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Assignment 2

Team Name: **Snooze Goose**

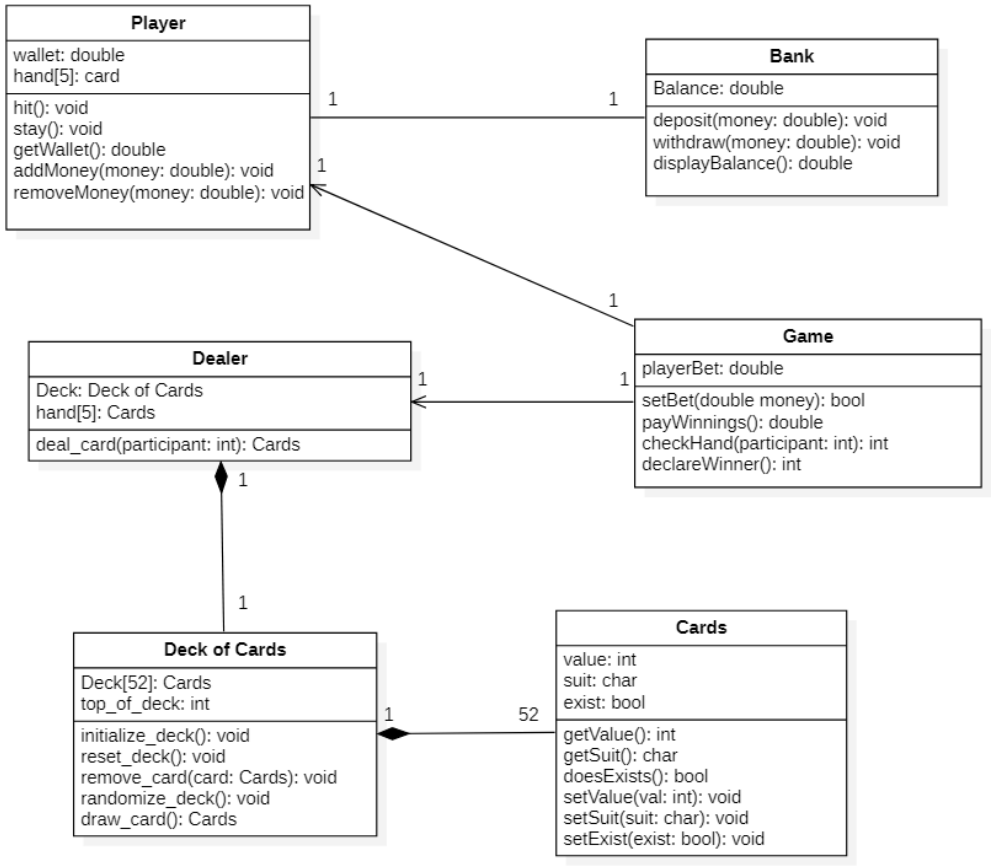
- Product Name: Jack's Bank
- Problem statement: Teaching young audiences about finances and economics in a fun and entertaining way to demonstrate the importance of money management.
- **Classes**

Class: **Player**	Class: **Game**
wallet : double Holds the player's money balance hand[5] : card Holds the player's hand during the game (max of 5)	playerBet : double Holds the value of the player's bet for the current game
hit() : void The Player sends a request to the dealer to draw a card stay() : void The Player sends a request to the dealer to stop his turn and stick with his hand getWallet() : double addMoney (money : double) : void removeMoney(money : double) : void	setBet(money : double) : bool payWinnings() : double Return the value of the player's winnings checkHand(participant : int) : int Check & return the value of the player's(0) or dealer's(1) hand declareWinner() : int Return the winner: Player(0) or Dealer(1)

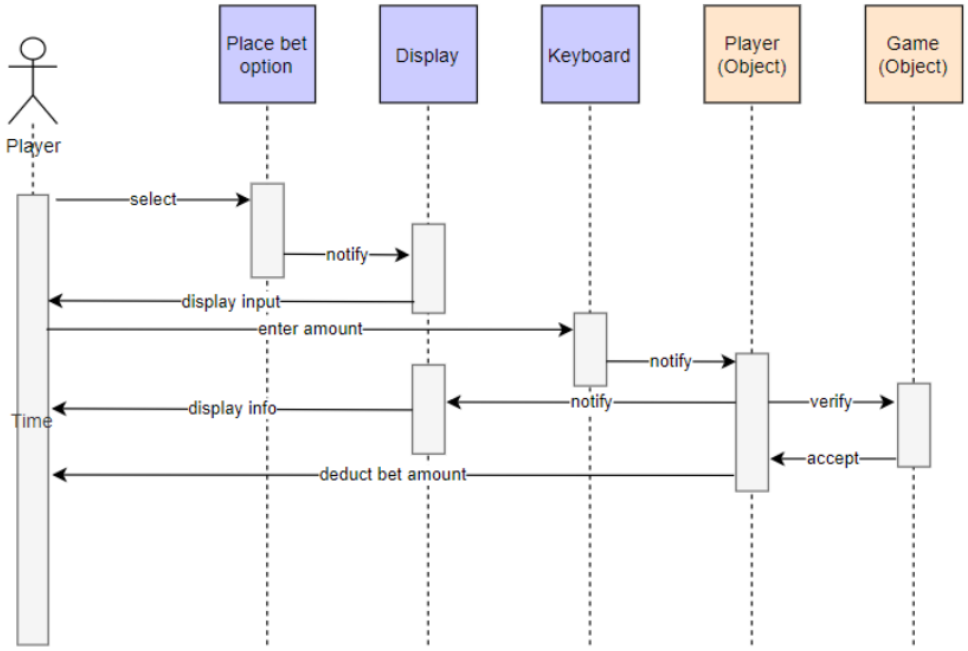
Class: **Bank**	Class: **Dealer**
Balance : double Holds the user's bank balance	Deck : Deck of Cards hand[5] : Cards Holds the dealer's hand during the game (max of 5)
deposit(money : double) : void withdraw(money : double) : void displayBalance() : double	deal_card(participant : int) : Cards Deal a card to the hand of either the dealer or player

Class: **Deck of Cards**	Class: **Cards**
Deck[52] : Cards Holds an array of Cards to represent a deck of cards top_of_deck : int Holds the index to the current top card of the deck	value : int The numerical value of a card suit : char The suit of the card: Spades(S), Clubs(C), Diamonds(D), Hearts(H) exist : bool checks if the card exists in the current deck
initialize_deck() : void Fill the array with all values of the 52 cards reset_deck() : void Reset the deck by putting all cards back into the deck and shuffling the deck remove_card(card : Cards) : void Remove a card from the deck randomize_ deck() : void Shuffle the current deck draw_card() : Cards Return the card on the top of the deck and remove it from the current deck	getValue() : int getSuit() : char doesExist() : bool setValue(val : int) : void setSuit(suit : char) : void setExist(exist : bool) : void

- ***UML class diagrams***



- ***UML sequence diagram***



- ***UML state diagram***