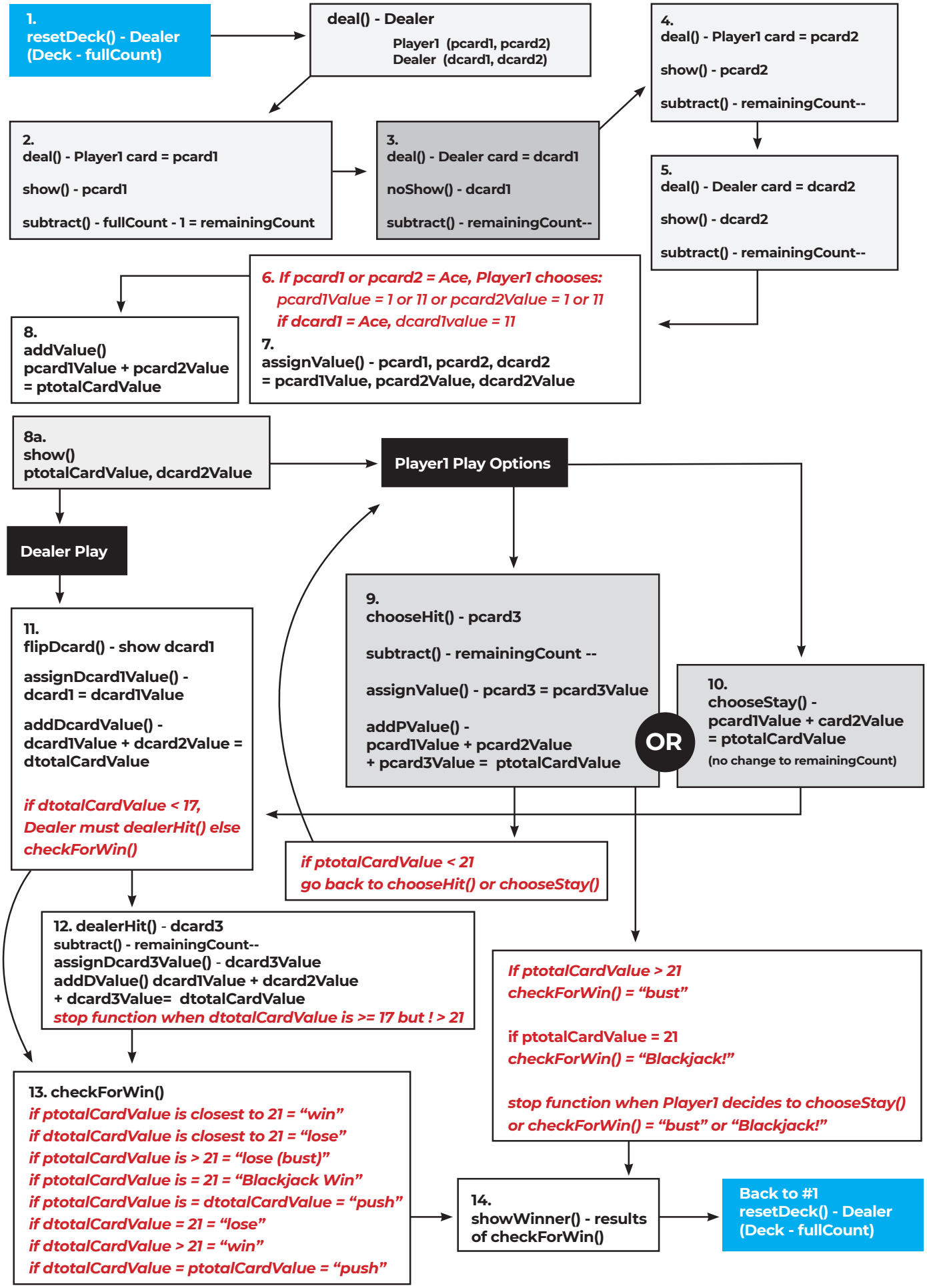
1.
resetDeck() - Dealer
(Deck - fullCount)
deal() - Dealer
Player1 (pcard1, pcard2)
Dealer (dcard1, dcard2)
2.
deal() - Player1 card = pcard1
show() - pcard1
subtract() - fullCount - 1 = remainingCount
3.
deal() - Dealer card = dcard1
noShow() - dcard1
subtract() - remainingCount--
4.
deal() - Player1 card = pcard2
show() - pcard2
subtract() - remainingCount--
5.
deal() - Dealer card = dcard2
show() - dcard2
subtract() - remainingCount--
6. If pcard1 or pcard2 = Ace, Player1 chooses:
pcard1Value = 1 or 11 or pcard2Value = 1 or 11
if dcard1 = Ace, dcard1value = 11
7.
assignValue() - pcard1, pcard2, dcard2
= pcard1Value, pcard2Value, dcard2Value
8.
addValue()
pcard1Value + pcard2Value
= ptotalCardValue
8a.
show()
ptotalCardValue, dcard2Value
Player1 Play Options
Dealer Play
9.
chooseHit() - pcard3
subtract() - remainingCount --
assignValue() - pcard3 = pcard3Value
addPValue() -
pcard1Value + pcard2Value
+ pcard3Value = ptotalCardValue
OR
10.
chooseStay() -
pcard1Value + card2Value
= ptotalCardValue
(no change to remainingCount)
11.
flipDcard() - show dcard1
assignDcard1Value() -
dcard1 = dcard1Value
addDcardValue() -
dcard1Value + dcard2Value =
dtotalCardValue
if dtotalCardValue < 17,
Dealer must dealerHit() else
checkForWin()
if ptotalCardValue < 21
go back to chooseHit() or chooseStay()
12. dealerHit() - dcard3
subtract() - remainingCount--
assignDcard3Value() - dcard3Value
addDValue() dcard1Value + dcard2Value
+ dcard3Value= dtotalCardValue
stop function when dtotalCardValue is >= 17 but ! > 21
If ptotalCardValue > 21
checkForWin() = "bust"
if ptotalCardValue = 21
checkForWin() = "Blackjack!"
stop function when Player1 decides to chooseStay()
or checkForWin() = "bust" or "Blackjack!"
13. checkForWin()
if ptotalCardValue is closest to 21 = "win"
if dtotalCardValue is closest to 21 = "lose"
if ptotalCardValue is > 21 = "lose (bust)"
if ptotalCardValue is = 21 = "Blackjack Win"
if ptotalCardValue is = dtotalCardValue = "push"
if dtotalCardValue = 21 = "lose"
if dtotalCardValue > 21 = "win"
if dtotalCardValue = ptotalCardValue = "push"
14.
showWinner() - results
of checkForWin()
Back to #1
resetDeck() - Dealer
(Deck - fullCount)

