Rapport matlab

1. Methode factorisation

function [b]=descende(L,b)

b(1)=b(1)/L(1,1) ;

for i=2:n

som = 0 ;

for j=1:i-1

som=som+L(i,j)\*b(k) ;

end;

b(i)=[b(i)-som]/L(i,i) ;

end;

end

function [b]= remonte(L,b)

sz=size(L,1);

b(sz)=b(sz)/L(sz,sz) ;

for i=sz-1:1

som=0;

for j=i+1:sz

som=som+L(i,j)\*b(j);

end;

b(i)=b(i)-som/L(i,i) ;

end;

end

function [A]=decomplu(A)

n=size(A,1) ;

s = det(A) ;

if s ~= 0

for i=2:n;

A(i,1)=A(i,1)/A(1,1);

end;

for i=2:n;

for j=i:n;

s=0;

for k=1:(i-1);

s=s+A(i,k)\*A(k,j);

end;

A(i,j)=A(i,j)-s;

end;

for j=i+1:n;

s=0;

for k=1:(i-1);

s=s+A(j,k)\*A(k,i);

end;

A(j,i)=(A(j,i)-s)/A(i,i);

end;

end;

end;

end

function [x] = resollu(A,b)

A=decomplu(A) ;

L=tril(A) ;

U=triu(A) ;

y = descende(L,b);

x = remonte(U,y);

end