Black Jack

I. The Game

The objective of the game is to accumulate a hand of cards that equals 21 (Blackjack!) or a hand that has a card value greater than your opponents without exceeding 21.

II. The Players

In this implementation, two players are required:
- The Dealer : distributes cards
- The Player : human player who faces the dealer

III. The Rules

Blackjack consists of multiple rounds. Each round the Player may bet any amount of currency. If the Player wins, they receive double the amount of the bet. Otherwise the Player loses the entirety of the bet.

To start each round, the Dealer deals two cards to each player in alternating sequence. Both of the cards that the Player is dealt are kept face up and known to both the Dealer and the Player. The first card the Dealer is dealt is kept face up and known to both the Player and the Dealer; the second is kept face down and only known to the Dealer.

The Player begins and may take one of the following actions:

- *Hit* : The Player receives another card

- *Stand* : The Player ends and maintains the value of the current hand

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- *Split* : **Only available if the Player has two cards of the same kind**. The Player splits their hand into two separate hands, and must place a bet on the other hand equal to their original bet. The Dealer gives a single new cards to each of these new hands. Each of these hands is treated as their own separate value.

- *Double Up* : The Player doubles their bet, and takes only a single hit and *immediately* stands afterwards.

If the player hits, what happens next depends on the new value of the hand:

- hand value of the player exceeds 21, the player's hand is bust and the player loses.

- hand value of the player equals 21 or Blackjack, we must wait to see the dealer's hand.

Once the Player *stands*, the dealer reveals their face down card to the Player, and continues to hit until the hand value of the Dealer reaches or exceeds 17.

This concludes a round, and the game continues until either the player runs out of money, or the player cashes out.

IV. The Cards

The game is played with a standard 52 card deck. Each card has a face value, King, Queen, and Jack have a face value of 10; the Ace can have a face value of 1 or 11.

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V. The Winner

In general, the winner of a round is the Player who has the higher of the two scores without having gone bust. In the case of a tie, the Player bet is returned and a new round starts.

A special case includes natural Blackjacks versus the value of a 21. A natural Blackjack is defined as the starting hand having a value of 21 (i.e. an Ace and any face card). While a value of 21 can be any amount of cards (e.g. a 9, 2, and a face card). *Natural Blackjacks always triumphs over a value of 21*.

VI. The Assignment

Design and Implement an Object Oriented Blackjack game in Java. Your game should be played by either two live players (where one player is randomly chosen to be the Dealer) or one live player and the Computer as the Dealer.

VII. Deliverables

- Object Design Specification
- Java Source files

VIII. Due Date
As specified