LAMPIRAN A
LISTING PROGRAM

Algoritma Graphical User Interface(programfinal2.m)

```
clear all;
clc;
form1=figure(...'units','points',.. 'position',[130 190 800 300],...'color',[.8 .8
.9],...'menubar','none',...
'resize','off',... 'numbertitle','off',...'name','Software For Detecting Image');

frame1=uicontrol('parent',form1,...'units','points',...'position',[0 270 800
50],...'backgroundcolor',[.3 .3 .4],... 'style','Frame');

label1=uicontrol('parent',form1,... 'units','points',... 'position',[100 270 200 20],...
'backgroundcolor',[.3 .3
.4],...'style','Text',...'horizontalalignment','left',...'string','Referensi',...
fontname','arial',...'fontsize',10,...'fontweight','bold',...'foregroundcolor',[1 1 1]);

layar1=axes('parent',form1,...'units','points',...'position',[30 80 180
180],...'xgrid','off',...'ygrid','off',...
'xcolor',[1 1 1],...'ycolor',[1 1 1],...'fontsize',1,...'color',[1 1 1]);

label2=uicontrol('parent',form1,...'units','points',...'position',[60 50 80
10],...'backgroundcolor',[.8 .8 .9],... 'style','Text',...    'string','Referensi
ke:',...'fontname','arial',...'fontsize',10,...
'fontweight','bold',...'foregroundcolor',[0 0 0]);

but1=uicontrol('parent',form1,...'style','radio',...'string','1',...'position',[90 40 50 10],...
'backgroundcolor',[.8 .8 .9],...'value',1,...
'callback',['set(but1,''value'',1),'...
            'set(but2,''value'',0),'...
            'set(but3,''value'',0),'...
            'set(but4,''value'',0),']);

 but2=uicontrol('parent',form1,... 'style','radio',...'string','2',...'position',[120 40 50 10],...
 backgroundcolor',[.8 .8 .9],...'value',1,...
 'callback',['set(but2,''value'',1),'...
            'set(but1,''value'',0),'...
            'set(but3,''value'',0),'...
            'set(but4,''value'',0),']);

 but3=uicontrol('parent',form1,...'style','radio',...'string','3',...'position',[150 40 50
10],...'backgroundcolor',[.8 .8 .9],...'value',1,...
 'callback',['set(but3,''value'',1),'...
            'set(but1,''value'',0),'...
            'set(but2,''value'',0),'...
            'set(but4,''value'',0),']);

 but4=uicontrol('parent',form1,...'style','radio',...'string','4',...'position',[180 40 50 10],...
 'backgroundcolor',[.8 .8 .9],...'value',1,...
 'callback',['set(but4,''value'',1),'...
            'set(but1,''value'',0),'...
            'set(but2,''value'',0),'...
            'set(but3,''value'',0),']);
```

```
tombol1=uicontrol('parent',form1,...'units','points',...'position',[80 10 80 15],...
'style','pushbutton',...'callback','programtb1',...'string','OLAH&SHOW',...'fontname','arial',...
'fontsize',10);

label3=uicontrol('parent',form1,...'units','points',...'position',[220 80 100 15],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...'string','=======>',...'fontname','arial',...
'fontsize',15,...'fontweight','bold',...'foregroundcolor',[0 0 0]);

label4=uicontrol('parent',form1,...'units','points',...'position',[220 100 100 15],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...'string','=======>',...'fontname','arial',...
'fontsize',15,...'fontweight','bold',...'foregroundcolor',[0 0 0]);

label5=uicontrol('parent',form1,…'units','points',...'position',[220 120 100 15],...
'backgroundcolor',[.8 .8
.9],...'style','Text',...'string','=======>',...'fontname','arial',...'fontsize',15,...
'fontweight','bold',...'foregroundcolor',[0 0 0]);

label6=uicontrol('parent',form1,...'units','points',...'position',[220 140 100 15],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...'string','=======>',...'fontname','arial',...
'fontsize',15,...'fontweight','bold',...'foregroundcolor',[0 0 0]);

label7=uicontrol('parent',form1,...'units','points',...'position',[220 160 100 15],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...'string','=======>',...'fontname','arial',...
'fontsize',15,...'fontweight','bold',...'foregroundcolor',[0 0 0]);

label8=uicontrol('parent',form1,...'units','points',...'position',[220 180 100 15],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...'string','=======>',...'fontname','arial',...
'fontsize',15,...'fontweight','bold',...'foregroundcolor',[0 0 0]);

label9=uicontrol('parent',form1,...'units','points',...'position',[220 200 100 15],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...'string','=======>',...'fontname','arial',...
'fontsize',15,...'fontweight','bold',...'foregroundcolor',[0 0 0]);

label10=uicontrol('parent',form1,...'units','points',...'position',[220 220 100 15],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...'string','=======>',...'fontname','arial',...
'fontsize',15,...'fontweight','bold',...'foregroundcolor',[0 0 0]);

label11=uicontrol('parent',form1,...'units','points',...'position',[220 240 100 15],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...'string','=======>',...'fontname','arial',...
'fontsize',15,...'fontweight','bold',...'foregroundcolor',[0 0 0]);

layar2=axes('parent',form1,...'units','points',...'position',[330 80 180 180],...'xgrid','off',...
