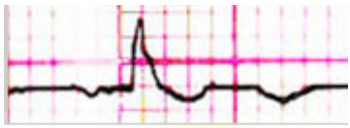

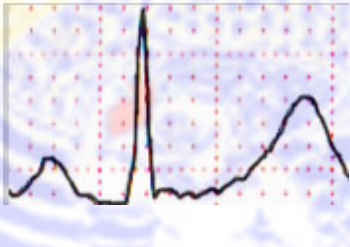
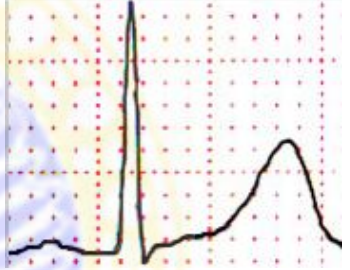
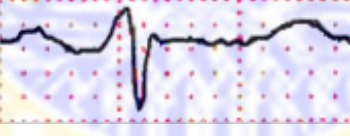
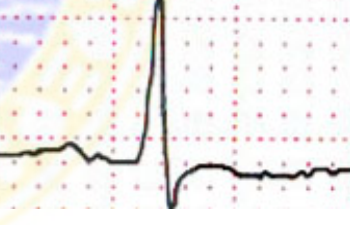
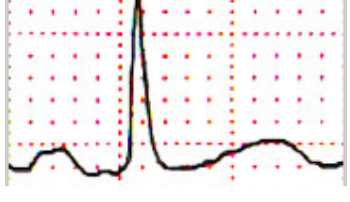
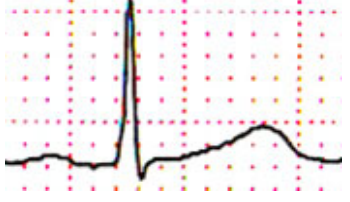


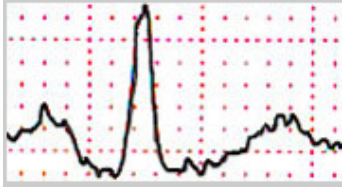
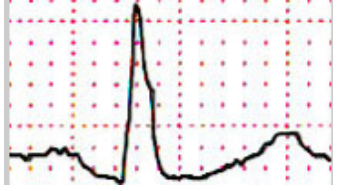
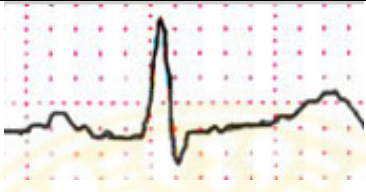
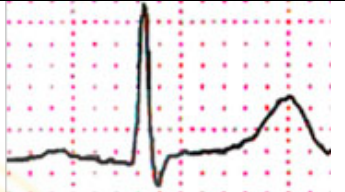
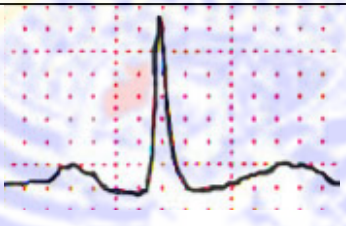
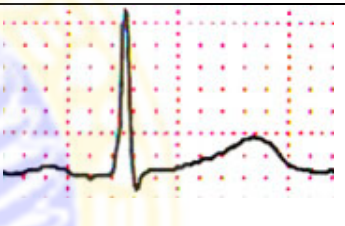
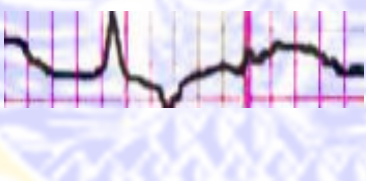

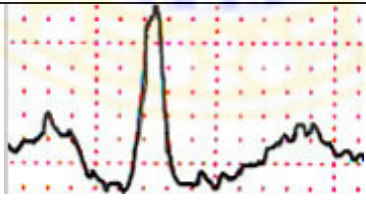
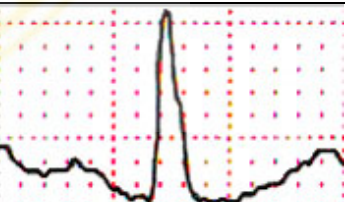
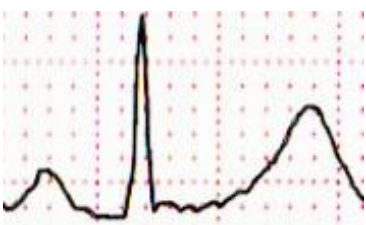
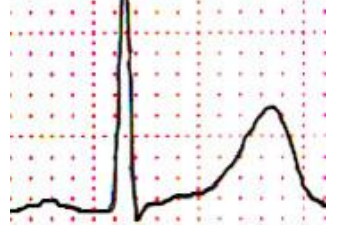

