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| **Req ID** | **Requirement** |
| **R1** | 1 – 5 Human players can play the game |
| **R2** | At least 1 autonomous player can play the game |
| **R3** | Players start with $1,500 |
| **R4** | Cards are shuffled at the beginning of the game |
| **R5** | Cards go back to the end of the card deck after being used |
| **R6** | The players get another go if they roll a double |
| **R7** | If a player rolls 3 doubles in one turn they go to jail |
| **R8** | When a player goes to jail they do not collect $200 for passing Go |
| **R9** | Players may not purchase a property on their first time around the board |
| **R10** | When a player passes Go they collect $200 |
| **R11** | Players can purchase properties |
| **R12** | If a player doesn’t buy a property, an auction is started |
| **R13** | Players pay rent when they land on another players property |
| **R14** | Rent changes depending on the conditions on the given property |
| **R15** | If a player cannot pay rent they can sell a property |
| **R16** | If a player cannot pay rent even after selling their assets, they are removed from the game |
| **R17** | Players can buy houses at the end of their go if they own a colour group of properties |
| **R18** | A property can only be sold if there are no houses or hotels on the property |
| **R19** | A player can sell houses on their properties back to the bank for their original value |
| **R20** | There cannot be a difference bigger than 1 between the number of houses on properties of the same colour |
| **R21** | The maximum development on a property is 4 houses and a hotel (5 houses) |
| **R22** | The player can mortgage a property for half its original value |
| **R23** | When fines are paid the proceeds accumulate on the free parking space |
| **R24** | When a player lands on the free parking they collect all the free parking money accumulated |
| **R25** | A player may pay $50 to get out of jail and that is added to free parking |
| **R26** | A player may not collect rent on their properties while they are in jail |
| **R27** | If a player has a get out of jail free card they can use it to get out of jail |

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| **Property Tycoon Testing** | | | | | | | |
| **Ref** | **Req ID** | **Description** | **Input(s)** | **Expected Output(s)** | **Actual Output(s)** | **Pass / Fail** | **Action** |
| **1** | R1  R2  R3 | Choose numbers 1 – 5 of human players in the game start screen, check that they start with $1500 and if there can be at least 1 AI player | Players 1 – 5 in the game start screen | The game can involve any number from 1 – 5 of human players to play the game |  | Pass | - |
| **2** | R4 | Start the game multiple times and examine the card order | Start the game multiple times and examine the card orders | The cards are in a different order each time | The cards are in a different order each time | Pass | - |
| **3** | R5 | Check what happens to a card after it has been used | Make a player land on a card tile and examine what happens to the card | The card goes to the end of the card queue and the correct action is successfully executed | The card goes to the end of the card queue and the correct action is successfully executed | Pass | - |
| **4** | R6 | Check whether the player gets another roll if they get a double | Make a player roll dice and examine output when a double occurs | The player gets to roll the dice another time | The player gets to roll the dice another time | Pass | - |
| **5** | R7  R8 | Check if the player goes to jail if they roll 3 consecutive doubles, player doesn’t collect $200 for passing Go | Force 3 doubles on to a players turn and examine output | The player goes to jail and their money doesn’t change | The player goes to jail and their money doesn’t change | Pass | - |
| **6** | R9 | Make player roll and land on a property on the first lap and make sure they do not get the option to purchase a property | Roll dice during first lap | The player will not get option to purchase property |  | Pass | - |
| **7** | R10 | Players should receive $200 for passing Go | Roll dice until player passes Go and check whether they get $200 more | Players balances will increase by $200 after passing Go |  | Pass | - |
| **8** | R11 | After the first lap players should be able to purchase properties | Roll dice until player lands on an available property | The player gets the option to purchase a property |  | Pass | - |
| **9** | R12 | If a player rejects the offer to buy a property an auction should commence | Decline the offer to purchase a property | An auction starts |  | Pass | - |
| **10** | R13 | If a player lands on another players property they have to pay rent | Get a player to land on another players property | The player pays rent |  | Pass | - |
| **11** | R14 | The rent should change depending on whether the owner of the property has houses or a monopoly on a property | Get a player to land | The rent changes with varying conditions |  | Pass | - |
| **12** | R15 | The player should be able to sell properties back to the bank if they are in need of cash | Make a player land on a property they cannot afford rent for | The player will be asked to sell properties to get cash |  | Pass | - |
| **13** | R16 | If a player goes bankrupt they are out of the game | Make a player go bankrupt | The player will be removed from the game |  | Pass | - |
| **14** | R17 | If a player owns a colour group they should get an option to purchase houses | Give a player a colour group of properties | The game allows player to buy houses |  | Pass | - |
| **15** | R18 | A property can be sold if there are no houses or hotels on it | Give a player a property with houses and observe behaviour when they do not have enough money for rent | The game makes the player sell houses and hotels before they are able to sell a property | The game allows the player to sell a property with houses and gives the value of properties + houses and hotels in cash | Fail | Not enough time to implement |
| **16** | R19 | A player should be able to sell individual houses or hotels back to the bank if in need of money | Give a player properties with houses and observe behaviour when they do not have enough to pay rent | The game allows the player to sell individual houses for money | The game only allows the player to sell whole properties along with houses for the combined value | Fail | Not enough time to implement |
| **17** | R20 | There can not be a difference bigger than 1 between houses on properties of the same colour | Give a player a colour set of properties and observe house purchase options | The game will not allow there to be a difference bigger than 1 in houses on a property |  | Pass | - |
| **18** | R21 | The maximum development for a property is 4 houses and a hotel | Make a player buy houses on properties and observe house purchase options | The game will not allow the player to buy 4 houses and a hotel in one go |  | Pass | - |
| **19** | R22 | A player can choose to mortgage a property for half of its original value | Make the player land on a property where they cannot afford the rent | The player will get the option to mortgage a property | The player can only sell properties, no option for mortgaging | Fail | Not enough time to implement |
| **20** | R23  R25 | When fines are paid they should gather in the free parking proceeds | Make a player pay a fine such as get out of jail fee | The money accumulates in free parking proceeds | All relevant fines are accumulated in free parking proceeds | Pass | - |
| **21** | R24 | Players collect free parking proceeds when they land on free parking | Make a player land on free parking | The players money gets increased by the amount gathered in free parking proceeds |  | Pass | - |
| **22** | R25 | Player may pay $50 to get out of jail | Jail a player and check whether they get the option to pay $50 to get out | The player receives the option to pay $50 to get out of jail | Image | Pass | - |
| **23** | R26 | Players do not collect rent if they are in jail | Force a player with properties in jail and observe behaviour when they are due rent | Jailed players do not collect rent | Jailed players do not collect rent | Pass | - |
| **24** | R27 | Players should be able to use a get out of jail free card | Force player to jail with a get out of jail free card and observe behaviour | The game asks the player if they want to use their get out of jail free card to leave jail |  | Pass | - |