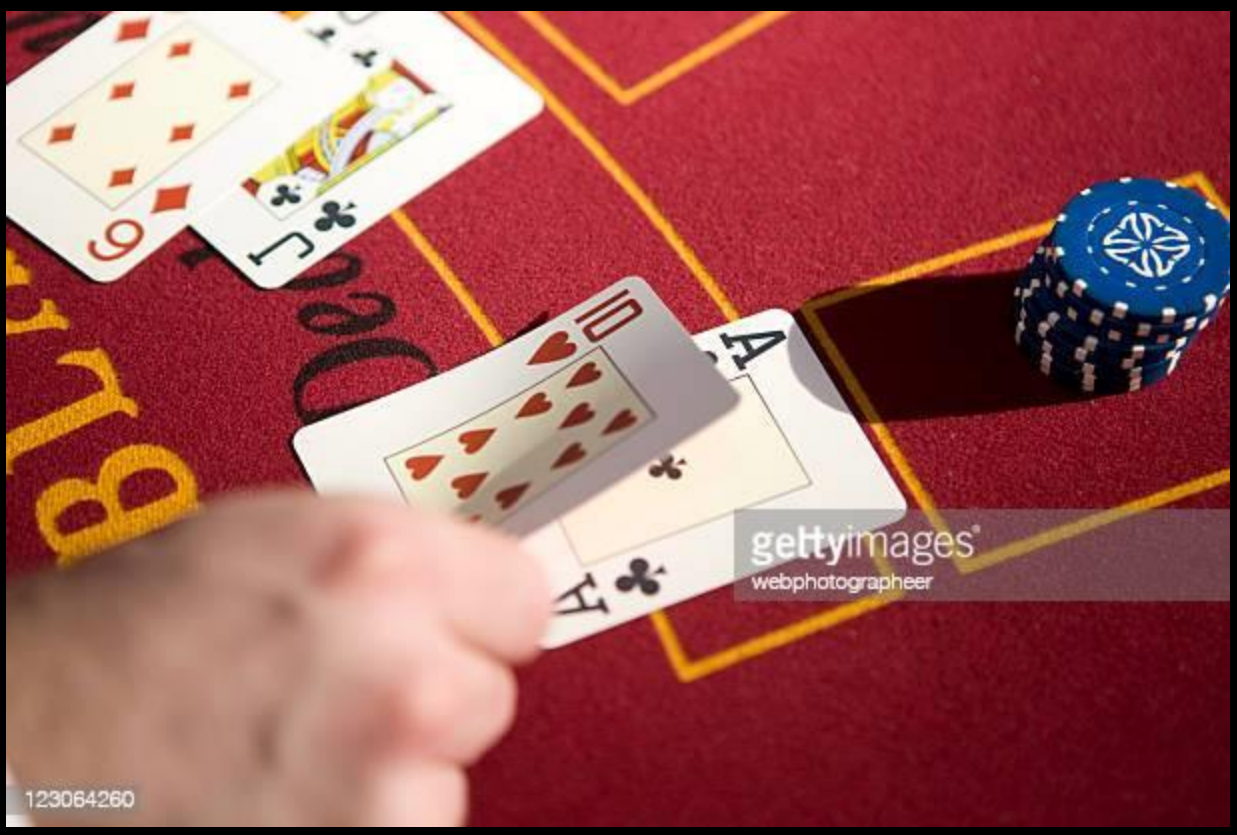
AP Computer Science
Mr Hanley

The Hood

Bonus Assignment 2nd Qtr: Black Jack Hand using a List

Ver: 1.1ae45607ab.2

Last Updated:12/23/2022 8:47 PM



Bonus Assignment: Black Jack Hand Using ArrayList

Create a BlackJackHand class and update the Black Jack Skeleton
In creating a BlackJack template for my Java semester class, I set up a black jack game with a simplistic system to add up the player and dealer's hands.

As the project grew in the fall of 2016, I felt the pain of the simplistic variables used to add up the score of each player's hand.

First, Mr. Lombardi suggested that there could be more than 5 cards per hand, which led me to add up to 7 cards per hand. Then, we talked about the split rule: **If a player receives 2 of the same cards to start, then they can choose to split the hand into two separate hands and play each one out separately.**

Therefore, there could be up to 3 different hands of 7 cards each. The way I solved the score for the semester class students was by adding up individual variables.

Ouchie!!! This does not scale well!!!!

However, this project is crying out for a **super nifty class called BlackJackHand** that manages an ArrayList of values to figure hand score.

That way, you could do the logic in one place to figure out the score, and it could be handled by an ArrayList, which is a flexible class to manage an array.

Tasks:

- Download the skeleton from mr Hanley's web site

- Check out how the game works

- Write a class to handle a black jack hand

    - BlackJack is a card game where the dealer and player are dealt two initial cards, one face up and one face down.
    - The player must play out their hand first
    - Hit means give me another card, stay means I am stopping
    - If your cards add up to over 21, you bust and lose your bet
    - If your cards add up to under 21, you have to see what the dealer has
    - If the dealer has a higher number but less than or equal to 21, they win
    - If you have a higher number but less than or equal to 21, you win

    - Your hand should allow the client class to add cards and should figure out the score according to the cards;

      Here is the tricky stuff…
    - **An ace can count as a 1 or 11 depending upon which helps more**

    - The face down card counts in as well.

