System Manual:-

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PROGRAM     : let's_make_a_deal_pseudo_percentage.cpp
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Last Modified : 1st March, 2016.
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PROGRAM PURPOSE   : This program will compute the pseudo result of the game "Let's Make a
    Deal" for 10000 times.   In fact, the program is made to answer the
    famous question in the game, "is it to the player's advantage to switch
    doors?" After running the program, it will show the total number of wins
    and loses along with the overall percentage of winning in different
    situations. It won't take any input. The user just need to run the program
    and analyze the result to understand the answer of this question.

Includes:
    iostream
    ctime
    cstdlib

Namespaces:
    std

Functions:
    int main()
    void setupDoors (char &door1, char &door2, char &door3)
    void pickDoorChoices(char door1, char door2, char door3, int &doorPlayer, int &doorMonty)
    void chance_of_win (char door1, char door2, char door3, int doorPlayer, int doorMonty)

int main() function:
    - Declared three character variable named door1, door2, and door3 respectively for storing
      the value of the object behind the door
    - Declared two integer variables named doorPlayer, and doorMonty to stroe the position
      of the door they pick up
    - Declared and initialized an integer variable seed, using the system's clock
    - Seeded the random number generator using the system's clock
    - Ran a for loop to compute the result produced by the function chance_of_win for 6 times
    - Called the function chance_of_win, which computes the pseudo result of the game "Let's
      Make a Deal" for 10000 times along with the overall percentage of winning in different
      situations.

void setupDoors (char &door1, char &door2, char &door3)

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/***
                    This function sets up the position of the Car and the two Goats
                    randomly behind the three doors.
    @param  &door1  -  value of object behind the Door -  1
    @param  &door2  -  value of object behind the Door -  2
    @param  &door3  -  value of object behind the Door -  3

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- Declared an integer variable door to store the number of the door
- Initializing the variable door by random numbers from 1 to 3 using rand() function
- Checked whether the value of door is equal to different values through conditional statement
- Initialized the value of the variable door1, door2, and door3 according to the conditions

void pickDoorChoices(char door1, char door2, char door3, int &doorPlayer, int &doorMonty)

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/***
                    The following function will make the right choice randomly for the door that
                    will be picked by Monty according to the choice of the Player
    @param  door1  -  value of object behind the Door -  1
    @param  door2  -  value of object behind the Door -  2
    @param  door3  -  value of object behind the Door -  3
    @param  &doorPlayer  -  the number of the door, picked by the Player
    @param  &doorMonty  -  the number of the door, picked by the Monty

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- Declared and initialized the integer variable r1 by random numbers from 1 to 3 using rand() function
- Initialized the value of the variable doorPlayer by r1
- Ran a while loop to find the right choice randomly for the door that will be picked by Monty
according to the choice of the Player
- Declared and initialized the integer variable r2 by random numbers from 1 to 3 using rand() function
- Initialized the value of the variable doorMonty by r2
- Checked whether the value of doorMonty is equal to different values through conditional statement
- Found the suitable value for doorMonty

void chance_of_win (char door1, char door2, char door3, int doorPlayer, int doorMonty)

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     /***
              The following function will compute  the pseudo result of the game
              "Let's Make a Deal" for 10000  times along with the overall percentage
              of winning in different situations
     @param  door1  -  value of object behind the Door -  1
     @param  door2  -  value of object behind the Door -  2
     @param  door3  -  value of object behind the Door -  3
     @param  doorPlayer  -  the number of the door, picked by the Player
     @param  doorMonty  -  the number of the door, picked by the Monty

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- Declared and initialized the integer variable win_in_change with 0
- Declared and initialized the integer variable lose_in_change with 0
- Declared and initialized the integer variable changingWon_percent with 0
- Declared and initialized the integer variable win_without_change with 0
- Declared and initialized the integer variable lose_without_change with 0
- Declared and initialized the integer variable stayingWon_percent with 0
- Ran a for loop to compute total number of wins and loses along with the overall percentage
  of winning while the player changes his choice
- Called the function setupDoors
- Called the function pickDoorChoices
- Checked whether the value of doorMonty is equal to different values of doorPlayer through
conditional statements
- Initialized the value of the variable doorPlayer to door1, door2, and door3
- Checked whether the value of doors is equal to C through conditional statements
- Incremented the value of the variable win_in_change based on the condition
- Incremented the value of the variable lose_in_change based on the condition
- Showed the total number of wins when the Player changes his/her choice as output
- Showed the total number of loses when the Player changes his/her choice as output
- Calculated the overall percentage of winning when the Player changes his/her choice
- Showed the overall percentage of winning when the Player changes his/her choice as output
- Ran a for loop to compute total number of wins and loses along with the overall percentage
  of winning while the player doesn't change his choice
- Incremented the value of the variable win_without_change based on the condition
- Incremented the value of the variable lose_without_change based on the condition
- Showed the total number of wins when the Player doesn't change his/her choice as output
- Showed the total number of loses when the Player doesn't change his/her choice as output
- Showed the overall percentage of winning when the Player doesn't change his/her choice as output.