Blackjack UML Diagram:

CLASSES / NOUNS:

Deck
- 52 Cards / 4 Suits - diamonds, clubs, spades, hearts)
- Each suit has 4 of each numValueCard (4 two's, 4 three's, 4 fours...up to 4 ten's)
- Each suit has 4 of each faceValueCard (4 J's, 4 Q's, 4 K's, 4 A's)
- fullCount and remainingCount of deck

Players
- Player1 and Dealer

Hand
- Each player starts with a Hand of 2 cards out of the 52 each.

gameResults
- win
- lose
- bust
- Blackjack
- push

Possible objects/classes
Deck, fullCount, remainingCount, Card, Suits, numCardValue, faceCardValue, Player, Hand, ptotalCardValue, dtotalCardValue

PROCESS / METHODS / VERBS:

1.
resetDeck() - Dealer shuffles/resets deck to **fullCount = 52**

2.
deal() - Dealer deals Player1 a random card (**pcard1**) from fullCount = 52
show() - pcard1 is shown
subtract() - **fullCount - 1 = remainingCount**

3.
deal() - Dealer deals Dealer a random card (**dcard1**) from remainingCount
noShow() - dcard1 is not shown
subtract() - remainingCount - 1 = remainingCount;

4.
deal() - Dealer deals Player1 a random card (**pcard2**) from remainingCount
show() - pcard2 is shown
subtract() - remainingCount - 1 = remainingCount;

5.
deal() - Dealer deals Dealer a random card (**dcard2**) from remainingCount
show() - dcard2 is shown
subtract() - remainingCount - 1 = remainingCount;

6. If pcard1 or pcard2 is an Ace, Player1 chooses pcard1Value = 1 or 11 or pcard2Value = 1 or 11
if dcard1 is an Ace, use dcard1value = 11

7.
assignValue() - assigns pcard1, pcard2, dcard2 values (**pcard1Value**, **pcard2Value, dcard2Value)**

continued next page

8.
addValue() - adds pcard1Value + pcard2Value (after check for #6) = **ptotalCardValue**
show() - Shows ptotalCardValue and dcard2Value (after check for #6)

9.
chooseHit() - Player1 chooses Hit = Dealer deals Player1 a random card (**pcard3**) from remainingCount
subtract() - remainingCount - 1 = remainingCount;
assignValue() - assigns pcard3 a value = **pcard3Value**
addPValue() - adds pcard1Value + pcard2Value + pcard3Value = ptotalCardValue
If pcard1Value + pcard2Value + pcard3Value is < 21 go back to chooseHit() or chooseStay()
If pcard1Value + pcard2Value + pcard3Value is > 21 checkForWin() = "bust"
stop function when Player1 decides to chooseStay() or checkForWin() = "bust".

OR

10.
chooseStay() - Player1 chooses Stay = pcard1Value + card2Value = ptotalCardValue
(no change to remainingCount)

11.
flipDcard1() - reveal dcard1
assignDcard1Value - assigns dcard1 a value
addDValue() - dcard1Value + dcard2Value = **dtotalCardValue**
if dtotalCardValue < 17, Dealer must dealerHit()

12.
dealerHit() - Dealer deals Dealer a random card (**dcard3**) from remainingCount
subtract() - remainingCount - 1 = remainingCount;
assignDcard3Value() - assigns dcard3 a value = **dcard3Value**
addDValue() - dcard1Value + dcard2Value + dcard3Value= dtotalCardValue
stop function when dtotalCardValue is >= 17 but ! > 21
if dtotalCardValue = 21 checkForWin() = "lose"
if dtotalCardValue > 21 checkForWin() = "win"
if dtotalCardValue = ptotalCardValue - checkForWin() = "push"

13.
checkForWin() - Dealer checks winning conditions
if ptotalCardValue is closer to 21 than dtotalCardValue = "win"
if dtotalCardValue is closer to 21 than ptotalCardValue = "lose"
if ptotalCardValue is > 21 = "lose"
if ptotalCardValue is = 21 = "Blackjack Win"
if ptotalCardValue is = dtotalCardValue = "push"

14.
showWinner() - Dealer "announces" results of checkForWin()

Back to #1. resetDeck()