'ygrid','off',...'xcolor',[1 1 1],...'ycolor',[1 1 1],...'fontsize',1,...'color',[1 1 1]);

label12=uicontrol('parent',form1,...'units','points',...'position',[310 270 200 20],...
'backgroundcolor',[.3 .3 .4],...'style','Text',...'horizontalalignment','center',...
'string','Input',...'fontname','arial',...'fontsize',10,...'fontweight','bold',...
'foregroundcolor',[1 1 1]);

label13=uicontrol('parent',form1,...'units','points',... 'position',[320 50 100 10],...
'backgroundcolor',[.8 .8 .9],...'style','Text',...    'string','Masukkan input:',...
'fontname','arial',...'fontsize',10,...'fontweight','bold',...'foregroundcolor',[0 0 0]);
```

```
edit1=uicontrol('parent',form1,...'units','points',...'position',[330 28 100
15],...'backgroundcolor',[1 1 1],...'style','Edit',...'string','',...'fontname','arial',...'fontsize',10);

 tombol2=uicontrol('parent',form1,...'units','points',...'position',[360 10 80 15],...
'style','pushbutton',...'callback','programtb2',...'string','OLAH&SHOW',...'fontname','arial',...
'fontsize',10);

label14=uicontrol('parent',form1,...'units','points',...'position',[560 270 200 20],...
'backgroundcolor',[.3 .3 .4],...'style','Text',...'string','Output',...'fontname','arial',...
'fontsize',10,...fontweight','bold',...'foregroundcolor',[1 1 1]);

layar3=axes('parent',form1,...'units','points',...'position',[580 80 180 180],...'xgrid','off',...
'ygrid','off',...'xcolor',[1 1 1],...'ycolor',[1 1 1],...'fontsize',1,...'color',[1 1 1]);

tombol3=uicontrol('parent',form1,...'units','points',...'position',[520 160 50 50],...
'style','pushbutton',...'callback','programolah',...'string','OLAH',...'fontname','arial',...
'fontsize',10);

edit2=uicontrol('parent',form1,...'units','points',...'position',[590 40 150 15],...
'backgroundcolor',[1 1 1],...'style','Edit',...'string','',...'fontname','arial',...
'fontsize',10);

tombol4=uicontrol('parent',form1,...'units','points',...'position',[690 20 50
15],...'style','pushbutton',...
'string','EXIT',...'fontname','arial',...'fontsize',10,...'callback','close');
```

Algoritma programtb1.m

```
if(get(but1,'value'))==1
       set(form1,'CurrentAxes',layar1);
       I=imread('gam13.bmp');
       imshow(I);
       Z=rgb2gray(I);
       [junk threshold] = edge(Z, 'sobel');
       fudgeFactor = .5;
       WW= edge(Z,'sobel', threshold * fudgeFactor);
       WsFill= imfill(Ws,'holes');
       Wsth= strel('diamond',1);
       fi1= imerode(WsFill,Wsth);
       fi2= imerode(fi1,Wsth);
       [K,L]=size(fi2);

for i=1:3
   for j=1:4
       x=0;
       for K=1:89
          for L=1:50
             x=x+fi2(((i-1)*89)+K,((j-1)*50)+L);
          end;
       end;
       Cf1(i,j)=x/4450;
   end;
end;
```

```
elseif(get(but2,'value'))==1
        set(form1,'CurrentAxes',layar1);
        I=imread('gam14.bmp');
        imshow(I);
        Z=rgb2gray(I);
        [junk threshold] = edge(Z, 'sobel');
        fudgeFactor = .5;
        WW= edge(Z,'sobel', threshold * fudgeFactor);
        WsFill= imfill(Ws,'holes');
        Wsth= strel('diamond',1);
        fi1= imerode(WsFill,Wsth);
        fi2= imerode(fi1,Wsth);
        [K,L]=size(fi2);

for i=1:3
    for j=1:4
        x=0;
        for K=1:89
            for L=1:50
                x=x+fi2(((i-1)*89)+K,((j-1)*50)+L);
            end;
        end;
        Cf2(i,j)=x/4450;
    end;
end;
elseif(get(but3,'value'))==1
        set(form1,'CurrentAxes',layar1);
        I=imread('gam16.bmp');
        imshow(I);
        Z=rgb2gray(I);
        [junk threshold] = edge(Z, 'sobel');
        fudgeFactor = .5;
        WW= edge(Z,'sobel', threshold * fudgeFactor);
        WsFill= imfill(Ws,'holes');
        Wsth= strel('diamond',1);
        fi1= imerode(WsFill,Wsth);
        fi2= imerode(fi1,Wsth);
        [K,L]=size(fi2);

for i=1:3
    for j=1:4
        x=0;
        for K=1:89
            for L=1:50
                x=x+fi2(((i-1)*89)+K,((j-1)*50)+L);
            end;
        end;
        Cf3(i,j)=x/4450;
    end;
end;

elseif(get(but4,'value'))==1
       set(form1,'CurrentAxes',layar1);
       I=imread('gam15.bmp');
       imshow(I);
       Z=rgb2gray(I);
```

```
      [junk threshold] = edge(Z, 'sobel');
       fudgeFactor = .5;
       WW= edge(Z,'sobel', threshold * fudgeFactor);
       WsFill= imfill(Ws,'holes');
       Wsth= strel('diamond',1);
       fi1= imerode(WsFill,Wsth);
       fi2= imerode(fi1,Wsth);
       [K,L]=size(fi2);

for i=1:3
   for j=1:4
      x=0;
      for K=1:89
         for L=1:50
            x=x+fi2(((i-1)*89)+K,((j-1)*50)+L);
         end;
      end;
      Cf4(i,j)=x/4450;
   end;
end;

else
   break;
end;


set(layar1,...
