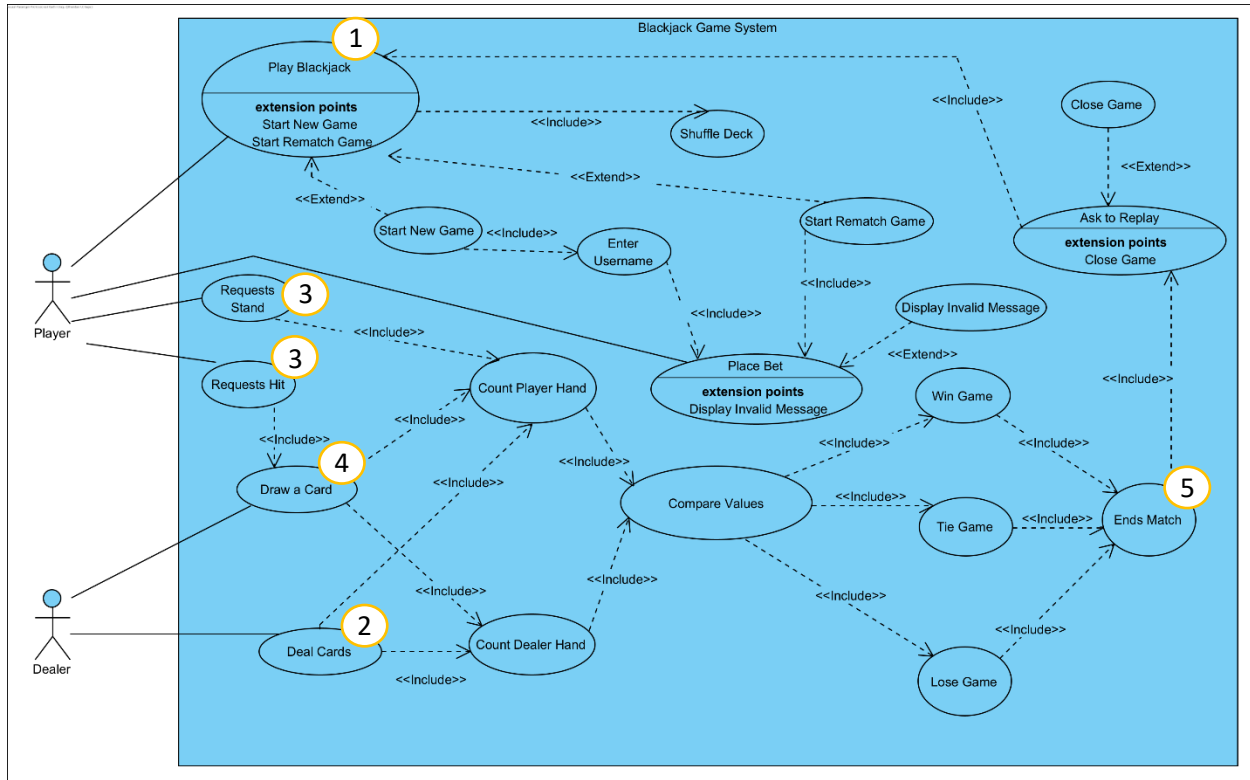


## Use Case Diagram:



This use case diagram displays how a Player would start playing Blackjack, how a Player can bet, how a Player can hit or stand, and how a Player would win, lose, or tie a game. This diagram also displays how a Dealer deals the cards to the Player and themselves, how a Dealer draws a card, and how a Dealer would win, lose, or tie a game.

## Use Case Narratives:

### 1. Player wants to Play Blackjack and Bet:

1.	a	Player	wants to	Play Blackjack
2.	if	Player	is playing for the first time	
2.1.	SYSTEM	will	Start New Game	
2.2.	SYSTEM	asks the	Player to	Enter Username
3.	else if	Player	requested a replay	
3.1.	SYSTEM	will	Start Rematch Game	
	end if			
4.	SYSTEM	successfully registers/remembers the	Player	
5.	SYSTEM		Shuffle Deck	
6.	SYSTEM	asks	Player to place a bet for their game	
7.	if	Player	Place Bet that is insufficient from their wallet	
7.1.	SYSTEM	will	Display Invalid Message	
7.2.	SYSTEM	prompt the	Player to	Place Bet again with a valid amount
	end if			
8.		Player	enters a valid amount to bet	

