Game of Life (Bonus)

ZPRAC-16-17-Lab2

[Bonus Question]
Note - This question will be evaluated only if solutions of all 3 lab questions are submitted.

Nishant and Rohan are very competitive and they always try to beat each other. Frustrated by this battle, their friend Rachita has designed a game of life for them in which the loser dies.

Rachita has a bag with w number of white balls and b number of black balls. Without peeking inside the bag, in every turn she removes two balls from the bag. If these balls are of same color then one white ball is added otherwise a black ball is added to the bag. The two drawn balls are discarded. She keeps on doing this until only one ball remains in the bag. If the last ball is black, Nishant wins, Rohan dies and vice-versa if the last ball is white.

As this is a matter of life and death, Nishant wants to compute his probability of winning. Write a C program to compute this probability given w and b.

Input:
 Two space separated non-negative integers representing number of white balls and number of black balls respectively
Output:
 Probability of winning for Nishant (upto two decimal places)

Example:
Input:
1 1
Output:
1.00
Explanation: The drawn balls will be of different colors so a black ball will be added to the bag and the two drawn balls will be discarded. Effectively only a black ball remains in the end. Hence, Nishant will always win.