   'xgrid','off',...
   'ygrid','off',...
   'xcolor',[1 1 1],...
   'ycolor',[1 1 1],...
   'fontsize',1,...
   'color',[1 1 1]);
```

Algoritma programtb2.m

```
for V=layar2
     set(form1,'CurrentAxes',layar2);
     F=get(edit1,'String');
     I=imread(F);
     imshow(I);
     Z=rgb2gray(I);
     [junk threshold] = edge(Z, 'sobel');
     fudgeFactor = .5;
     WW= edge(Z,'sobel', threshold * fudgeFactor);
     WsFill= imfill(Ws,'holes');
     Wsth= strel('diamond',1);
     fi1= imerode(WsFill,Wsth);
     fi2= imerode(fi1,Wsth);
     [K,L]=size(fi2);

for i=1:3
   for j=1:4
```

```
        x=0;
        for K=1:89
            for L=1:50
                x=x+fi2(((i-1)*89)+K,((j-1)*50)+L);
            end;
        end;
        CF(i,j)=x/4450;
    end;
end;
end;

set(layar2,...
    'xgrid','off',...
    'ygrid','off',...
    'xcolor',[1 1 1],...
    'ycolor',[1 1 1],...
    'fontsize',1,...
    'color',[1 1 1]);
```

Algoritma programolah.m

```
 if get(but1,'value')==1
    F=get(edit1,'String');
    I=imread(F);
    imshow(I);
    Z=rgb2gray(I);
    [junk threshold] = edge(Z, 'sobel');
    fudgeFactor = .5;
    WW= edge(Z,'sobel', threshold * fudgeFactor);
    WsFill= imfill(Ws,'holes');
    Wsth= strel('diamond',1);
    fi1= imerode(WsFill,Wsth);
    fi2= imerode(fi1,Wsth);
    [K,L]=size(fi2);

for i=1:3
    for j=1:4
        x=0;
        for K=1:89
            for L=1:50
                x=x+fi2(((i-1)*89)+K,((j-1)*50)+L);
            end;
        end;
        CF(i,j)=x/4450;
    end;
end;

k=F;
db=Cf1;
in=CF;
A=0;
for i=1
if in(1,1)>=0&in(1,1)<=db(1,1)
    n(i)=1;
```

```
else
    n(i)=0;
end;
end;
for i=2
if in(1,2)>=0&in(1,2)<=(db(1,2)+0.0952)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=3
if in(1,3)>=0&in(1,3)<=(db(1,3)+0.108)
    n(i)=1;
else
    n(i)=0;
end;
end;
for i=4
if in(1,4)>=0&in(1,4)<=db(1,4)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=5
if in(2,1)>=0&in(2,1)<=(db(2,1)+0.021)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=6
if in(2,2)>=0&in(2,2)<=(db(2,2)+0.4991)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=7
if in(2,3)>=0&in(2,3)<=(db(2,3)+0.2126)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=8
if in(2,4)>=0&in(2,4)<=(db(2,4)+0.0943)
    n(i)=1;
else
   n(i)=0;
end;
end;
for i=9
if in(3,1)>=0&in(3,1)<=(db(3,1)+0.1317)
   n(i)=1;
else
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```
   n(i)=0;
end;
end;
for i=10
if in(3,2)>=0&in(3,2)<=(db(3,2)+0.5627)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=11
if in(3,3)>=0&in(3,3)<=(db(3,3)+0.569)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=12
if in(3,4)>=0&in(3,4)<=(db(3,4)+0.0797)
   n(i)=1;
else
   n(i)=0;
end;
end;

for i=1:12
A=A+n(i);
end;
if A==12
    set(form1,'CurrentAxes',layar3);
    I=imread(k);
    imshow(I);
    i='MATCHING';
    set(edit2,'String',(i));
else
    set(form1,'CurrentAxes',layar3);
    I=imread(k);
    imshow(I);
    i='NO MATCHING';
    set(edit2,'String',(i));
    if(in(1,1)>=0.1&in(1,2)>=0.1&in(1,3)<=0.05&in(1,4)>=0.2)
        x=[25 65 65 25 25];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
        x=[140 180 180 140 140];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
    elseif(in(1,1)>=0.2&in(1,2)<=0.01&in(1,3)>=0.1&in(1,4)>=0.1)
       x=[15 50 50 15 15];
       y=[20 20 150 150 20];
       z=line(x,y,'color','r','linewidth',4);
       x=[140 180 180 140 140];
       y=[20 20 150 150 20];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)>=0.2&in(1,2)<=0.01&in(1,3)<=0.01&in(1,4)>=0.2)
       x=[20 65 65 20 20];
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```
    y=[30 30 160 160 30];
    z=line(x,y,'color','r','linewidth',4);
    x=[160 195 195 160 160];
    y=[30 30 160 160 30];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.3&in(1,2)<=0.05&in(1,3)<=0.0005&in(1,4)<=0.0005)
     x=[30 65 65 30 30];
     y=[30 30 160 160 30];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.05&in(1,2)>=0.25&in(1,3)<=0.0005&in(1,4)<=0.0005)
     x=[45 80 80 45 45];
     y=[10 10 160 160 10];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)>=0.1&in(1,4)<=0.1&in(1,1)<=0.0005&in(1,2)<=0.0005)
     x=[133 163 163 133 133];
     y=[20 20 160 160 20];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)>=0.1&in(1,4)>=0.1&in(1,1)<=0.0005&in(1,2)<=0.0005)
     x=[130 165 165 130 130];
     y=[10 10 160 160 10];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)<=0.001&in(1,4)>=0.25&in(1,1)<=0.0005&in(1,2)<=0.0005)
     x=[140 180 180 140 140];