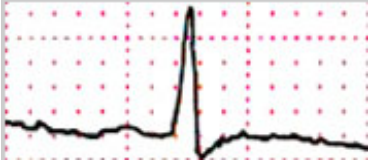
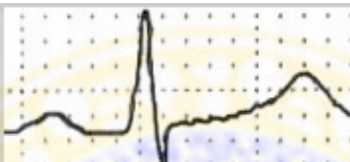

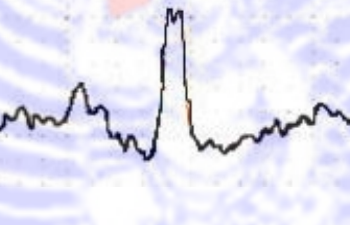
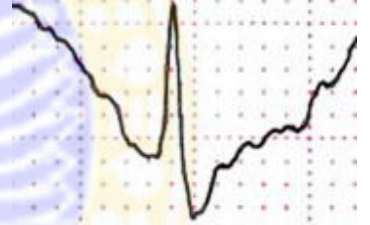
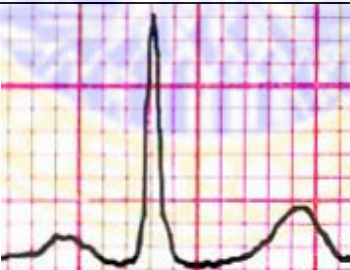
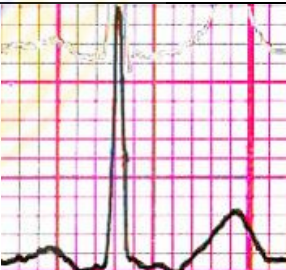


LAMPIRAN 1

Data Pengujian Perangkat Lunak

Pengolahan Citra	Lead 2	Lead V6
Data Uji 1		
Citra Asli		
Data Uji 2		
Citra Asli		
Data Uji 3		
Citra Asli		
Data Uji 4		
Citra Asli		
Data Uji 5		
Citra Asli		

Data Uji 6		
Citra Asli		
Data Uji 7		
Citra Asli		
Data Uji 8		
Citra Asli		
Data Uji 9		
Citra Asli		
Data Uji 10		
Citra Asli		
Data Uji 11		
Citra Asli		

Data Uji 12		
Citra Asli		
Data Uji 13		
Citra Asli		
Data Uji 14		
Citra Asli		
Data Uji 15		
Citra Asli		

LAMPIRAN 2

Listing Program Pada *Form* Judul Perangkat Lunak

```

function varargout = home(varargin)
% HOME M-file for home.fig
%     HOME, by itself, creates a new HOME or raises the existing
%     singleton*.
%
%     H = HOME returns the handle to a new HOME or the handle to
%     the existing singleton*.
%
%     HOME('CALLBACK', hObject,eventData,handles,...) calls the
local
%     function named CALLBACK in HOME.M with the given input
arguments.
%
%     HOME('Property','Value',...) creates a new HOME or raises
the
%     existing singleton*. Starting from the left, property
value pairs are
%     applied to the GUI before home_OpeningFcn gets called. An
%     unrecognized property name or invalid value makes property
application
%     stop. All inputs are passed to home_OpeningFcn via
varargin.
%
%     *See GUI Options on GUIDE's Tools menu. Choose "GUI allows
only one
%     instance to run (singleton)".
%
% See also: GUIDE, GUIDATA, GUIHANDLES

% Edit the above text to modify the response to help home

% Last Modified by GUIDE v2.5 06-Aug-2012 16:33:29

% Begin initialization code - DO NOT EDIT
gui_Singleton = 1;
gui_State = struct('gui_Name',       mfilename, ...
                  'gui_Singleton',  gui_Singleton, ...
                  'gui_OpeningFcn', @home_OpeningFcn, ...
                  'gui_OutputFcn',  @home_OutputFcn, ...
                  'gui_LayoutFcn',  [] , ...
                  'gui_Callback',   []);
if nargin && ischar(varargin{1})
    gui_State.gui_Callback = str2func(varargin{1});
end

if nargout
    [varargout{1:nargout}] = gui_mainfcn(gui_State, varargin{:});
else
    gui_mainfcn(gui_State, varargin{:});

