A4 Test Cases

Testcase 1001
System: Monopoly Game
Run Application
Instructions: 　1.　Run the Monopoly Game application
Expected Result: 　-　Window pops up with the following visual aspects: 　　　-　An image of an empty monopoly board in the center 　　　-　A "New Game" button 　　　-　A "Roll" button 　　　-　A "Develop" button 　　　-　A "Trade" button 　　　-　An "End Turn" button 　　　-　An indication that the current player is empty 　　　-　An indication that the current bankroll is $0 　　　-　A spot that will indicate the player's current location 　　　-　A spot that will indicate the player's token
Cleanup: To exit the application, select the "x" in the top right hand corner of the window

Testcase 1002
System: Monopoly Game
Start a new game of monopoly
Instructions: 　1.　Start the application (Testcase 1001) 　2.　Select the "New Game" button in the top left hand corner of the window 　3.　Enter the names of up to 4 players 　4.　Enter the amount of time desired to play the game. 　5.　Select the start button 　6.　Select OK 　7.　SelectOK
Expected Result: 　-　When "New Game" is selected, a window will appear that prompts the user to enter player information. There will be an option to "start" or "cancel" at the bottom of the window

- When start is selected a window will popup indicating that the game has started
- The window will close when ok is clicked
- A window will pop up indicating that who's turn it is
- The window will close when ok is clicked
- start game window will disappear and the name, current bankroll, location, and token of the first player will be indicated at the top of the screen
- Tokens will be displayed on the Go board space to represent each player playing

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1003

System: Monopoly Game

Cancel starting a new game

Instructions:
1. Start the application (Testcase 1001)
2. Select the "New Game" button in the top left hand corner of the window
3. Select the Cancel button at the bottom of the pop out window

Expected Result:
- When "New Game" is selected, a window will appear that prompts the user to enter player information. There will be an option to "start" or "cancel" at the bottom of the window
- When Cancel is selected the New Game window will disappear and the Monopoly window will be unchanged

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1004

System: Monopoly Game

Start new game with too few players

Instructions:
1. Start the application (Testcase 1001)
2. Select the "New Game" button in the top left hand corner of the window
3. Enter the names of 0 or 1 players
4. Select the start button
5. Select OK

Expected Result:
- When "New Game" is selected, a window will appear that prompts the user to enter player information. There will be an option to "start" or "cancel" at the bottom of the window
- A window pops up indicating that the game could not be started
- The window will close when ok is clicked

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1005

System: Monopoly Game

Roll without starting the game

Instructions:
1. Start the application (Testcase 1001)
2. Select the "Roll" button

Expected Result:
- The Monopoly window will be unchanged

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1006

System: Monopoly Game

Develop without starting game

Instructions:
1. Start the application (Testcase 1001)
2. Select the "Develop" button

Expected Result:
- The Monopoly window will be unchanged

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1007

System: Monopoly Game
Trade without starting game

Instructions:
    1. Start the application (Testcase 1001)
    2. Select the "Trade" button

Expected Result: - The Monopoly window will be unchanged
Cleanup: To exit the application, select the "x" in the top right hand corner of the window

Testcase 1008
System: Monopoly Game
End turn without starting game

Instructions:
    1. Start the application (Testcase 1001)
    2. Select the "End Turn" button

Expected Result: - The Monopoly window will be unchanged
Cleanup: To exit the application, select the "x" in the top right hand corner of the window

Testcase 1009
System: Monopoly Game
Select roll when game has started and player is not in jail

Instructions:
    1. Start the Game (Testcase 1002)
    2. Select the "Roll" button
    3. Select OK

Expected Result:
    - A window will pop up indicating the result of the roll
    - The window will close when ok is clicked

- The Monopoly window will display the token associated with the player whose turn it is on the space that is the amount rolled ahead of the space the player is currently on
- The Monopoly game will give the player options to perform different actions depending on the board space that the player landed on

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1010
System: Monopoly Game
End turn without rolling
Instructions: 1. Start the Game (Testcase 1002)   2. Select the "End Turn" button
Expected Result: - The Monopoly game will automatically roll for the player   - The Monopoly window will display the token associated with the player whose turn it is on the space that is the amount rolled ahead of the space the player is currently on   - The Monopoly game will give the player options to perform different actions depending on the board space that the player landed on   - After completing the specified action, the players turn will end and the next player's information will be displayed at the top of the Monopoly window   - A window will pop up indicating which player's turn it is
Cleanup: To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1011
System: Monopoly Game
Roll when player has already rolled and did not previously roll doubles
Instructions: 1. Roll the die on the players turn (Testcase 1009)   2. Respond to the monopoly game's prompts depending on which space is landed on   3. Select the "Roll" button a second time
Expected Result: - The results of Testcase 1009 the first time the die is rolled

