```
function LS_solution(n, A, Ab)
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
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% UF ID: ####-####    %
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
% Purpose of this function = to check if an augmented matrix is consistent.
% If the matrix is consistent, the function then determines if the solution is
% unique or infinitely many.
% n = number of variables in the system of the equation
% A = A matrix
% Ab = augmented matrix of A and b
% Output = displays text to clarify if the matrix is consistent and how
% many solutions it has

% modify the function rank_comp.m per instructions posted in Canvas
if rank(A) ~= rank(Ab)
    disp('Ax = b is inconsistent and it has no solution')
elseif rank(A) == rank(Ab) && rank(A) == n
    disp('Ax = b is consistent and it has a unique solution')
else
    disp('Ax = b is consistent and it has infinitely many solutions')
end

end
```