```

```

end
% End initialization code - DO NOT EDIT

% --- Executes just before home is made visible.
function home_OpeningFcn(hObject, eventdata, handles, varargin)
% This function has no output args, see OutputFcn.
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
% varargin   command line arguments to home (see VARARGIN)
set(imshow('D:\Unair\Bem SainTek\Logo\images2.jpeg'));
% Choose default command line output for home
handles.output = hObject;

% Update handles structure
guidata(hObject, handles);

% UIWAIT makes home wait for user response (see UIRESUME)
% uiwait(handles.figure1);

% --- Outputs from this function are returned to the command line.
function varargout = home_OutputFcn(hObject, eventdata, handles)
% varargout  cell array for returning output args (see VARARGOUT);
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Get default command line output from handles structure
varargout{1} = handles.output;

% -----
----
function figtraining_Callback(hObject, eventdata, handles)
% hObject    handle to figtraining (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
respon=training1('title','TRAINING');

% -----
----
function testong_Callback(hObject, eventdata, handles)
% hObject    handle to testong (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
respon=testong('title','TESTING');

```

```
% -----  
----  
function tutorial_Callback(hObject, eventdata, handles)  
% hObject    handle to tutorial (see GCBO)  
% eventdata  reserved - to be defined in a future version of  
MATLAB  
% handles    structure with handles and user data (see GUIDATA)  
respon=tutorial('title','TUTORIAL');
```



LAMPIRAN 3

Listing Program Pada *Form* Pelatihan Perangkat Lunak

```

function varargout = training1(varargin)
% TRAINING1 M-file for training1.fig
%   TRAINING1, by itself, creates a new TRAINING1 or raises the
existing
%   singleton*.
%
%   H = TRAINING1 returns the handle to a new TRAINING1 or the
handle to
%   the existing singleton*.
%
%   TRAINING1('CALLBACK',hObject,eventData,handles,...) calls
the local
%   function named CALLBACK in TRAINING1.M with the given input
arguments.
%
%   TRAINING1('Property','Value',...) creates a new TRAINING1
or raises the
%   existing singleton*. Starting from the left, property
value pairs are
%   applied to the GUI before training1_OpeningFcn gets called.
An
%   unrecognized property name or invalid value makes property
application
%   stop. All inputs are passed to training1_OpeningFcn via
varargin.
%
%   *See GUI Options on GUIDE's Tools menu. Choose "GUI allows
only one
%   instance to run (singleton)".
%
% See also: GUIDE, GUIDATA, GUIHANDLES

% Edit the above text to modify the response to help training1

% Last Modified by GUIDE v2.5 20-Jul-2012 14:24:46

% Begin initialization code - DO NOT EDIT
gui_Singleton = 1;
gui_State = struct('gui_Name',       mfilename, ...
                  'gui_Singleton',  gui_Singleton, ...
                  'gui_OpeningFcn', @training1_OpeningFcn, ...
                  'gui_OutputFcn',  @training1_OutputFcn, ...
                  'gui_LayoutFcn',  [] , ...
                  'gui_Callback',    []);
if nargin && ischar(varargin{1})
    gui_State.gui_Callback = str2func(varargin{1});
end

if nargout

```

```

    [varargout{1:nargout}] = gui_mainfcn(gui_State, varargin{:});
else
    gui_mainfcn(gui_State, varargin{:});
end
% End initialization code - DO NOT EDIT

% --- Executes just before training1 is made visible.
function training1_OpeningFcn(hObject, eventdata, handles,
varargin)
% This function has no output args, see OutputFcn.
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
% varargin   command line arguments to training1 (see VARARGIN)

% Choose default command line output for training1
handles.output = hObject;

% Update handles structure
guidata(hObject, handles);

% UIWAIT makes training1 wait for user response (see UIRESUME)
% uiwait(handles.figtraining);

% --- Outputs from this function are returned to the command line.
function varargout = training1_OutputFcn(hObject, eventdata,
handles)
% varargout  cell array for returning output args (see VARARGOUT);
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Get default command line output from handles structure
varargout{1} = handles.output;

function edit1_Callback(hObject, eventdata, handles)
% hObject    handle to edit1 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of edit1 as text
%        str2double(get(hObject,'String')) returns contents of
edit1 as a double

% --- Executes during object creation, after setting all
properties.

