APPLICATION OF THOMAS ALGORITHM

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```
% Tridiagonal system
clc; clear all; clc; close all;
format 'short'
m=4; % Order of the Tridiagonal
% Lower diagonal entries
a=[0 1 1 1]
% Upper diagonal entries
c = [1 1 1 0];
% Main diagonal entries
b = [-2.6 -2.6 -2.6 -2.6];
% Right-side vector
d = [-240 0 0 -150];
%% Triangularization
for i=1:m
        if i==1
        alpha(1)=b(1);
        beta(1)=d(1)
        else
        alpha(i) = b(i) - (a(i)/alpha(i-1))*c(i-1);
        beta(i)=d(i)-(a(i)/alpha(i-1))*beta(i-1)
        end
end
alpha
beta
AA = [alpha(1) c(1) 0 0; 0 alpha(2) c(2) 0 0; 0 0 alpha(3) c(3); 0 0 0 alpha(4)]
BB=[beta(1); beta(2); beta(3); beta(4)]
%%Back Substituion
x = zeros(1,m)
for i=m:-1:1
        if i==m
        T(m)=beta(m)/alpha(m)
        else
        T(i)=(beta(k)-c(i)*T(i+1))/alpha(i+1);
        end
end
T
```