     y=[20 20 160 160 20];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.2&in(1,2)<=0.0005&in(1,3)<=0.0005&in(1,4)<=0.0005)
     x=[15 68 68 15 15];
     y=[15 15 155 155 15];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)>=0.15&in(1,3)<=0.1&in(1,4)>=0.15)
     x=[25 65 65 25 25];
     y=[10 10 160 160 10];
     z=line(x,y,'color','r','linewidth',4);
     x=[140 180 180 140 140];
     y=[10 10 160 160 10];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.15&in(1,2)<=0.05&in(1,3)>=0.05&in(1,4)<=0.15)
     x=[25 65 65 25 25];
     y=[10 10 160 160 10];
     z=line(x,y,'color','r','linewidth',4);
     x=[140 180 180 140 140];
     y=[10 10 160 160 10];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.05&in(1,2)>=0.15&in(1,3)<=0.0005&in(1,4)<=0.0005)
     x=[30 70 70 30 30];
     y=[20 20 160 160 20];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)<=0.05&in(1,3)<=0.0005&in(1,4)<=0.0005)
     x=[25 70 70 25 25];
     y=[20 20 160 160 20];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)<=0.05&in(1,4)>=0.2&in(1,1)<=0.0005&in(1,2)<=0.0005)
     x=[140 180 180 140 140];
     y=[20 20 160 160 20];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)<=0.05&in(1,4)>=0.1&in(1,1)<=0.0005&in(1,2)<=0.0005)
     x=[140 180 180 140 140];
```

```
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)<=0.15&in(1,3)<=0.005&in(1,4)<=0.0005)
    x=[35 80 80 35 35];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.2&in(1,2)<=0.0005&in(1,3)>=0.05&in(1,4)>=0.15)
    x=[20 65 65 20 20];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 170 170 135 135];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.0005&in(1,2)>=0.2&in(1,3)<=0.005&in(1,4)<=0.0005)
    x=[35 85 85 35 35];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.005&in(1,2)<=0.2&in(1,3)>=0.1&in(1,4)>=0.1)
    x=[40 75 75 40 40];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 165 165 135 135];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.0005&in(1,2)>=0.25&in(1,3)<=0.005&in(1,4)<=0.0005)
    x=[45 85 85 45 45];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.05&in(1,2)>=0.2&in(1,3)>=0.15&in(1,4)<=0.1)
    x=[40 75 75 40 40];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 165 165 135 135];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)<=0.15&in(1,4)<=0.1&in(1,1)<=0.001&in(1,2)<=0.001)
    x=[130 180 180 130 130];
    y=[15 15 160 160 15];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)>=0.15&in(1,3)>=0.2&in(1,4)<=0.05)
    x=[30 75 75 30 30];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
    x=[130 165 165 130 130];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)<=0.1&in(1,4)>=0.2&in(1,1)<=0.0005&in(1,2)<=0.0005)
    x=[140 180 180 140 140];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.2&in(1,2)<=0.05&in(1,3)<=0.01&in(1,4)>=0.2)
    x=[25 65 65 25 25];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
    x=[140 175 175 140 140];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
```

```
    elseif (in(1,3)<=0.05&in(1,4)>=0.2&in(1,1)<=0.001&in(1,2)<=0.001)
        x=[140 180 180 140 140];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)<=0.01&in(1,2)>=0.2&in(1,3)>=0.1&in(1,4)<=0.1)
        x=[40 80 80 40 40];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
        x=[130 165 165 130 130];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,3)<=0.1&in(1,4)<=0.2&in(1,1)<=0.005&in(1,2)<=0.005)
        x=[140 180 180 140 140];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)<=0.1&in(1,2)>=0.1&in(1,3)>=0.1&in(1,4)<=0.05)
        x=[40 80 80 40 40];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
        x=[130 165 165 130 130];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)>=0.2&in(1,2)<=0.1&in(1,3)<=0.1&in(1,4)<=0.005)
        x=[20 65 65 20 20];
        y=[10 10 160 160 10];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,3)<=0.1&in(1,4)>=0.15&in(1,1)<=0.1&in(1,2)<=0.1)
        x=[140 180 180 140 140];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)<=0.1&in(1,2)>=0.1&in(1,3)<=0.1&in(1,4)>=0.1)
        x=[40 80 80 40 40];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
        x=[120 170 170 120 120];
        y=[20 20 160 160 20];
        z=line(x,y,'color','r','linewidth',4);
    else
       x=[1 200 200 1 1];
       y=[1 1 267 267 1];
       z=line(x,y,'color','r','linewidth',10);
    end;
end;

%Untuk olah perbandingan dengan database2

elseif get(but2,'value')==1
    F=get(edit1,'String');
    k=F;
    db=Cf2;
    in=CF;
A=0;
for i=1
if in(1,1)>=0&in(1,1)<=(db(1,1)+0.3239)
