```
function [Q, R] = qr_factorization(A)
    [m, n] = size(A);
    Q = zeros(m, n);
    R = zeros(n, n);

    for j = 1:n
        R(j, j) = norm(A(:, j));
        if R(j, j) == 0
            disp("A has linearly dependent columns");
            Q = [];
            R = [];
            return;
        end

        Q(:, j) = A(:, j) / R(j, j);

        for k = j + 1:n
            R(j, k) = Q(:, j)' * A(:, k);
            A(:, k) = A(:, k) - Q(:, j) * R(j, k);
        end
    end
end

function x = qr_solve(Q, R, b)
    Qt_b = Q' * b;
    x = R \ Qt_b;
end

%Trying my own example
A = [1 1 1; 1 2 3; 1 3 6];
b = [6; 14; 30];

[Q, R] = qr_factorization(A);
x = qr_solve(Q, R, b);

disp("Q:");
disp(Q);
disp("R:");
disp(R);
disp("x:");
disp(x);
```