```matlab
im=(imread('LENA.bmp'));
logo=im2bw(rgb2gray(imread('LOGO.bmp')));

figure(1)
subplot(1,2,1),imshow(im)
subplot(1,2,2),imshow(logo)

immod=im;
global cl
global len
[h1,w1]=size(im);   %cover image
[r c]=size(logo);   %logo

cl=150;
dl=cl;
cu=cl+99;du=dl+99;

x=1;
len=r*c;
t=0;

%%%%%%%%%%%%%%%%%%%%%%embedding%%%%%%%%%%%%%%%%%%%%%
bitvector=reshape(logo,[1 r*c]);
%[mbitvector]=bitvectmodifi(bitvector);
embedarea=im(cl:cu,dl:du);
[x1,y1]=size(embedarea);

embedareavect=reshape(embedarea,[1 x1*y1]);
%modembedarea=embedarea;
modembedareavect=embedareavect;
%
nibitvector=bitvector;
bitvector=reshape(logo,[1 r*c]);

for t=1:len
```

```matlab
        pix=embedareavect(1,t);
        bin=dec2bin(pix,8);
        tmp(t,1)=pix; %tmp(t,2)=99999;
        ic=bitvector(1,t);

        %bin(1,7)=num2str(v);
        bin(1,8)=num2str(ic);
        mpix=(bin2dec(bin));
        tmp(t,2)=mpix;
        modembedareavect(1,t)=mpix; %modembedareavect(1,t) ↙
-3;

        %nbitvector(x)=v;
        %nbitvector(x+1)=w;
        nbitvector(x,1)=ic;
        x=x+1;
end
modembedarea=reshape(modembedareavect,[x1 y1]);
immod(cl:cu,dl:du)=(modembedarea);
%[k]=bitvectsim(bitvector,nbitvector);

%figure(1),imshow(bitvector)%bitvector
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
figure(2),imshow((immod)) %bitvector
%%%%%%%%%%%%%%%%%%%%%%%%%%extraction%%%%%%%%%%%%%%%%%%%%%%%
rlogo=reshape(nbitvector,[r c]);
%figure(2),imshow(rlogo)
imwrite(immod, 'WATERMARKED_LENA.bmp');
imwrite(rlogo, 'RLOGO.bmp');
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%xlswrite('bintmp.xls',tmp);
corr2(im,immod)
psnr(im,immod)
```