   n(i)=1;
else
```

```
    n(i)=0;
end;
end;
for i=2
if in(1,2)>=0&in(1,2)<=(db(1,2)+0.1365)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=3
if in(1,3)>=0&in(1,3)<=db(1,3)
    n(i)=1;
else
    n(i)=0;
end;
end;
for i=4
if in(1,4)>=0&in(1,4)<=db(1,4)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=5
if in(2,1)>=0&in(2,1)<=(db(2,1)+0.3037)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=6
if in(2,2)>=0&in(2,2)<=(db(2,2)+0.3966)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=7
if in(2,3)>=0&in(2,3)<=(db(2,3)+0.6155)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=8
if in(2,4)>=0&in(2,4)<=db(2,4)
    n(i)=1;
else
   n(i)=0;
end;
end;
for i=9
if in(3,1)>=0&in(3,1)<=(db(3,1)+0.1042)
   n(i)=1;
else
   n(i)=0;
```

```
end;
end;
for i=10
if in(3,2)>=0&in(3,2)<=(db(3,2)+0.5326)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=11
if in(3,3)>=0&in(3,3)<=(db(3,3)+0.316)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=12
if in(3,4)>=0&in(3,4)<=(db(3,4)+0.1713)
   n(i)=1;
else
   n(i)=0;
end;
end;

for i=1:12
A=A+n(i);
end;
if A==12
    set(form1,'CurrentAxes',layar3);
    I=imread(k);
    imshow(I);
    i='MATCHING';
    set(edit2,'String',(i));
else
    set(form1,'CurrentAxes',layar3);
    I=imread(k);
    imshow(I);
    i='NO MATCHING';
    set(edit2,'String',(i));
    if (in(1,4)<=0.005&in(1,2)<=0.05&in(1,1)<=0.0005&in(1,3)<=0.15)
       x=[40 70 70 40 40];
       y=[175 175 267 267 175];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,3)>=0.15&in(1,4)>=0.1&in(1,1)<=0.0005&in(1,2)<=0.0005)
       x=[45 70 70 45 45];
       y=[175 175 267 267 175];
       z=line(x,y,'color','r','linewidth',4);
       x=[130 165 165 130 130];
       y=[15 15 160 160 15];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,3)<=0.001&in(1,4)>=0.25&in(1,1)<=0.0005&in(1,2)<=0.0005)
       x=[40 60 60 40 40];
       y=[178 178 267 267 178 ];
       z=line(x,y,'color','r','linewidth',4);
       x=[150 185 185 150 150];
       y=[20 20 160 160 20];
```

```
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)>=0.2&in(1,4)<=0.005&in(1,1)<=0.005&in(1,2)<=0.005)
    x=[30 60 60 30 30];
    y=[178 178 267 267 178 ];
    z=line(x,y,'color','r','linewidth',4);
    x=[110 150 150 110 110];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)>=0.1&in(1,4)<=0.1&in(1,1)<=0.0005&in(1,2)<=0.0005)
    x=[50 70 70 50 50];
    y=[178 178 267 267 178 ];
    z=line(x,y,'color','r','linewidth',4);
    x=[133 163 163 133 133];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)<=0.05&in(1,4)>=0.1&in(1,1)<=0.0005&in(1,2)<=0.0005)
    x=[30 60 60 30 30];
    y=[178 178 267 267 178 ];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 175 175 135 135];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)>=0.15&in(1,3)<=0.05&in(1,4)>=0.2)
    x=[135 170 170 135 135];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.25&in(1,2)<=0.005&in(1,3)>=0.1&in(1,4)>=0.1)
    x=[135 180 180 135 135];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.2&in(1,2)<=0.005&in(1,3)<=0.005&in(1,4)>=0.2)
    x=[160 195 195 160 160];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.05&in(1,2)>=0.15&in(1,3)<=0.1&in(1,4)<=0.1)
    x=[133 163 163 133 133];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.01&in(1,2)>=0.01&in(1,3)>=0.01&in(1,4)>=0.01)
    x=[133 170 170 133 133];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.0001&in(1,2)>=0.01&in(1,3)<=0.01&in(1,4)>=0.01)
    x=[133 175 175 133 133];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,4)<=0.05&in(1,2)<=0.1&in(1,3)<=0.2&in(1,1)<=0.05)
    x=[40 70 70 40 40];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)>=0.1&in(1,4)>=0.1&in(1,1)<=0.005&in(1,2)<=0.005)
    x=[30 60 60 30 30];
    y=[178 178 267 267 178 ];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 175 175 135 135];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
```

```
    elseif (in(1,1)<=0.05&in(1,2)>=0.2&in(1,3)>=0.1&in(1,4)<=0.1)
       x=[130 180 180 130 130];
       y=[20 20 160 160 20];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,4)<=0.005&in(1,2)>=0.1&in(1,3)>=0.1&in(1,1)<=0.005)
       x=[30 60 60 30 30];
       y=[175 175 267 267 175];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,4)<=0.005&in(1,2)<=0.1&in(1,3)>=0.1&in(1,1)<=0.005)
       x=[30 70 70 30 30];
       y=[165 165 267 267 165];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,3)<=0.1&in(1,4)>=0.2&in(1,1)<=0.005&in(1,2)<=0.005)
       x=[30 60 60 30 30];
       y=[178 178 267 267 178 ];
       z=line(x,y,'color','r','linewidth',4);
