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CS362 Assignment 1

1) Baron

The Baron allows you to to execute one extra buy (by default you can only “buy” once).
You can also discard one of your Estates to gain 4 coins this turn - if you don’t elect this option, you select an Estate card from the Estate pile and add it to your discard pile.

BARON
+1 Buy
You may discard an Estate for +4. If you don't, gain an Estate.
4
ACTION
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In the cardEffect function, for the “baron” case of the switch statement: first the gameState’s numBuys variable is incremented.
Then there is an if statement that checks for the player’s choice (choice1) of whether to discard an estate.
If they choose to discard an estate, it iterates through the player’s hand until an estate is found. If one is, it increases players coins by 4, updates the player’s hand array and discard pile array with the change, then exits the loop.
If no estate card is found in the hand, the player must take the “gain estate” option, which is then executed (as long as there are estates left available, if there aren’t we check if we’ve hit a game over).
Then the loop exits. After all of this the function returns.

2) Minion

The minion is itself a card that executes an action but also gives you the ability to perform an extra action this turn. The minion’s action is that you can choose to 1) Add 2 coins to your spending ability this turn, or 2) discard your hand but gain 4 cards, and every other player with at least 5 cards in hand must also discard their hands and draw 4 cards.

MINION
+1 Action
Choose one: +2; or discard your hand, +4 Cards, and each other player with at least 5 cards in hand discards their hand and draws 4 cards.
5
ACTION - ATTACK
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In the cardEffect function, for the “minion” case of the switch statement: first the gameStates numActions variable is incremented.
Then the discardCard function discards this card from the player’s hand.
An if statement checks choice1 to see which option the player chose - if choice1 is true, the coins of the current gameState are increased by 2.
If choice 2 is true, the numHandCards function is used in conjunction with the discardCard function to discard the player’s hand.
A for loop calls drawCard for the player 4 times to get 4 new cards.
Another for loop iterates through the other players and does the same if the number of cards in their hand (handCount) is greater than 4.
After all of the the function returns.

3) Ambassador

The Ambassador card allows the player to reveal a card from their hand, gain up to 2 copies of it, also from the player's hand, to the Supply. Each other player then gets a copy of that card (from the Supply).

AMBASSADOR
Reveal a card from your hand. Return up to 2 copies of it from your hand to the Supply. Then each other player gains a copy of it.
3
ACTION - ATTACK
Illustration: Alexander Jung
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In the cardEffect function, for the "ambassador" case of the switch statement: the first if statement checks to make sure the player hasn't chosen more than 2 or less than 0 as the number of copies.
The next makes sure the user didn't choose (choice1) this actual currently in play ambassador card since that wouldn't be allowed.
Next a for loop iterates through the player's hand, incrementing the counter j when the chosen card (choice1) is encountered. Afterward, j has to be at least as many as choice2 (# of copies chosen) or -1 (error) is returned.
The supply count is updated with the discarded cards, then each other player is given a copy of the card using a for loop and the gainCard function.
Next the current played card is discarded.
then the discarded/trashed copies of the chosen card are returned to the supply using the discardCard function with the trash flag set to 1.

4)Tribute

When Tribute is played, the player to the left reveals then discards the top 2 cards of their deck (or if they only have 1 card they reveal that one). For each unique card revealed, the player playing Tribute gets 2 actions this turn if it's an action card, 2 coins this turn if it's a treasure card, and draws 2 cards if it's a victory card.

TRIBUTE
The player to your left reveals then discards the top 2 cards of his deck. For each differently named card revealed, if it is an…
Action Card, + 2 Actions
Treasure Card, + 2
Victory Card, + 2 Cards
5
ACTION
Illustration: Matthias Catrein
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In the cardEffect function, for the "tribute" case of the switch statement: an if statement checks if the nextPlayer has 1 or fewer cards total in their deck + discard pile, then either updates the tributeRevealedCards array with the 1 available card from whichever pile it resides, or does nothing if both are empty.
The else statement that executes if nextPlayer has at least 2 cards available to show, first uses an if statement to check if their deck is empty, and if so goes for the discard pile, and moves two of them to the deck, then shuffles it.
Back to the else statement, we continues and update tributeRevealedCards with the first two cards found in nextPlayer's deck, also removing them from the player's deck/deck arrays.
Next an if statement checks if both found cards are the same, and if so updates the playedCardCount and playedCards array with it., and marks one of them as "-1" so it's not used in the next bit of code, where an if statement executes the +2 actions/coins/drawCard events based on what type of cards are in the tributeRevealedCards array.

5) Mine

Mine
You may trash a Treasure from your hand. Gain a Treasure to your hand costing up to 3 more than it.
5
Action
Illustration: Claus Stephan
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Mine lets the player trash a Treasure card from their hand, gaining a treasure that costs up to 3 coins more.

In the cardEffect function, for the “mine” case of the switch statement:
the variable j stores the card to be trashed using choice1.
Then we have a few if statements that return an error if the player has chosen an invalid card to trash, or has chosen a replacement treasure that does not cost 1-3 more coins than the trashed treasure card.
Next we use gainCard to add the new chosen treasure card to the player’s hand, and discardCard to move this mine card to the discard pile, then a for loop iterates through the player’s hand to find the card to be trashed, and discards it.