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Final Project Proposal: Blackjack

I’d like to develop a game of blackjack as my final project. I will have to implement classes of the game, players, shoe, deck, hand and cards to accomplish this I think. I’ll have to give appropriate properties to the cards such as suit and value. I’ll then have to give the deck a vector of cards and proper behaviors like shuffle; then I will need to come up with a way to deal the cards most likely as a function of the game. I will also need to then put the dealt cards into the hands (a property of the player class) of the respective players including the dealer. The players will have a certain amount of chips in dollars that will be a property of that class, at any point a player will have the option to cash out and end the game for that player, while the game continues on for the rest. I will do this by assigning a Boolean flag for in/out that will be checked before each hand is played, there will also need to be a flag for when a player has elected to stand, in which case they are still competing but will not be dealt any more cards.

As for the gameplay, it will be text based and allow first the user to input the number of people playing; it will then create the shoe with the appropriate amount of decks for the number of competing players. Those players will have an option to hit, stand, double down, split or buy insurance if the dealer’s up card is an ace. I’m intending on keeping the game as true to American casino play as I can, I imagine I’ll come across some challenges along the way that might cause issues and force me to modify things slightly. I think that the most challenging aspects will be designing the function to deal cards and all of the conditions each player must meet to receive a card or not. The function that determines the end of each hand will also be interesting to write and even as simple as keeping chip count sounds I have a feeling that might be something of a challenge itself.