       x=[135 175 175 135 135];
       y=[20 20 160 160 20];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)>=0.1&in(1,2)<=0.05&in(1,3)<=0.1&in(1,4)>=0.1)
       x=[133 175 175 133 133];
       y=[20 20 160 160 20];
       z=line(x,y,'color','r','linewidth',4);
    elseif  (in(1,3)<=0.1&in(1,4)>=0.1&in(1,1)<=0.05&in(1,2)<=0.05)
       x=[30 60 60 30 30];
       y=[178 178 267 267 178 ];
       z=line(x,y,'color','r','linewidth',4);
       x=[135 175 175 135 135];
       y=[20 20 160 160 20];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)<=0.1&in(1,2)>=0.1&in(1,3)>=0.15&in(1,4)<=0.05)
       x=[125 165 165 125 125];
       y=[20 20 160 160 20];
       z=line(x,y,'color','r','linewidth',4);
   elseif (in(1,4)<=0.05&in(1,2)<=0.1&in(1,3)<=0.1&in(1,1)<=0.05)
       x=[40 70 70 40 40];
       y=[175 175 267 267 175];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,3)>=0.1&in(1,4)<=0.1&in(1,1)<=0.005&in(1,2)<=0.005)
       x=[40 70 70 40 40];
       y=[178 178 267 267 178 ];
       z=line(x,y,'color','r','linewidth',4);
       x=[130 170 170 130 130];
       y=[20 20 160 160 20];
       z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)<=0.1&in(1,2)>=0.1&in(1,3)<=0.1&in(1,4)>=0.1)
       x=[125 170 170 125 125];
       y=[20 20 160 160 20];
       z=line(x,y,'color','r','linewidth',4);
    else
       x=[1 200 200 1 1];
       y=[1 1 267 267 1];
       z=line(x,y,'color','r','linewidth',10);
    end;
end;
```

```
%Untuk olah perbandingan dengan database3

elseif get(but3,'value')==1
     F=get(edit1,'String');
     k=F;
     db=Cf3;
     in=CF;

A=0;
for i=1
if in(1,1)>=0&in(1,1)<=(db(1,1)+0.2799)
    n(i)=1;
else
    n(i)=0;
end;
end;
for i=2
if in(1,2)>=0&in(1,2)<=db(1,2)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=3
if in(1,3)>=0&in(1,3)<=(db(1,3)+0.0233)
    n(i)=1;
else
    n(i)=0;
end;
end;
for i=4
if in(1,4)>=0&in(1,4)<=(db(1,4)+0.2662)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=5
if in(2,1)>=0&in(2,1)<=(db(2,1)+0.337)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=6
if in(2,2)>=0&in(2,2)<=(db(2,2)+0.3665)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=7
if in(2,3)>=0&in(2,3)<=(db(2,3)+0.376)
   n(i)=1;
else
   n(i)=0;
```

```
end;
end;
for i=8
if in(2,4)>=0&in(2,4)<=(db(2,4)+0.3259)
    n(i)=1;
else
   n(i)=0;
end;
end;
for i=9
if in(3,1)>=0&in(3,1)<=(db(3,1)+0.1206)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=10
if in(3,2)>=0&in(3,2)<=(db(3,2)+0.6063)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=11
if in(3,3)>=0&in(3,3)<=(db(3,3)+0.6335)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=12
if in(3,4)>=0&in(3,4)<=(db(3,4)+0.008)
   n(i)=1;
else
   n(i)=0;
end;
end;

for i=1:12
A=A+n(i);
end;
if A==12
    set(form1,'CurrentAxes',layar3);
    I=imread(k);
    imshow(I);
    i='MATCHING';
    set(edit2,'String',(i));
else
    set(form1,'CurrentAxes',layar3);
    I=imread(k);
    imshow(I);
    i='NO MATCHING';
    set(edit2,'String',(i));
    if (in(1,2)<=0.04&in(1,2)~=0&in(1,3)<=0.005&in(1,4)<=0.005)
        x=[40 70 70 40 40];
        y=[175 175 267 267 175];
```

```
    z=line(x,y,'color','r','linewidth',4);
    x=[135 165 165 135 135];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,2)<=0.005&in(1,3)<=0.005&in(1,4)<=0.005&in(1,1)<=0.005)
    x=[40 70 70 40 40];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 165 165 135 135];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,2)<=0.05&in(1,3)<=0.2&in(1,4)<=0.005&in(1,1)<=0.005)
    x=[40 70 70 40 40];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 165 165 135 135];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.005&in(1,2)>=0.2&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[125 145 145 125 125];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,2)>=0.25&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[140 165 165 140 140];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.3&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[135 165 165 135 135];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.2&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[145 165 165 145 145];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)>=0.2&in(1,1)<=0.005&in(1,2)<=0.005)
    x=[35 65 65 35 35];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,3)>=0.15&in(1,1)<=0.005&in(1,2)<=0.005)
    x=[30 65 65 30 30];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,4)>=0.2&in(1,1)<=0.005&in(1,2)<=0.005)
    x=[35 65 65 35 35];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,4)<=0.05&in(1,1)<=0.005&in(1,2)<=0.005)