- The result of the game and user's interactions based on the space that was landed on
- The Monopoly window will be unchanged when the "Roll" button is selected a second time

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1012

System: Monopoly Game

Trade a mortgaged property for mortgaged property and keep both mortgaged

Instructions:
1. Start the Game (Testcase 1002)
2. Play the monopoly game until two players have mortgaged properties
3. On the turn of one of the owners of a mortgaged property, select the "Trade" button
4. Select the player to trade with
5. Select a mortgaged property that belongs to the current player
6. Select a mortgaged property that belongs to a different player
7. The current player selects the option to keep the property mortgaged
8. The player who was traded with selects the option to keep the property mortgaged

Expected Result:
- When the "Trade" button is pressed, a window will pop up and prompt the player choose a player to trade with.
- The popup window will close
- a window will pop up and prompt the player to choose properties to trade
- The current player will be set as the owner of the property they traded for
- The player who is traded with will be se as the owner of the property that was traded
- 10% of the mortgage value is deducted from the current player's bankroll and the new value of their bankroll will be displayed
- 10% of the mortgage value is deducted from the other player's bankroll
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1013

System: Monopoly Game

Trade a mortgaged property for mortgaged property and keep the current player's property mortgaged

Instructions:
1. Start the Game (Testcase 1002)
2. Play the monopoly game until two players have mortgaged properties
3. On the turn of one of the owners of a mortgaged property, select the "Trade" button
4. Select a player to trade with
5. Select a mortgaged property that belongs to the current player
6. Select a mortgaged property that belongs to a different player
7. The current player selects the option to keep the property mortgaged
8. The player who was traded with selects the option to unmortgage it

Expected Result:
- When the "Trade" button is pressed, a window will pop up and prompt the player choose a player to trade with.
- The popup window will close
- a window will pop up and prompt the player to choose properties to trade
- The current player will be set as the owner of the property they traded for
- The player who is traded with will be se as the owner of the property that was traded
- The other player's new property is unmortgaged. see Testcase 1053 without having to press the Develop button.
- 10% of the mortgage value is deducted from the current player's bankroll

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1014

System: Monopoly Game

Trade a mortgaged property for mortgaged property and keep the other player's property mortgaged

Instructions:
1. Start the Game (Testcase 1002)
2. Play the monopoly game until two players have mortgaged properties
3. On the turn of one of the owners of a mortgaged property, select the "Trade" button
4. Select a player to trade with
5. Select a mortgaged property that belongs to the current player
6. Select a mortgaged property that belongs to a different player
7. The current player selects the option to unmortgage the property
8. The player who was traded with selects the option to keep the property mortgaged

Expected Result:
- When the "Trade" button is pressed, a window will pop up and prompt the player to choose properties to trade
- When the "Trade" button is pressed, a window will pop up and prompt the player

choose a player to trade with.
- The popup window will close
- a window will pop up and prompt the player to choose properties to trade
- The current player will be set as the owner of the property they traded for
- The player who is traded with will be se as the owner of the property that was traded
- The current player's new property is un-mortgaged. **See Testcase** 1053 without having to press the Develop button
- If the player that was traded with chooses to keep the property mortgaged, 10% of the mortgage value is deducted from their bankroll

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1015

System: Monopoly Game

Trade a mortgaged property for mortgaged property and unmortgage both properties

Instructions:
1. Start the Game (Testcase 1002)
2. Play the monopoly game until two players have mortgaged properties
3. On the turn of one of the owners of a mortgaged property, select the "Trade" button
4. Select a player to trade with
5. Select a mortgaged property that belongs to the current player
6. Select a mortgaged property that belongs to a different player
7. The current player selects the option to unmortgage the property
8. The player who was traded with selects the option to unmortgage it