```



```

function edit1_CreateFcn(hObject, eventdata, handles)
% hObject    handle to edit1 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    empty - handles not created until after all
CreateFcns called

% Hint: edit controls usually have a white background on Windows.
%       See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUiControlBackgroundColor'))
    set(hObject,'BackgroundColor','white');
end

% --- Executes on button press in figtraining.
function training_Callback(hObject, eventdata, handles)
% hObject    handle to figtraining (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
talita=guidata(gcbo);
H=str2double(get(talita.Hidden,'String'));
Er=str2double(get(talita.Error,'String'));
Ep=str2double(get(talita.eppoh,'String'));
A=xlsread('G:\GambarFix\talita.xlsx', 'sheet1', 'A1:AI2')
C=xlsread('G:\GambarFix\talita.xlsx', 'sheet2', 'A1:AI2')
netA=newff(minmax(A),[H 2],{'tansig' 'purelin'},'traingda');

    Y=sim(netA,A)

function Hidden_Callback(hObject, eventdata, handles)
% hObject    handle to Hidden (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of Hidden as text
%       str2double(get(hObject,'String')) returns contents of
Hidden as a double

% --- Executes during object creation, after setting all
properties.
function Hidden_CreateFcn(hObject, eventdata, handles)
% hObject    handle to Hidden (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    empty - handles not created until after all
CreateFcns called

% Hint: edit controls usually have a white background on Windows.
%       See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUiControlBackgroundColor'))

```

```

        set(hObject,'BackgroundColor','white');
    end

function Error_Callback(hObject, eventdata, handles)
% hObject    handle to Error (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of Error as text
%        str2double(get(hObject,'String')) returns contents of
Error as a double

% --- Executes during object creation, after setting all
properties.
function Error_CreateFcn(hObject, eventdata, handles)
% hObject    handle to Error (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    empty - handles not created until after all
CreateFcns called

% Hint: edit controls usually have a white background on Windows.
%        See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUicontrolBackgroundColor'))
    set(hObject,'BackgroundColor','white');
end

function eppoh_Callback(hObject, eventdata, handles)
% hObject    handle to eppoh (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of eppoh as text
%        str2double(get(hObject,'String')) returns contents of
eppoh as a double

% --- Executes during object creation, after setting all
properties.
function eppoh_CreateFcn(hObject, eventdata, handles)
% hObject    handle to eppoh (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    empty - handles not created until after all
CreateFcns called

```

```
% Hint: edit controls usually have a white background on Windows.
%       See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUicontrolBackgroundColor'))
    set(hObject,'BackgroundColor','white');
end
```

```
% --- Executes on button press in selesai.
function selesai_Callback(hObject, eventdata, handles)
% hObject     handle to selesai (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles     structure with handles and user data (see GUIDATA)
```

```
% -----
-----
function uitable2_ButtonDownFcn(hObject, eventdata, handles)
% hObject     handle to uitable2 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles     structure with handles and user data (see GUIDATA)
```

LAMPIRAN 4

Listing Program Pada *Form* Pengujian Perangkat Lunak

```

function varargout = testong(varargin)
% TESTONG M-file for testong.fig
%     TESTONG, by itself, creates a new TESTONG or raises the
existing
%     singleton*.
%
%     H = TESTONG returns the handle to a new TESTONG or the
handle to
%     the existing singleton*.
%
%     TESTONG('CALLBACK',hObject,eventData,handles,...) calls the
local
%     function named CALLBACK in TESTONG.M with the given input
arguments.
%
%     TESTONG('Property','Value',...) creates a new TESTONG or
raises the
%     existing singleton*. Starting from the left, property
value pairs are
%     applied to the GUI before testong_OpeningFcn gets called.
An
%     unrecognized property name or invalid value makes property
application
%     stop. All inputs are passed to testong_OpeningFcn via
varargin.
%
%     *See GUI Options on GUIDE's Tools menu. Choose "GUI allows
only one
%     instance to run (singleton)".
%
% See also: GUIDE, GUIDATA, GUIHANDLES

% Edit the above text to modify the response to help testong

% Last Modified by GUIDE v2.5 05-Aug-2012 16:24:27

% Begin initialization code - DO NOT EDIT
gui_Singleton = 1;
gui_State = struct('gui_Name',       mfilename, ...
                  'gui_Singleton',   gui_Singleton, ...
                  'gui_OpeningFcn', @testong_OpeningFcn, ...
                  'gui_OutputFcn',  @testong_OutputFcn, ...
                  'gui_LayoutFcn',  [] , ...
                  'gui_Callback',    []);
if nargin && ischar(varargin{1})
    gui_State.gui_Callback = str2func(varargin{1});
end

if nargout