    x=[45 70 70 45 45];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,2)<=0.1&in(1,1)<=0.005&in(1,3)<=0.2&in(1,4)<=0.005)
    x=[40 70 70 40 40];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 165 165 135 135];
    y=[175 175 267 267 175];
    z=line(x,y,'color','r','linewidth',4);
```

```
    elseif (in(1,4)>=0.1&in(1,1)<=0.005&in(1,2)<=0.005&in(1,3)>=0.1)
        x=[30 60 60 30 30];
        y=[170 170 267 267 170 ];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,2)>=0.1&in(1,1)<=0.005&in(1,3)>=0.1&in(1,4)<=0.005)
        x=[30 70 70 30 30];
        y=[175 175 267 267 175];
        z=line(x,y,'color','r','linewidth',4);
        x=[135 165 165 135 135];
        y=[175 175 267 267 175];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)>=0.1&in(1,3)<=0.005&in(1,4)<=0.005&in(1,2)>=0.1)
        x=[130 155 155 130 130];
        y=[170 170 267 267 170 ];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,4)>=0.1&in(1,1)<=0.005&in(1,2)<=0.005&in(1,3)<=0.1)
        x=[30 60 60 30 30];
        y=[170 170 267 267 170 ];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,4)<=0.1&in(1,1)<=0.005&in(1,2)<=0.005&in(1,3)>=0.1)
        x=[40 70 70 40 40];
        y=[170 170 267 267 170 ];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,2)<=0.1&in(1,1)<=0.1&in(1,3)>=0.1&in(1,4)<=0.005)
        x=[30 70 70 30 30];
        y=[175 175 267 267 175];
        z=line(x,y,'color','r','linewidth',4);
        x=[135 165 165 135 135];
        y=[175 175 267 267 175];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,4)>=0.1&in(1,1)<=0.005&in(1,2)<=0.1&in(1,3)<=0.1)
        x=[30 60 60 30 30];
        y=[170 170 267 267 170 ];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,2)>=0.1&in(1,1)<=0.005&in(1,3)<=0.1&in(1,4)<=0.005)
        x=[30 70 70 30 30];
        y=[175 175 267 267 175];
        z=line(x,y,'color','r','linewidth',4);
        x=[135 165 165 135 135];
        y=[175 175 267 267 175];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)>=0.1&in(1,3)<=0.005&in(1,4)<=0.005&in(1,2)<=0.1)
        x=[130 155 155 130 130];
        y=[170 170 267 267 170 ];
        z=line(x,y,'color','r','linewidth',4);
    else
        x=[1 200 200 1 1];
        y=[1 1 267 267 1];
        z=line(x,y,'color','r','linewidth',10);
    end;
end;

%Untuk olah perbandingan dengan database4

elseif get(but4,'value')==1
    F=get(edit1,'String');
```

```
    k=F;
    db=Cf4;
    in=CF;

A=0;
for i=1
if in(1,1)>=0&in(1,1)<=db(1,1)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=2
if in(1,2)>=0&in(1,2)<=db(1,2)
  n(i)=1;
else
  n(i)=0;
end;
end;
for i=3
if in(1,3)>=0&in(1,3)<=(db(1,3)+0.1507)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=4
if in(1,4)>=0&in(1,4)<=(db(1,4)+0.31)
  n(i)=1;
else
  n(i)=0;
end;
end;
for i=5
if in(2,1)>=0&in(2,1)<=db(2,1)
  n(i)=1;
else
  n(i)=0;
end;
end;
for i=6
if in(2,2)>=0&in(2,2)<=(db(2,2)+0.7067)
  n(i)=1;
else
  n(i)=0;
end;
end;
for i=7
if in(2,3)>=0&in(2,3)<=(db(2,3)+0.3472)
  n(i)=1;
else
  n(i)=0;
end;
end;
for i=8
if in(2,4)>=0&in(2,4)<=(db(2,4)+0.2347)
```

```
    n(i)=1;
else
   n(i)=0;
end;
end;
for i=9
if in(3,1)>=0&in(3,1)<=(db(3,1)+0.1228)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=10
if in(3,2)>=0&in(3,2)<=(db(3,2)+0.2975)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=11
if in(3,3)>=0&in(3,3)<=(db(3,3)+0.5636)
   n(i)=1;
else
   n(i)=0;
end;
end;
for i=12
if in(3,4)>=0&in(3,4)<=(db(3,4)+0.1023)
   n(i)=1;
else
   n(i)=0;
end;
end;

for i=1:12
A=A+n(i);
end;
if A==12
    set(form1,'CurrentAxes',layar3);
    I=imread(k);
    imshow(I);
    i='MATCHING';
    set(edit2,'String',(i));
else
    set(form1,'CurrentAxes',layar3);
    I=imread(k);
    imshow(I);
    i='NO MATCHING';
    set(edit2,'String',(i));
    if (in(1,1)<=0.005&in(1,3)>=0.001&in(1,4)<=0.005&in(1,2)<=0.2)
        x=[135 170 170 135 135];
        y=[175 175 267 267 175];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,2)<=0.005&in(1,3)<=0.005&in(1,4)<=0.005&in(1,1)<=0.005)
        x=[135 180 180 135 135];
        y=[175 175 267 267 175];
```

```
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,2)>=0.35&in(1,1)<=0.005&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[50 80 80 50 50];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
    x=[125 155 155 125 125];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.05&in(1,2)>=0.25&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[40 75 75 40 40];
    y=[15 15 160 160 15];
    z=line(x,y,'color','r','linewidth',4);