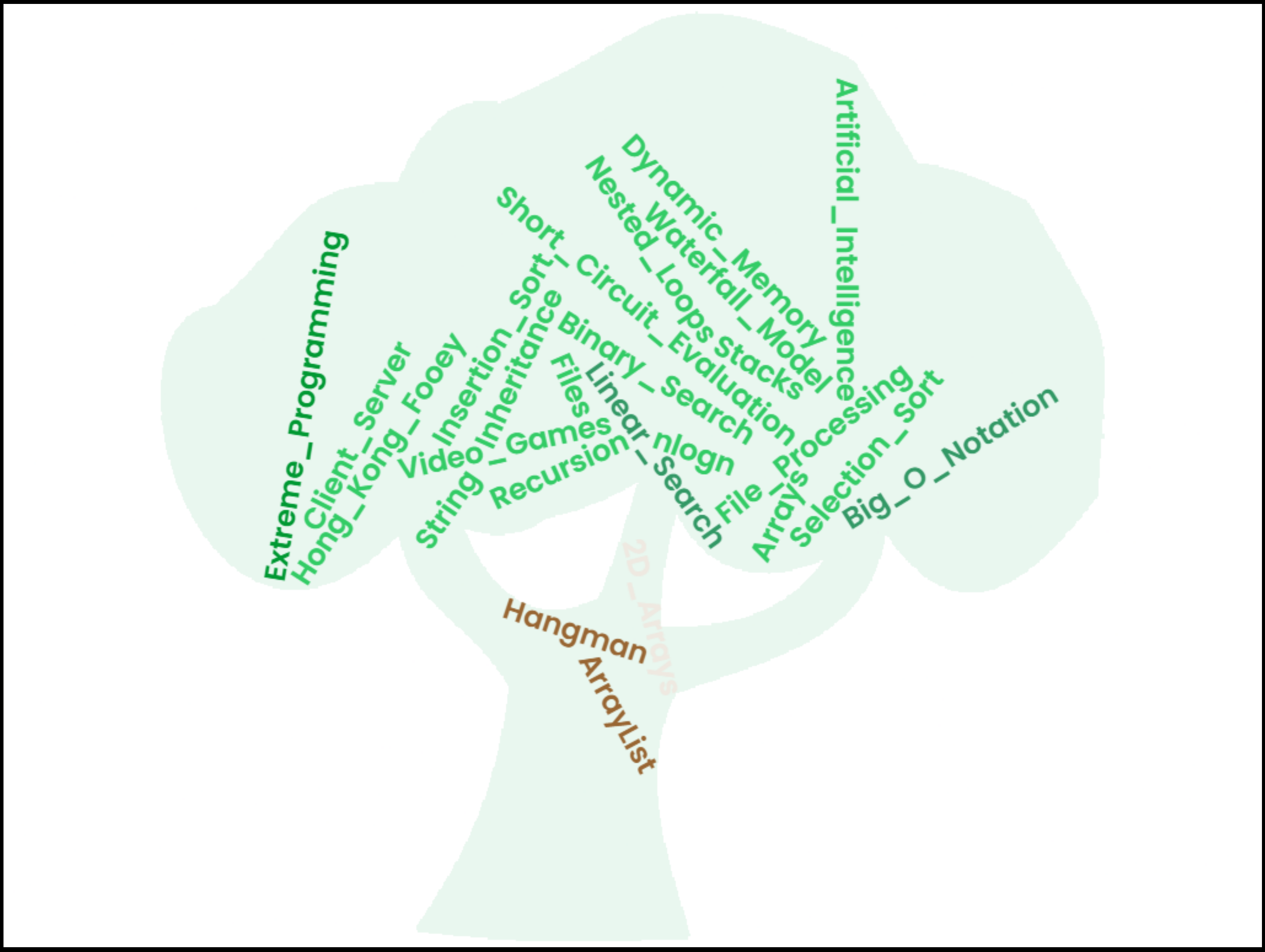
    - If the dealer and the player have the same number, then this is a **push**.

- Apparently most actual casinos consider a push to be no one wins the hand. No one wins in this hand

- You need to update the GUI to handle the splits, I haven't finished that yet!!!!!!

Project 1 Name	**BlackJackSkeletonLISTPROJECT**
Class 1 Name	BlackJackApp
Class 2 Name	BlackJackFrame
Class 3 Name	BlackJackHand

Project Name	**BlackJackSkeletonLISTPROJECT**
Class 1 Name	BlackJackApp
Class 2 Name	BlackJackFrame
Class 3 Name	BlackJackHand


Artificial_Intelligence
Dynamic_Memory
Waterfall_Model
Nested_Loops
Stacks
Short_Circuit_Evaluation
Binary_Search
Extreme_Programming
Client_Server
Hong_Kong_Fooey
Video
Insertion_Sort
Inheritance
_Games
String
Recursion
Files
Linear_Search
nlogn
File_Processing
Arrays
Selection_Sort
Big_O_Notation
2D_Arrays
Hangman
ArrayList