

SAE Mini-Game Game Design Document

Pool (Billiards) & Uno

Summary:

- Genre: Casual
- Style: 3D
- Balls act as cards from Uno mixed with balls from Pool:
 - 4 colors: Red, Blue, Yellow and Green
 - Balls are separated in full colors and half colors to represent each player's hand
 - There are a total of 122 balls: The cue ball, 60 full & 60 half colors and the 8-ball. To not clutter the table, only 15 of those will be started with, like in classic pool.
 - The 8 ball is not representing an Uno card and instead acts as the regular 8 ball from Pool.
- Win/Lose condition:
 - A player wins if they have pocketed all balls of their group and the 8 ball. Only balls that are currently on the table are counted for this condition.
 - A player loses if their opponent wins via the described condition above.

Rules/Gameplay:

1. Break

- Each player has with 61 balls: 15 of each color of their respective group and the 8-ball shared between the players. The game starts with 7 per player on the table.
- The 1st player is determined by random.
- The first player must break by hitting the cue ball with their cue to "break" the balls apart from each other.
- If during the break 3 or less balls touch a rim or if the 8-ball is pocketed, the 2nd player can decide if the 1st player must break again or skip their next turn. If the 8-ball was pocketed, it must be placed in the middle of the table. If any other ball has been pocketed, it's group is disregarded and both players remain unassigned.
- If none of the conditions of rule #4 have met and a ball has been pocketed during the break, the 1st player's group is set to the group of the pocketed ball, whereas the 2nd player's group is set to the other group. If multiple balls were pocketed, the group of the first ball that entered a pocket will be assigned to the 1st player. Even if balls of the other group than the 1st ball's group have been pocketed during the break, it does not count as a foul.

After the break the game follows the same loop until a victory has been achieved.

2. Main Loop

- In case none of the balls have been pocketed during the break, the first time a ball other than the 8-ball or cue ball have been pocketed, the pocketed ball's group will be assigned to the player who's turn it is. The other group will be assigned to the other player. If multiple balls were pocketed, the group of the first ball that entered a pocket will be assigned to the 1st player. If there were balls of the other group among them, it does not count as a foul.
- Once a ball was pocketed, that pocket will copy the pocketed balls properties. Now only a ball of the same color (disregarding full or half) or the same number may be pocketed in this pocket.
- If (after the groups were assigned) a ball of the player's own group was pocketed, they can keep playing.
- If the cue ball has hit a ball of the player's group but no ball was pocketed, the player's turn will end.
- Once all balls of the player's group (currently on the table) have been pocketed, they can attempt to pocket the 8-ball. If they successfully pocket the 8-ball, the game is won. If the cue ball is pocketed as well, the opponent wins instead.
- The 8-ball may be pocketed in any pocket, regardless of the color and number of the pocket.
- A foul can be achieved in the following ways:
 - The cue ball did not hit any ball or hit a ball of the opponent's group first.
 - A ball with a different color and number than the current setting of a pocket was pocketed.
 - A ball of the opponent's group was pocketed (except break and group assign).
 - The cue ball was pocketed.
- In case of a foul, the player has to skip their next turn. The next player is free to place the cue ball wherever they want.
- Some balls have special features:
 - Red & Blue 7: The player can choose to switch groups with the opponent.
 - 2: If pocketed, the pocket will be blocked for the next player's turn.
 - Green & Yellow 10: The next player has to skip their turn.
 - 12: If pocketed, the pocket will be reset, allowing a ball of any color or number to be pocketed next.
 - Red & Green 16: The opponent has to add two more balls from the reserve to the table. If the player's reserve is empty: two random balls already pocketed will return to the table.
 - 0: If pocketed, 2 other random pockets will turn into the same color as the ball. Their number will not change.
- If a player is unable to to pocket any ball due to a color or number mismatch, a new ball has to be added to the table from the reserve. If the player's reserve is empty a semi-random ball, that was already pocketed, will return to the table. The selected ball will always either match a color or a number with any pocket.