    x=[130 165 165 130 130];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif(in(1,1)>=0.05&in(1,2)>=0.15&in(1,3)<=0.0005&in(1,4)<=0.0005)
    x=[40 75 75 40 40];
    y=[15 15 160 160 15];
    z=line(x,y,'color','r','linewidth',4);
    x=[130 165 165 130 130];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.3&in(1,2)<=0.05&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[25 65 65 25 25];
    y=[15 15 160 160 15];
    z=line(x,y,'color','r','linewidth',4);
    x=[130 165 165 130 130];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.2&in(1,2)<=0.005&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[15 50 50 15 15];
    y=[30 30 150 150 30];
    z=line(x,y,'color','r','linewidth',4);
    x=[135 160 160 135 135];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.2&in(1,2)>=0.05&in(1,3)<=0.005&in(1,4)<=0.005)
    x=[25 60 60 25 25];
    y=[20 20 150 150 20];
    z=line(x,y,'color','r','linewidth',4);
    x=[125 155 155 125 125];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,2)>=0.2&in(1,1)<=0.0005&in(1,3)<=0.0005&in(1,4)<=0.0005)
    x=[50 80 80 50 50];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
    x=[125 150 150 125 125];
    y=[170 170 267 267 170 ];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)>=0.15&in(1,3)<=0.05&in(1,4)>=0.2)
     x=[30 65 65 30 30];
     y=[20 20 160 160 20];
     z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.25&in(1,2)<=0.005&in(1,3)>=0.1&in(1,4)>=0.1)
     x=[15 50 50 15 15];
     y=[30 30 150 150 30];
```

```
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.2&in(1,2)<=0.005&in(1,3)<=0.005&in(1,4)>=0.2)
    x=[20 50 50 20 20];
    y=[30 30 150 150 30];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.05&in(1,2)>=0.15&in(1,3)<=0.1&in(1,4)<=0.1)
    x=[40 75 75 40 40];
    y=[20 20 160 160 20];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)>=0.15&in(1,3)<=0.1&in(1,4)>=0.1)
    x=[30 75 75 30 30];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)<=0.05&in(1,3)>=0.05&in(1,4)>=0.1)
    x=[30 75 75 30 30];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif(in(1,1)<=0.01&in(1,2)>=0.2&in(1,3)>=0.1&in(1,4)<=0.1)
    x=[30 75 75 30 30];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.3&in(1,2)<=0.05&in(1,3)<=0.005&in(1,4)>=0.3)
    x=[20 70 70 20 20];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,2)>=0.1&in(1,1)>=0.1&in(1,3)<=0.05&in(1,4)<=0.05)
   x=[40 80 80 40 40];
   y=[10 10 160 160 10];
   z=line(x,y,'color','r','linewidth',4);
   x=[125 155 155 125 125];
   y=[170 170 267 267 170 ];
   z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.1&in(1,2)>=0.1&in(1,3)>=0.1&in(1,4)<=0.05)
    x=[20 70 70 20 20];
    y=[10 10 160 160 10];
    z=line(x,y,'color','r','linewidth',4);
elseif (in(1,2)>=0.1&in(1,1)<=0.1&in(1,3)<=0.05&in(1,4)<=0.05)
   x=[40 80 80 40 40];
   y=[10 10 160 160 10];
   z=line(x,y,'color','r','linewidth',4);
   x=[125 155 155 125 125];
   y=[170 170 267 267 170 ];
   z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)<=0.05&in(1,3)>=0.2&in(1,4)<=0.05)
   x=[20 70 70 20 20];
   y=[10 10 160 160 10];
   z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.05&in(1,2)>=0.15&in(1,3)<=0.1&in(1,4)>=0.1)
   x=[20 80 80 20 20];
   y=[10 10 160 160 10];
   z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)<=0.1&in(1,2)>=0.15&in(1,3)>=0.1&in(1,4)<=0.1)
   x=[20 80 80 20 20];
   y=[10 10 160 160 10];
   z=line(x,y,'color','r','linewidth',4);
elseif (in(1,1)>=0.1&in(1,2)>=0.1&in(1,3)>=0.1&in(1,4)<=0.1)
   x=[20 80 80 20 20];
```

```
        y=[10 10 160 160 10];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,2)<=0.1&in(1,3)>=0.1&in(1,4)<=0.1&in(1,1)<=0.1)
        x=[135 180 180 135 135];
        y=[175 175 267 267 175];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,2)<=0.1&in(1,1)>=0.1&in(1,3)<=0.05&in(1,4)<=0.05)
        x=[20 70 70 20 20];
        y=[10 10 160 160 10];
        z=line(x,y,'color','r','linewidth',4);
        x=[125 155 155 125 125];
        y=[170 170 267 267 170 ];
        z=line(x,y,'color','r','linewidth',4);
    elseif (in(1,1)>=0.1&in(1,2)<=0.1&in(1,3)<=0.1&in(1,4)>=0.1)
        x=[20 80 80 20 20];
        y=[10 10 160 160 10];
        z=line(x,y,'color','r','linewidth',4);
    else
        x=[1 200 200 1 1];
        y=[1 1 267 267 1];
        z=line(x,y,'color','r','linewidth',10);
    end;
end;
else
   break;
end;

set(layar3,...
   'xgrid','off',...
   'ygrid','off',...
   'xcolor',[1 1 1],...
   'ycolor',[1 1 1],...
   'fontsize',1,...
   'color',[1 1 1]);
```