Expected Result:
- When the "Trade" button is pressed, a window will pop up and prompt the player choose a player to trade with.
- The popup window will close
- a window will pop up and prompt the player to choose properties to trade
- The current player will be set as the owner of the property they traded for
- The player who is traded with will be se as the owner of the property that was traded
- The current player's property is unmortgaged see Testcase 1053 without having to press the Develop button**.**
- The other player's new property is unmortgaged see Testcase 1053 without having to press the Develop button. The new balance of the player will not be displayed

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

Testcase 1016

System: Monopoly Game

Trade unmortgaged property for mortgaged property and unmortgage the property

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until at least one player owns a mortgaged property and at least one player owns an unmortgaged property
3. On the turn of the owners of the unmortgaged property, select the "Trade" button
4. Select a player to trade with
5. Select an unmortgaged property that belongs to the current player
6. Select a mortgaged property that belongs to a player whose turn it is not
7. The current player selects the option to unmortgage the property

Expected Result:
- When the "Trade" button is pressed, a window will pop up and prompt the player choose a player to trade with.
- The popup window will close
- a window will pop up and prompt the player to choose properties to trade
- The current player will be set as the owner of the property they traded for
- The player who is traded with will be set as the owner of the property that was traded
- The mortgaged property is unmortgaged see Testcase 1053 without having to press the Develop button

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1017

System: Monopoly Game

Trade unmortgaged property for mortgaged property and keep property mortgaged

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until at least one player owns a mortgaged property and at least one player owns an unmortgaged property
3. On the turn of the owners of the unmortgaged property, select the "Trade" button
4. Select a player to trade with
5. Select an unmortgaged property that belongs to the current player
6. Select a mortgaged property that belongs to a player whose turn it is not
7. The current player selects the option to keep the property mortgaged

Expected Result:

- When the "Trade" button is pressed, a window will pop up and prompt the player choose a player to trade with.
- The popup window will close
- a window will pop up and prompt the player to choose properties to trade
- The current player will be set as the owner of the property they traded for
- The player who is traded with will be se as the owner of the property that was traded
- 10% of the mortgage value is deducted from the current player's bankroll
- The new value of the current player's bankroll is be displayed

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1018
System: Monopoly Game
Trade unmortgaged property for unmortgaged property

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until at least two players own unmortgaged properties
3. On the turn of one of the owners of an unmortgaged property, select the "Trade" button
4. Select player to trade with
5. Select an unmortgaged property that belongs to the current player
6. Select an unmortgaged property that belongs to a different player

Expected Result:
- When the "Trade" button is pressed, a window will pop up and prompt the player choose a player to trade with.
- The popup window will close
- a window will pop up and prompt the player to choose properties to trade
- The current player will be set as the owner of the property they traded for
- The player who is traded with will be se as the owner of the property that was traded

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1019
System: Monopoly Game
Player selects trade but has no properties to trade
Instructions:

1. Start a new game (Testcase 002)
2. Select the "Trade" button
3. Select ok

Expected Result:
- When the "Trade" button is pressed, a window will pop up indicating that the player does not have any properties to trade
- The popup window will close
- The player continues with their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1020

System: Monopoly Game

Select end turn when game has started and current player has rolled

Instructions:
1. Start the Game and roll the die (Testcase 1009)
2. Select the "End Turn" button

Expected Result:
- The monopoly window will display the information about the next player at the top of the screen and start the next player's turn.
- A window will pop up indicating which player's turn it is

Cleanup: To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1021

System: Monopoly Game

Land on the go to jail boardspace

Instructions:
1. Start the Game and roll the die (Testcase 1009). The player is moved to the Go To Jail Space.
2. Select OK

Expected Result:
- A window will pop up indicating that the player was sent to jail
- The window will close when ok is clicked

- The location of the player is updated to the location of the jail space
- The current player's turn ends.
- The player's turn ends. See Testcase 1020 without having to press the End Turn button

Cleanup: To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1022

System: Monopoly Game

Player successfully rolls doubles to get out of jail

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until a player is in jail
3. On the player's turn, select the option to roll. The player successfully rolls doubles.
4. Select ok

Expected Result:
- A window pops up prompting the player to roll or pay the fine
- A window will pop up indicating that the player was sent to jail
- The window will close when ok is clicked
- The location of the player is updated to as many spaces forward as the player rolled
- The player can continue their turn

Cleanup: To exit the application, select the "x" in the top right hand corner of the window
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1023

System: Monopoly Game

Player unsuccessfully attempts to roll doubles to get out of jail for the first or second time

Instructions:
1. Start a new game (Testcase 1002)
2. Play monopoly game until a player is in jail
3. On the player's turn, select the option to roll. The player does not roll doubles.