### 2. Dealer Deals Cards and There is an Automatic Blackjack:

1.	SYSTEM	acquired	Player	username and bet
2.	Dealer		Deal Cards	to themselves and Player (2 Cards each)
3.	SYSTEM	displays the	Player	hand
4.	SYSTEM	displays only 1 card of the	Dealer	hand
5.	SYSTEM	will	Count Player Hand	and Count Dealer Hand
6.	SYSTEM	will	Compare Values	of the cards in Player and Dealer hand
7.	if	the value of	Player	hand equals 21
7.1.	SYSTEM	declares the	Player	as the winner and Win Game Message
7.2.	Player	receives one and a half of their bet		
7.3.	SYSTEM	automatically	Ends Match	
8.	else if	the value of	Dealer	hand equals 21
8.1.	SYSTEM	declares the	Dealer	as the winner and Win Game Message
8.2.	SYSTEM	displays that the	Player	Lose Game
8.3.	Player	loses their bet		
8.4.	SYSTEM	automatically	Ends Match	
9.	else if	the value of	Player or Dealer	hand BOTH equals 21
9.1.	SYSTEM	displays	Tie Game	Message
9.2.	Player	receives the same bet back		
9.3.	SYSTEM	automatically	Ends Match	
	end if			
10.		the value of	Player or Dealer	does not have a hand that equals 21

### 3. Player Hit OR Stand

1. ♀ Player receives two cards from the ♀ Dealer
2. while ♀ Player hand is below the value of 21
  - 2.1. SYSTEM asks ♀ Player if they would like to hit or stand
  - 2.2. if ♀ Player ● Requests Hit
    - 2.2.1. SYSTEM will let the ♀ Player ● Draw a Card to their hand
    - 2.2.2. SYSTEM will keep track and ● Count Player Hand
  - 2.3. ♀ Player ● Requests Standend if
3. SYSTEM will keep the remaining cards in the ♀ Player hand
4. SYSTEM reveals ♀ Dealer hand
5. SYSTEM will ● Count Player Hand and ● Count Dealer Hand
6. SYSTEM will ● Compare Values of the cards in ♀ Player and ♀ Dealer hand
7. if ♀ Player has a higher value than the ♀ Dealer
  - 7.1. SYSTEM declares ♀ Player as the winner and ● Win Game Message
  - 7.2. ♀ Player receives twice their bet
8. else if ♀ Player has Blackjack (value of cards is 21)
  - 8.1. SYSTEM declares ♀ Player as the winner and ● Win Game Message
  - 8.2. ♀ Player receives one and a half of their bet
9. else if ♀ Player and ♀ Dealer have the same value of cards in their hand
  - 9.1. SYSTEM displays ● Tie Game Message
  - 9.2. ♀ Player receives the same bet back
10. else if ♀ Player hand Busts (value of cards is over 21)
  - 10.1. SYSTEM declares ♀ Dealer as the winner and ● Win Game Message
  - 10.2. SYSTEM displays the ♀ Player ● Lose Game
  - 10.3. ♀ Player loses their betend if
11. SYSTEM ● Ends Match when there is a Winner, Loser, or Tie Game

#### 4. Dealer Draw Card:

1. ♀ Dealer receives two cards
2. SYSTEM lets ♀ Dealer play when ♀ Player is done their turn ( ♀ Player ➡ Requests Stand)
3. SYSTEM reveals ♀ Dealer hand
4. while ♀ Dealer hand is below the value of 17
  - 4.1. SYSTEM automatically ➡ Draw a Card for the ♀ Dealer
  - 4.2. SYSTEM will keep track and ➡ Count Dealer Handend while
5. SYSTEM will keep the remaining cards in the ♀ Dealer hand
6. SYSTEM will ➡ Count Player Hand and ➡ Count Dealer Hand
7. SYSTEM will ➡ Compare Values of the cards in ♀ Player and ♀ Dealer hand
8. if ♀ Dealer has a higher value than the ♀ Player
  - 8.1. SYSTEM declares ♀ Dealer as the winner and ➡ Win Game Message
  - 8.2. SYSTEM displays the ♀ Player ➡ Lose Game
  - 8.3. ♀ Player loses their bet
9. else if ♀ Dealer has Blackjack (value of cards is 21)
  - 9.1. SYSTEM declares ♀ Dealer as the winner and ➡ Win Game Message
  - 9.2. SYSTEM displays the ♀ Player ➡ Lose Game
  - 9.3. ♀ Player loses their bet
10. else if ♀ Player and ♀ Dealer have the same value of cards in their hand
  - 10.1. SYSTEM displays ➡ Tie Game Message
  - 10.2. ♀ Player receives the same bet back
11. else if ♀ Dealer hand Busts (value of cards is over 21)
  - 11.1. SYSTEM declares ♀ Player as the winner and ➡ Win Game Message
  - 11.2. ♀ Player receives twice their betend if
12. SYSTEM ➡ Ends Match when there is a Winner, Loser or Tie Game

#### 5. After a Match Ends – Replay?

1. SYSTEM ➡ Ends Match when there is a Winner, Loser, or Tie game
2. SYSTEM displays a screen to the ♀ Player and ➡ Ask to Replay
3. if ♀ Player rejects to replay
  - 3.1. SYSTEM will ➡ Close Game
  - 3.2. ♀ Player takes home the money they have leftend if
4. ♀ Player agree's for a rematch
5. SYSTEM will then ➡ Start Rematch Game