```

```

    [varargout{1:nargout}] = gui_mainfcn(gui_State, varargin{:});
else
    gui_mainfcn(gui_State, varargin{:});
end
% End initialization code - DO NOT EDIT

% --- Executes just before testong is made visible.
function testong_OpeningFcn(hObject, eventdata, handles, varargin)
% This function has no output args, see OutputFcn.
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
% varargin   command line arguments to testong (see VARARGIN)

% Choose default command line output for testong
handles.output = hObject;

% Update handles structure
guidata(hObject, handles);

% UIWAIT makes testong wait for user response (see UIRESUME)
% uiwait(handles.figure1);

% --- Outputs from this function are returned to the command line.
function varargout = testong_OutputFcn(hObject, eventdata,
handles)
% varargout  cell array for returning output args (see VARARGOUT);
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Get default command line output from handles structure
varargout{1} = handles.output;

% --- Executes on button press in ambilcitra.
function ambilcitra_Callback(hObject, eventdata, handles)
% hObject    handle to ambilcitra (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'},'Buka
Gambar')
A=imread([pathname,filename]);
get(hObject,'value');
handles.A=A;
axes(handles.citra1)
set(imshow(A));
save A
% --- Executes on button press in pcd.

```

```

function pcd_Callback(hObject, eventdata, handles)
% hObject      handle to pcd (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load A
II=rgb2gray(A);
handles.II=II;
axes(handles.axes10)
set(imshow(II));
handles.c=c;
axes(handles.axes2)
set(imshow(c));
% c
% figure,imshow(c)
% title ('hasil segmentasi');

bw2 = imdilate(c,se);
% figure, imshow(bw2)
% title ('hasil dilasi');
bw3=imerode(bw2,se1)
handles.bw3=bw3;
axes(handles.axes8)
set(imshow(bw3));

handles.yy=yy;
axes(handles.axes3)
set(plot(xx,yy));
save yy

% --- Executes on button press in ambilcitrav6.
function ambilcitrav6_Callback(hObject, eventdata, handles)
% hObject      handle to ambilcitrav6 (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'},'Buka
Gambar')
B=imread([pathname,filename]);
get(hObject,'value');
handles.B=B;
axes(handles.citra2)
set(imshow(B));
save B

% --- Executes on button press in tes.
function tes_Callback(hObject, eventdata, handles)
% hObject      handle to tes (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load yy
load 'G:\GambarFix\hasil_training_lead2'
tesL2=yy'

```

```

S=sim(netA,tesL2);
SS=round(S)
save SS
load yyy
load 'G:\GambarFix\hasil_training_leadV6'
kok=yyy'
T=sim(netA,kok);
TT=round(T)
save TT
if TT>1
    TT=1
end

A=[SS;TT]
load 'G:\GambarFix\hasil_training_lead2_akhir_1'

W=sim(netA,A);
WW=round(W)
if WW(1)==-1 && WW(2)==-1
    disp('normal')
    set(projek.hasil,'string','normal')
else if WW(1)==0 && WW(2)==1
    disp('Left Atrium Hipertrophy')
    set(projek.hasil,'string','Left Atrium Hipertrophy')
else if WW(1)==1 && WW(2)==0
    disp('Right Ventricular Hipertrophy')
    set(projek.hasil,'string','Right Ventricular Hipertrophy')
else if WW(1)==0 && WW(2)==0
    disp('Left Atrium Hipertrophy dan Right Ventricular
Hipertrophy')
    set(projek.hasil,'string','Left Atrium Hipertrophy dan
Right Ventricular Hipertrophy')
else if WW(1)==1 && WW(2)==1
    disp('Kelainan Jantung Lainnya')
    set(projek.hasil,'string','Kelainan Jantung Lainnya')
end
end
end
end

end

% --- Executes on button press in pcd6.
function pcd6_Callback(hObject, eventdata, handles)
% hObject    handle to pcd6 (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
projek=guidata(gcbo);
load B
II=rgb2gray(B);
handles.II=II;
axes(handles.axes11)
set(imshow(II));

