7. Players can **view the instructions** before proceeding (optional).
 8. The system confirms the **setup is complete** and assigns the **first turn** (either by predefined rules or randomly).
 9. The game begins.
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Alternative Flows:

- **Alt 1: Player Adjusts Number of Participants After Initial Selection**
 - If a player changes the number of participants before finalizing setup, the system **returns to Step 2** to allow modifications before proceeding.
 - **Alt 2: Viewing Instructions During Setup**
 - A player chooses to view the instruction manual. After reviewing, the system **resumes from Step 7** (confirmation screen).
 - **Alt 3: Missing or Incomplete Player Details**
 - If a player skips a required input (e.g., name), the system prompts them to complete it. Once completed, the system **resumes from Step 4** (AI difficulty selection).
 - **Alt 4: Player Cancels Setup**
 - If the player chooses to exit during setup, the system **returns to the main menu**, and the use case ends.
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Exceptions:

- **System Error During Setup**
 - If the system encounters an error (e.g., unable to assign players), it **displays an error message** and prompts the player to retry. If the issue persists, the setup **terminates, returning to the main menu**.
 - **Player Exits Mid-Setup**
 - If a player leaves during setup, the system allows the remaining players to either:
 - Adjust the participant list and **continue setup (returns to Step 2)**, or
 - Cancel the setup and **return to the main menu**.
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Special Requirements:

- The UI should provide **clear options and instructions** for easy navigation.
 - **Color Vision Deficiency Mode** should be easily accessible to enhance inclusivity.
 - Setup should **complete within 30 seconds** to ensure a smooth experience.
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Open Issues:

- Should there be a **time limit for making setup selections** to avoid delays?
- How should the system handle a **partially completed setup if the application crashes?**