## EGME 2050 Computational Methods Spring 2022

Lab Week 7

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## **Problem 1: Section 32.3**

```
function [L, b, x] = myl(n)
    \mbox{\ensuremath{\mbox{\$Create}}} zero matrices L, b and x
    L=zeros(n,n);
    b=zeros(n,1);
    x=zeros(n,1);
    %Fill matrix b with a column from 1 to n
    %Fill matrix L with a lower triangle
    for i=1:n
        b(i,1)=i;
        for j=1:n
             if i>=j
                 L(i,j)=i+j;
             end
        end
    end
    %Solves the lower triangle using numerical methods
    for j=1:1:n
        x(j) = (b(j)-L(j,1:n)*x(1:n))/L(j,j);
    end
end
```