BLACKJACK ALGORITHM

Implement and analyse the optimal algorithm for winning a game of Blackjack.

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GOAL- *Our project aims at modifying and analysing the complexity of the code generated for the Blackjack casino game algorithm.*

OVERVIEW

The Blackjack casino game originated in 1700s, although, there are many theories about invention of the game.

The game is played between players and the dealer, where player in turn competes against the dealer.

INTRODUCTION

-Blackjack is a complex game can be played with more than one deck. Our project is based on the basic idea of Blackjack and complexity analysis with an efficient way of winning the game.

-The deck contains different cards having different values in this game, faces cards, King, Queen and Jack of different suites have values 10, numbered cards from 2 to 10 have their respective values and ace can take values 1 or 11.

-The game is between dealer and the player the margin score is 21.

-Whoever gets nearest to, i.e., less than 21 or gets a perfect 21 wins the game.

RULES & SCORING THE GAME –

- If the player has blackjack, they win, unless the dealer also has blackjack, in which case the game is a tie.
- If the dealer busts and the player doesn't, the player wins.
- If the player busts, the dealer wins.
- If the player and the dealer both don't bust, whoever is closest to 21 wins.

GAME LOGIC-

-The dealer in this project is computer.

-The shuffling of cards and the front card in the stack/list is picked by the dealer and the players are done using randomize and is popped from the deck.

-After getting cards player is given options to hit (take another card from the deck) or stay (allow the dealer to pick).

-The dealer picks the card until he gets a 17 score out of his hands.

Role of the ACES**-** *ACE cards can take values of 1 or 11. Initially in this program, we take default score of ACE as 11. If the sum of the hand is above 21 we subtract 10 for an ace and check the score and repeat the process.*

-Finally, we check the scoring rule and declare winner.

REFERENCES-

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2. https://brilliant.org/wiki/programming-blackjack/

3. https://ieeexplore.ieee.org/document/1299399