



Use Cases:

Name: Player lands on an unowned property and decides to purchase it from the bank.

Preconditions: Player has a sufficient amount of cash on hand to pay for the property.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) After landing on an unowned property, player decides to purchase it from the bank.	3.) Player’s amount of money is decreased by the cost of the property.

Postconditions: The property is updated to show that it is owned by that player.

Name: Player lands on an unowned property and decides not to purchase.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) After landing on an unowned property, player decides not to purchase it from the bank.	3.) An auction is held for all players to purchase the property. 4.) The player who bids the most has their amount of money decreased by the amount of their bid.

Postconditions: The property is updated to show that it is owned by the player who placed the highest bid.

Name: Player lands on an owned property and pays rent to the owner.

Preconditions: Player has a sufficient amount of cash on hand to pay the rent for the property. **Steps:**

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on an owned property.	3.) Player’s amount of money is decreased by the amount of rent for the property. 4.) The owner of property has their money increased by the amount of rent paid.

Name: Player lands on an owned property, but has insufficient funds.

Preconditions: Player does not have a sufficient amount of cash on hand to pay the rent for the property. Player owns a property that can be mortgaged that will give them the needed difference to pay the rent.

Related use cases: Player mortgages an undeveloped property.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on an owned property. 3.) Player mortgages a property that they own. 5.) Player pays the required rent to their opponent.	4.) The Player's amount of money is increased by half of the amount they originally paid for the now mortgaged property. 6.) Player's amount of money is decreased by the amount of rent for the property they landed on.

Postconditions: The property is updated to show that it is currently mortgaged.

Name: Player lands on an owned property, but has insufficient funds/assets.

Preconditions: Player does not have a sufficient amount of cash on hand to pay the rent for the property. Player also does not own any assets that can be mortgaged.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on an owned property.	3.) Player is marked as bankrupt because they cannot pay. 4.) Player's assets are added to their opponent's assets.

Postconditions: The player is eliminated and removed from the game.

Name: Player lands on the Income Tax square and pays the bank \$100.

Preconditions: The Player has a sufficient amount of cash on hand to pay the income tax amount to the bank.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on the Income Tax square.	3.) Player's amount of money is decreased by \$100.

Name: Player lands on the Income Tax square and does not have the cash on hand to pay the bank.

Preconditions: Player does not have a sufficient amount of cash on hand to pay the income tax. Player owns a property that can be mortgaged that will give them the needed difference to pay.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on the Income Tax square. 3.) Player mortgages a property that they own. 5.) Player pays the income tax.	4.) The Player's amount of money is increased by half of the amount they originally paid for the now mortgaged property. 6.) Player's amount of money is decreased by the amount of rent for the property they landed on.

Name: Player lands on an owned property, but has insufficient funds/assets.

Preconditions: Player does not have a sufficient amount of cash on hand to pay the rent for the property. Player also does not own any assets that can be mortgaged.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on the Income Tax square.	3.) Player is marked as bankrupt because they cannot pay. 4.) Player's properties are auctioned off to the highest bidder.

Postconditions: The player is eliminated and removed from the game. The player's properties are updated to reflect their new owner.

Name: Player decides to develop their property.

Preconditions: The Player already owns all properties in a group, and has a sufficient amount of cash on hand to develop the property.

Steps:

Actor	System
1.) Player pays the bank the required amount to mortgage the property.	2.) The Player's amount of money is decreased by the amount needed to develop the property. 3.) The property has the specified number of houses or hotels added to it.

Postconditions: The property's current rent is updated to reflect the developments.

Name: Player lands on the Go To Jail square and pays bail on their next turn.

Preconditions: The Player has a sufficient amount of funds to pay the bail.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on the Go To Jail space. 3.) Player's token is moved to jail. 5.) On player's next turn, player pays the bank \$50. 7.) Player's token is removed from jail.	4.) Player's turn is ended and play moves on to the next player. 6.) The Player's amount of money is decreased by \$50. 8.) The Player's turn is ended.

Name: Player lands on the Go To Jail square and rolls a double on their next turn.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on the Go To Jail space. 3.) Player's token is moved to jail. 5.) On player's next turn, player rolls the dice and gets a double. 6.) Player's token is removed from jail.	4.) Player's turn is ended and play moves on to the next player. 7.) The Player's turn is ended.

Name: Player lands on the Go To Jail square, and is not able to roll a double.

Steps:

Actor	System
1.) Player rolls the dice and moves their token the appropriate amount of spaces. 2.) Player lands on the Go To Jail space. 3.) Player's token is moved to jail. 5.) On player's next turn, player rolls the dice and does not get a double. 7.) On player's next turn, player rolls the dice and does not get a double. 9.) On player's next turn, player rolls the dice and does not get a double. 10.) Player pays the bank \$50. 11.) Player's token is removed from jail.	4.) Player's turn is ended and play moves on to the next player. 6.) Player's turn is ended and play moves on to the next player. 8.) Player's turn is ended and play moves on to the next player. 12.) The Player's amount of money is decreased by \$50. 13.) The Player's turn is ended.

Name: Player rolls three consecutive doubles and is sent to jail.

Preconditions: Player has already rolled two doubles and therefore taken two turns.

Steps:

Actor	System
1.) Player rolls the dice and rolls a double. 2.) Player's token is moved to jail.	3.) The Player's turn is ended.

Name: Player mortgages an undeveloped property.

Preconditions: The property the Player is mortgaging is undeveloped.

Steps:

Actor	System
1.) Player mortgages a property.	2.) The Player's amount of money is increased by half of the amount they originally paid for the now mortgaged property.

Postconditions: The property is updated to show that it is currently mortgaged.

Name: Player mortgages a developed property.

Preconditions: The property the Player is mortgaging has at least one building on it.

Related use cases: Player mortgages an undeveloped property.

Steps:

Actor	System
1.) Player sells all buildings located on the property. 3.) Player mortgages a property.	2.) Player's amount of money is increased by half of the original price of the developed buildings. 4.) The Player's amount of money is increased by half of the amount they originally paid for the now mortgaged property.

Postconditions: The property is updated to show that it is currently mortgaged.

Name: Player unmortgages a property.

Preconditions: The Player already owns the mortgaged property, and the Player has a sufficient amount of cash on hand to unmortgage the property.

Steps:

Actor	System
1.) Player pays the bank the required	2.) The Player's amount of money is

amount to unmortgage the property.	decreased by the original mortgage cost plus ten percent interest.
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Postconditions: The property is updated to show that it is currently not mortgaged.