Expected Result:
- A window pops up prompting the player to roll or pay the fine
- The location of the player is unchanged
- The player's turn ends. See Testcase 1020 without having to press the End Turn

button

Cleanup: To exit the application, select the "x" in the top right hand corner of the window

Testcase 1024
System: Monopoly Game
Player unsuccessfully attempts to roll doubles to get out of jail for the third time
Instructions: 　1. Start a new game (Testcase 1002) 　2. Play monopoly game until a player is in jail and they have attempted to get out of jail twice 　3. On the player's turn, select the option to roll. The player does not roll doubles
Expected Result: 　- A window pops up prompting the player to roll or pay the fine 　- The window closes when the player selects what to do 　- The player pays the fine (Testcase 1026 Without having to select pay fine) 　- The location of the player is updated to as many spaces forward as the player rolled 　- The monopoly game prompts the player to perform the actions associated with the space that they land on and player performs the actions. 　- The player can continue their turn
Cleanup: To exit the application, select the "x" in the top right hand corner of the window To exit the application, select the "x" in the top right hand corner of the window

Testcase 1025
System: Monopoly Game
Player unsuccessfully attempts to roll doubles to get out of jail for the third time and cannot pay fine
Instructions: 　1. Start a new game (Testcase 1002) 　2. Play monopoly game until a player is in jail and they have attempted to get out of jail twice 　3. On the player's turn, select the option to roll. The player does not roll doubles 　4. The player un-develops property to get more money in order to pay the fine (Testcases 1027 or 1028)

Expected Result:
- A window pops up prompting the player to roll or pay the fine
- The window closes when they select their decision
- The player pays the fine (Testcases 1027 or 028)
- The location of the player is updated to as many spaces forward as the player rolled
- The player can continue their turn

Cleanup: To exit the application, select the "x" in the top right hand corner of the window
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1026

System: Monopoly Game

Player pays fine to get out of jail with sufficient funds

Instructions:
1. Start a new game (Testcase 1002)
2. Play monopoly game until a player is in jail
3. Choose option to pay fine.
4. Select OK

Expected Result:
- A window pops up prompting the player to roll or pay the fine
- A window will pop up indicating that the player was freed from jail
- The window will close when ok is clicked
- The player's bankroll is deducted $50 and displayed in the monopoly game window
- The system rolls the dice for the player Testcase 1009
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1027

System: Monopoly Game

Player pays fine to get out of jail with insufficient funds and they successfully mortgage properties to pay fee

Instructions:
1. Start a new game (Testcase 1002)
2. Play monopoly game until a player is in jail
3. Choose option to pay fine.

4. Select ok

Expected Result:
- A window pops up prompting the player to roll or pay the fine
- The player attempts to un-develop properties to get enough money (Testcase 1039 starting at step 3)
- A window will pop up indicating that the player was freed from jail
- The window will close when ok is clicked
- The player's bankroll is deducted $50 and displayed in the monopoly game window
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1028

System: Monopoly Game

Player pays fine to get out of jail with insufficient funds and they unsuccessfully mortgage properties to pay fee

Instructions:
1. Start a new game (Testcase 1002)
2. Play monopoly game until a player is in jail and they do not have sufficient funds to pay the fine and not enough properties to un-develop
3. Choose option to pay fine.

Expected Result:
- A window pops up prompting the player to roll or pay the fine
- The player attempts to un-develop properties to get enough money (Testcase 1065)
- A window will pop up indicating that the player was freed from jail
- The window will close when ok is clicked
- The system rolls the dice for the player. See testcase 1009 without having to press the "Roll" button
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1029

System: Monopoly Game

Player lands on owned property that is mortgaged

Instructions:
1. Start a new game (Testcase 1002)
2. Play monopoly game until at least one property is owned and mortgaged
3. The current player clicks the "roll" button and lands on a property space that has an owned and mortgaged property

Expected Result:
- The current player's token moves the amount indicated by the dice roll
- The current player's balance does not change and the balance of the player who owns the property does not change
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1030

System: Monopoly Game

Player lands on a property that they own

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until at least one property is owned and not mortgaged and the current player has enough money to pay the rent
3. Roll the dice (Testcase 1009) and land on a property space that has a property owned by the current player

