```
A=[10 -1 -2 0; -1 11 -1 3; 2 -1 10 -1; 0 3 -1 8]
```

```
A = 4×4
    10    -1    -2     0
    -1    11    -1     3
     2    -1    10    -1
     0     3    -1     8
```

```
b=[6; 25; -11; 15]
```

```
b = 4×1
     6
    25
   -11
    15
```

```
jacobiMethod(A,b)
```

```
ans = 4×1
    0.6118
    1.9655
   -0.9236
    1.0225
```

```

```

```
function bool=dominanteDiagonal(A)
    [n,m] = size(A);
    if n~=m
        error('A no es una matriz cuadrada.')
    end
    i = 1;
    bool = true;
    while i<=n && bool
        bool = 2*abs(A(i,i)) > sum(abs(A(i,:)));
        i = i+1;
    end
end
function x=jacobiMethod(A,b)
    if ~dominanteDiagonal(A),error('La matriz no es dominante diagonal'),end
    [n,~] = size(A);
    if(n~=size(b)), error('Las dimensiones no son iguales'), end
    D = diag(A);
    U = triu(A,1);
    L = tril(A,-1);
    x = zeros(size(b));
    MAX = 1000;
    i = 1;
    cond = true;
    while cond
        xp = x;
        x(1) = (b(1)- U(1,2:n)*xp(2:n))/D(1);
        for j=2:n-1
            x(j) = (b(j) - (L(j,1:j-1)*xp(1:j-1)+U(j,j+1:n)*xp(j+1:n)))/D(j);
        end
        x(n) = (b(n) - L(n,1:n-1)*xp(1:n-1))/D(n);
```

```
        i = i+1;
        cond = norm((x-xp)./x, Inf) > eps && i<MAX;
    end
end
```