# **ALGORITHM**

❖ Start
❖ Login/Sign-Up using binary file of structure:-
  struct blackjack{
  char name[20],username[20],pswd[20];
  double bank;
  };
❖ Read the amount to be bet. Assign it to variable money.
❖ Display first two cards for dealer and player.
❖ Ask the player to hit or stay.
❖ Keep displaying an extra card every time the user hits. Count the total.
❖ When user stays, dealer will start playing.
❖ If the player's total is greater than the dealer's total, the player wins. Increase the player's total money and update in the binary file for further use.
❖ Else if the player's total exceeds 21 or the player's total is less than the dealer's total, the player loses. Decrease the player's money and update in the binary file.
❖ Ask if the player wants to play again. if yes, go to step 3.
❖ Stop.

# HEADER FILES USED

1. #include<string.h>
   This Header file is used for using the Sting functions such as "strcmp", "strcpy" in a program.

2. #include<fstream.h>
   This is a Header file which is used for invoking functions related to files and other file related activities in a program.

**3.** #include<graphics.h>
   This header file is used for implementing graphics in a program like adding a background.

4. #include<iostream.h>
   This Header file is used is for basic c++ functions such as accepting a value from the user through "cin" and displaying the value through "cout" in a program.

5. #include<conio.h>
   This Header file is used for clearing the screen through "clrscr();" and exiting the program through "getch();" in a program.

6. #include<iomanip.h>
   This is part of the Input/output library of the **C++** Standard Library. It contains functions like "setw", "setprecision", etc.

7. #include<stdlib.h>
   This is a Header file of the general purpose standard library of C programming language which includes functions involving memory allocation, process control, conversions in a program.

8. #include<dos.h>
   This header file contains functions for handling interrupts, producing sound, date and time functions etc.

# User Defined Functions/ Member Functions used

1. Member functions of class BJ:
   (a) void dealer_twocard(char suit[2], char num[2]);
      -For displaying the dealer's two cards in which one is closed.
   (b) void onecard(char suit, char num)
      -For displaying the a single card.
   (c) void fivecard(char suit[5], char num[5])
      -For displaying five cards.
   (d) void fourcard( char suit[4], char num[4])
      -For displaying four cards.
   (e) void threecard(char suit[3],char num[3])
      -For displaying three cards.
   (f) void twocard(char suit[2],char num[2])
      -For displaying two cards.

2. void update() – To update the money the user has lost/won into the binary file "Blackjack.dat" which contains all the details of players.

3. void clearscreen()- To clear the existing screen and set up a blank background.

4. void loading() – To show the loading process on the screen.

5. void menu()- This contains the options for the user to login/sign-up or to read how to play the game.

6. void midscreen()- To reach the middle of the screen for displaying.

7. void credits()- Displays details of the creators of the game.

8. void playerwon()- To display appropriate message when a player has won.

9. int norepeat(char suit, char num, int d=0)- To prevent a card from repeating itself.

10. void playerlost()- To display appropriate message when a player has lost.

11. void dealer_newcard()- To create a new card for the dealer.

12. void newcard()- To create a new card for the player.