Expected Result:
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1031

System: Monopoly Game

Player lands on owned property that is not mortgaged and player has sufficient funds

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until at least one property is owned and not mortgaged and the current player has enough money to pay the rent

3. Roll the dice (Testcase 1008) and land on a property space that has an owned and un mortgaged property

Expected Result:
- The rent of the property is deducted from the balance of current player
- The value of the rent is removed from the current player's balance
- The new balance of the player is displayed at the top of the monopoly game window
- The rent of the property is added to the balance of the player who owns the property
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1032

System: Monopoly Game

Player lands on owned property that is not mortgaged and player has insufficient funds and earns enough to pay by non developing properties

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until at least one property is owned and not mortgaged and the current player does not have enough money to pay the rent
3. Roll the dice (Testcase 1008) and land on a property space that has an owned and un mortgaged property

Expected Result:
- The rent of the property is deducted from the balance of current player
- The player is prompted to un-develop properties (Testcase 1039)
- The value of the rent is removed from the current player's balance
- The new balance of the player is displayed at the top of the monopoly game window
- The rent of the property is added to the balance of the player who owns the property
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1033

System: Monopoly Game

Player lands on owned property that is not mortgaged and player has insufficient funds and does not earn enough to pay by undeveloping properties

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until at least one property is owned and not mortgaged and the current player does not have enough money to pay the rent
3. Roll the dice (Testcase 1008) and land on a property space that has an owned and un mortgaged property

Expected Result:
- The rent of the property is deducted from the balance of current player
- The player is prompted to un-develop properties (Testcase 1040)

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1034

System: Monopoly Game

Player lands on unowned property decides to purchase it with sufficient funds

Instructions:
1. The current player has rolled the dice (Testcase 1008) and landed on a property space that is unowned
2. Selects to purchase the property

Expected Result:
- When the player lands on the property space a window pops up prompting them to purchase the property or decline the purchase
- The player purchases the property see Testcase 1037
- A window pops up indicating that the property was purchased successfully
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1035

System: Monopoly Game

Player lands on unowned property decides to purchase it with insufficient funds

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until a player does not have sufficient funds to purchase a

property
3. The current player has rolled the dice (Testcase 1008) and landed on a property space that is unowned
4. Selects to purchase the property

Expected Result:
- When the player lands on the property space a window will pop up prompting them to purchase the property or decline the purchase
- A new window will pop up to indicate that the player could not buy the property
- The property is auctioned. See Testcase 1038
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1036

System: Monopoly Game

Player lands on unowned property declines the purchase

Instructions:
1. The current player has rolled the dice (Testcase 1008) and landed on a property space that is unowned
2. Selects to decline to purchase the property

Expected Result:
- When the player lands on the property space a window will pop up prompting them to purchase the property or decline the purchase
- The property is auctioned. See Testcase 1038
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1037

System: Monopoly Game

Player purchases a property

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until the current player selected to purchase a property

(Testcase 1023) or won the auction for a property (Testcase 1025)
3. Select OK

Expected Result:
- The balance of the player is reduced by the value of the property
- The new balance of the player is displayed at the top of the monopoly game window
- The balance of the bank is increased the the value of the property
- The owner of the property is set to the current player
- If the current player purchased the final street in a neighborhood they are set as the owner of the neighborhood
- A window pops up to indicate that the purchase was successful
- The window will close when ok is clicked
- The player continues their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1038

System: Monopoly Game

Unowned property is auctioned

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until the current player declined to purchase the property (Testcase 1036) or attempted to purchase a property with insufficient funds (Testcase 1035)
3. Enter a bid for each player
4. Submit bids
5. Select OK

Expected Result:
- When the player declines to purchase the property, a window pops up that prompts each player for their bid
- The system ensures that if a player bid more than their balance, their bid is changed to their balance
- The system finds the highest bid that a player can pay or picks a random player if there is a tie
- The property is sold to the player with the highest bid. See Testcase 1037
- A window pops up indicating that the auction was successful
- The window will close when ok is clicked
- The player continues with their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

Testcase 1039

System: Monopoly Game

Player cannot pay for something and must un-develop a property until they make enough money and undevelops are successful

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until a player must pay a fee or rent but does not have sufficient funds and is unable to un-develop a property
3. Select a property to un-develop
4. Repeat step 3 until the player has earned enough money to pay what they have to pay

Expected Result:
- A window will pop up with a list of properties that the player owns
- The property that the player selects will be un-developed. See Testcases 1061 - 1065
- The value from the un-development will be added to the player's balance
- The value from the un-development will be taken from the bank
- Bullet points 2 through 4 are repeated until the player has enough money to pay what they have to pay
- When the player receives enough money then the players balance will be updated and the Monopoly window will display the player's updated bank roll

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1040

System: Monopoly Game

Player cannot pay for something and must un-develop a property until they make enough money but is unable to un-develop any properties

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until a player must pay a fee or rent but does not have sufficient funds and is unable to un-develop a property
3. Select a property to un-develop
4. Repeat step 2 until the player is unable to un-develop any properties

Expected Result:
- A window will pop up with a list of properties that the player owns

- The property that the player selects attempts to be un-developed. See Testcases 1061 - 1065
- The un-development fails. Go to Testcase 1065

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1041

System: Monopoly Game

Player rolls doubles

Instructions:
1. Roll the dice (Testcase 1008) and both dice roll the same value

Expected Result:
- The player is moved the amount that they rolled and perform the action corresponding to the boardspace that they land on
- The player can roll the dice again

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1042

System: Monopoly Game

Player rolls three sets of doubles

Instructions:
1. Roll doubles (Testcase 1041) 3 times
2. Select OK

Expected Result:
- A window will pop up indicating that the player was sent to jail
- The window will close when OK is selected
- The location of the player is updated to the location of the jail space
- The monopoly game will update the location of the token corresponding to the current player
- The current player's turn ends
- The monopoly window will display the information about the next player at the top of the screen and start the player's turn.

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1043

System: Monopoly Game

Player passes or lands on Go and bank has sufficient funds

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on or pass the GO board space.

Expected Result:
- $200 is removed from the bank balance
- $200 is added to the balance of the current player
- The monopoly game window updates the bankroll of the current player

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1044

System: Monopoly Game

Player passes or lands on Go and bank has insufficient funds

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on or pass the GO board space and the balance of the bank is less than $200

Expected Result:
- The remaining balance of the bank is removed
- The amount removed from the bank is added to the balance of the current player
- The monopoly game window updates the bankroll of the current player

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1045

System: Monopoly Game
Player lands on income tax and has sufficient funds to play
Instructions: 1. Start a new game (Testcase 002) 2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on the income tax board space and the player has sufficient funds to play
Expected Result: - $200 is removed from the current players balance - $200 is added to the balance of the bank - The monopoly game window updates the bankroll of the current player - The player can continue their turn
Cleanup: To exit the application, select the "x" in the top right hand corner of the window

Testcase 1046
System: Monopoly Game
Player lands on income tax and has insufficient funds to play but can gain enough money form un-developing properties
Instructions: 1. Start a new game (Testcase 002) 2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on the income tax board space and the player has insufficient funds to play but can rise enough through un-developing properties 3. Select OK
Expected Result: - A window pops up indicating that the tax could not be paid - The window will close when ok is clicked - The player is prompted to un-develop properties See testcase 1040. - $200 is removed from the current players balance - $200 is added to the balance of the bank - The monopoly game window updates the bankroll of the current player - The player can continue their turn
Cleanup: To exit the application, select the "x" in the top right hand corner of the window

Testcase 1047

System: Monopoly Game

Player lands on income tax and has insufficient funds to play and cannot gain enough money form un-developing properties

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on the income tax board space and the player has insufficient funds to play and cannot raise enough through un-developing properties
3. Select OK

Expected Result:
- A window pops up indicating that the tax could not be paid
- The window will close when ok is clicked
- The player is prompted to un-develop properties See testcase 1040 starting at step 3.

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1048

System: Monopoly Game

Player lands on luxury tax and has sufficient funds to play

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on the luxury tax board space and the player has sufficient funds to play

Expected Result:
- $100 is removed from the current players balance
- $100 is added to the balance of the bank
- The monopoly game window updates the bankroll of the current player
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1049

System: Monopoly Game
Player lands on luxury tax and has insufficient funds to play but can gain enough money form un-developing properties

Instructions:
   1. Start a new game (Testcase 002)
   2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on the luxury tax board space and the player has insufficient funds to play but can rise enough through un-developing properties
   3. Select ok

Expected Result:
   - A window pops up indicating that the tax could not be paid
   - The window will close when ok is clicked
   - The player is prompted to un-develop properties See testcase 1039.
   - $100 is removed from the current players balance
   - $100 is added to the balance of the bank
   - The monopoly game window updates the bankroll of the current player
   - The player can continue their turn

Cleanup: To exit the application, select the "x" in the top right hand corner of the window

Testcase 1050
System: Monopoly Game
Player lands on luxury tax and has insufficient funds to play and cannot gain enough money form un-developing properties

Instructions:
   1. Start a new game (Testcase 002)
   2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on the luxury tax board space and the player has insufficient funds to play and cannot raise enough through un-developing properties
   3. Select OK

Expected Result:
   - A window pops up indicating that the tax could not be paid
   - The window will close when ok is clicked
   - The player is prompted to un-develop properties See testcase 1040.

Cleanup: To exit the application, select the "x" in the top right hand corner of the window

Testcase 1051

System: Monopoly Game

Player lands on an open space

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until rolling the dice (Testcase 1008) allows a player to land on an open board space.

Expected Result:
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1052

System: Monopoly Game

Player selects develop for mortgaged property and player has sufficient funds

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until a player owns a mortgaged property
3. Select the "Develop" button
4. Select a property that is mortgaged to develop
5. Select OK

Expected Result:
- When the "Develop" button is selected, a window pops up to prompt the player to select a property to develop
- The mortgage value plus 10% interest is removed from the current player's balance
- The mortgage value plus 10% interest is added to the bank's balance
- The property is no longer mortgaged
- The new blance of the current player is displayed at the top of the screen
- A window pops up indicating that the property was developed
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

Testcase 1053

System: Monopoly Game

Player selects develop for mortgaged property player has insufficient funds

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until a player owns a mortgaged property
3. Select the "Develop" button
4. Select a property that is mortgaged to develop
5. Select OK

Expected Result:
- When the "Develop" button is selected, a window pops up to prompt the player to select a property to develop
- A window pops up indicating that the development failed
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1054

System: Monopoly Game

Player selects develop for an unmortgaged street that has less than 4 houses and there are no houses available

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until a player owns an unmortgaged street with less than 4 houses on it
3. Select the "Develop" button
4. Select the street property. It should be un-mortgaged and have less than 4 houses on it
5. Select OK

Expected Result:
- When the "Develop" button is selected, a window pops up to prompt the player to select a property to develop
- A window pops up indicating that the development failed
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1055
System: Monopoly Game
Player selects develop for an unmortgaged street but has an insufficient balance

Instructions:
   1. Start a new game (Testcase 002)
   2. Play monopoly game until a player owns an unmortgaged property but does not have enough money to develop the property
   3. Select the "Develop" button
   4. Select the property
   5. Select OK

Expected Result:
   - When the "Develop" button is selected, a window pops up to prompt the player to select a property to develop
   - A window pops up indicating that the development failed
   - The window will close when ok is clicked
   - The player can continue their turn

Cleanup: To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1056
System: Monopoly Game
Player selects develop for an unmortgaged street but the number of houses on the other streets of the neighborhood are not within one of the new number of houses on the current street

Instructions:
   1. Start a new game (Testcase 002)
   2. Play monopoly game until a player owns an unmortgaged property and the number of houses on the other streets of the neighborhood would not be within one of the new number of houses on the current street
   3. Select the "Develop" button
   4. Select the property
   5. Select OK

Expected Result:
- When the "Develop" button is selected, a window pops up to prompt the player to select a property to develop
- A window pops up indicating that the development failed
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1057

System: Monopoly Game

Player selects develop for an unmortgaged street

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly game until a player owns an unmortgaged property that meets all of the conditions to purchase a house/hotel
3. Select the "Develop" button
4. Select the property
5. Select OK

Expected Result:
- When the "Develop" button is selected, a window pops up to prompt the player to select a property to develop
- The price of one house for the property is removed from the player's balance
- The price for one house for the property is added to the bank's balance
- The new blance of the current player is displayed at the top of the screen
- A window pops up indicating that the development was successful
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1058

System: Monopoly Game

Player adds a fifth house

Instructions:

1. Start a new game (Testcase 002)
2. Play monopoly until a player has a street property with 4 houses on it
3. On the player's turn, select the "Develop" button
4. Select the street property with 4 houses on it.
5. Select OK

Expected Result:
- When the "Develop" button is selected, a window pops up to prompt the player to select a property to develop
- The price of one house for the property is removed from the player's balance
- The price for one house for the property is added to the bank's balance
- The new blance of the current player is displayed at the top of the screen
- The number of houses on the property is set to 0
- The number of hotels on the property is set to 1
- A window pops up indicating that the development was successful
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1059

System: Monopoly Game

Player attempts to add a fifth house when there are no hotels available

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until a player has a street property with 4 houses on it and the monopoly game no longer has hotels
3. On the player's turn, select the "Develop" button
4. Select the street property with 4 houses on it.
5. Select ok

Expected Result:
- When the "Develop" button is selected, a window pops up to prompt the player to select a property to develop
- The monopoly window indicates that the development failed
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

Testcase 1060

System: Monopoly Game

Player attempts to develop when there are no properties that can be developed

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until a player has a property that can be developed and they are in jail
3. On the player's turn, select the "Develop" button
4. Select ok

Expected Result:
- When the "Develop" button is selected, a window pops up indicating that the player is unable to develop any properties
- The pop up disappears when the player selects ok
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1061

System: Monopoly Game

Player un-develops a street when there is a hotel on it

Instructions:
1. Play monopoly until a player has a street property that has a hotel on it and they must un-develop a property to pay a fee or rent
2. Select the street property with a hotel on it.
3. Select OK

Expected Result:
- A window pops up to prompt the player to select a property to un-develop
- The price of one house for the property is added to the player's balance
- The price for one house for the property is removed from the bank's balance
- The new balance of the current player is displayed at the top of the screen
- The number of houses on the property is set to 4
- The number of hotels on the property is set to 0
- A window pops up indicating the un-development succeeded
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:

To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1062

System: Monopoly Game

Player un-develops a street when there is at least one house on it

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until a player has a street property that has at least one house on it and they must un-develop a property to pay a fee or rent
3. Select the street property with at least one house on it.
4. Select OK

Expected Result:
- A window pops up to prompt the player to select a property to un-develop
- The price of one house for the property is added to the player's balance
- The price for one house for the property is removed from the bank's balance
- The new balance of the current player is displayed at the top of the screen
- The number of houses on the property is set to one less than the current number of houses
- A window pops up indicating the un-develop was successful
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

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Testcase 1063

System: Monopoly Game

Player un-develops a property that is not mortgaged

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until a player has an unmortgaged property and they must un-develop a property to pay a fee or rent
3. Select the unmortgaged property with no houses or hotels.
4. Select OK

Expected Result:
- A window pops up to prompt the player to select a property to un-develop

- Half the purchase value of the property is added to the player's balance
- Half the purchase value of the property is removed from the bank's balance
- The new balance of the current player is displayed at the top of the screen
- The property is mortgaged
- A window pops up indicating that the property was mortgaged
- The window will close when ok is clicked
- The player can continue their turn

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1064

System: Monopoly Game

Player un-develops a property and bank has no money

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until a player owns a property and they must un-develop a property to pay a fee or rent and the bank has a balance of zero
3. Select the property.
4. Select ok

Expected Result:
- A window pops up to prompt the player to select a property to un-develop
- The monopoly game indicates that the un-development failed
- The window will close when ok is clicked
- Go to Testcase 1065 for the expected outcome of the player not being able to undevelop anymore

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1065

System: Monopoly Game

The player does not have a large enough balance to pay a fee an does not have anymore properties to un-develop

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until a player must pay a fee or rent but does not have sufficient funds

and is unable to un-develop a property   3. Select ok

Expected Result:
- The monopoly game indicates that the player is unable to un-develop any more properties
- The window will close when ok is clicked
- The remaining balance of the player is removed
- The player or bank that the current player owes money to receives the remaining balance of the player

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window

---

Testcase 1066

System: Monopoly Game

The timer runs out

Instructions:
1. Start a new game (Testcase 002)
2. Play monopoly until the timer runs out
3. Click ok on window indicating the game is finished
4. Click ok on window indicating the winner

Expected Result:
- The monopoly game will pop up a window indicating that the game is finished
- The window will close when ok is clicked
- The monopoly game will pop up a window indicating that the player with the highest balance after selling all properties won the monopoly game (or a random player if there is a tie)
- The window will close when ok is clicked
- The monopoly game window will go back to the state when no game is started. The only button that will respond is the new game button

Cleanup:
To exit the application, select the "x" in the top right hand corner of the window