```

```

handles.c=c;
axes(handles.axes5)
set(imshow(c));
% c

bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes9)
set(imshow(bw3));

handles.yyy=yyy;
axes(handles.axes6)
set(plot(xxx,yyy));
save yyy

function hasil_Callback(hObject, eventdata, handles)
% hObject      handle to hasil (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)

% Hints: get(hObject,'String') returns contents of hasil as text
%          str2double(get(hObject,'String')) returns contents of
hasil as a double

% --- Executes during object creation, after setting all
properties.
function hasil_CreateFcn(hObject, eventdata, handles)
% hObject      handle to hasil (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      empty - handles not created until after all
CreateFcns called

% Hint: edit controls usually have a white background on Windows.
%          See ISPC and COMPUTER.
if ispc && isequal(get(hObject,'BackgroundColor'),
get(0,'defaultUiControlBackgroundColor'))
    set(hObject,'BackgroundColor','white');
end

% --- Executes on button press in leadsatu.
% hObject      handle to leadsatu (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)

% --- Executes on button press in pcdleadsatu.
function pcdleadsatu_Callback(hObject, eventdata, handles)

```



```

% hObject    handle to pcdleadsatu (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load C
II=rgb2gray(C);
handles.II=II;
axes(handles.axes14)
set(imshow(II));
handles.c=c;
axes(handles.axes13)
set(imshow(c));
bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes15)
set(imshow(bw3));
handles.yyy=yyy;
axes(handles.axes16)
set(plot(xxx,yyy));
save yyy

% --- Executes on button press in leadsatu.
function leadsatu_Callback(hObject, eventdata, handles)
% hObject    handle to leadsatu (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'},'Buka
Gambar')
C=imread([pathname,filename]);
get(hObject,'value');
handles.C=C;
axes(handles.axes12)
set(imshow(C));
save C

% --- Executes on button press in leadtiga.
function leadtiga_Callback(hObject, eventdata, handles)
% hObject    handle to leadtiga (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'},'Buka
Gambar')
D=imread([pathname,filename]);
get(hObject,'value');
handles.D=D;
axes(handles.axes17)
set(imshow(D));
save D

```

```

% --- Executes on button press in pcdleadtiga.
function pcdleadtiga_Callback(hObject, eventdata, handles)
% hObject    handle to pcdleadtiga (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load D
II=rgb2gray(D);
handles.II=II;
axes(handles.axes19)
set(imshow(II));
% figure, imshow(II)
% title('hasil grey');
handles.c=c;
axes(handles.axes18)
set(imshow(c));
bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes20)
set(imshow(bw3));
handles.YYY=YYY;
axes(handles.axes21)
set(plot(XXX,YYY));
save yyy

% --- Executes on button press in leadavr.
function leadavr_Callback(hObject, eventdata, handles)
% hObject    handle to leadavr (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'}, 'Buka
Gambar')
E=imread([pathname,filename]);
get(hObject,'value');
handles.E=E;
axes(handles.axes22)
set(imshow(E));
save E

% --- Executes on button press in pcdleadavr.
function pcdleadavr_Callback(hObject, eventdata, handles)
% hObject    handle to pcdleadavr (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load E
II=rgb2gray(E);
handles.II=II;
axes(handles.axes24)

```

```

set(imshow(II));
handles.c=c;
axes(handles.axes23)
set(imshow(c));
% c
bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes25)
set(imshow(bw3));
handles.yyy=yyy;
axes(handles.axes26)
set(plot(xxx,yyy));
save yyy

% --- Executes on button press in leadavl.
function leadavl_Callback(hObject, eventdata, handles)
% hObject    handle to leadavl (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'},'Buka
Gambar');
F=imread([pathname,filename]);
get(hObject,'value');
handles.F=F;
axes(handles.axes27)
set(imshow(F));
save F

% --- Executes on button press in pcdleadavl.
function pcdleadavl_Callback(hObject, eventdata, handles)
% hObject    handle to pcdleadavl (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load F
II=rgb2gray(F);
handles.II=II;
axes(handles.axes29)
set(imshow(II));

end
handles.c=c;
axes(handles.axes28)
set(imshow(c));
% c
bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes30)
set(imshow(bw3));

```

```

handles.yyy=yyy;
axes(handles.axes31)
set(plot(xxx,yyy));
save yyy

% --- Executes on button press in leadavf.
function leadavf_Callback(hObject, eventdata, handles)
% hObject    handle to leadavf (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'}, 'Buka
Gambar')
G=imread([pathname,filename]);
get(hObject,'value');
handles.G=G;
axes(handles.axes32)
set(imshow(G));
save G

% --- Executes on button press in pcpleadavf.
function pcpleadavf_Callback(hObject, eventdata, handles)
% hObject    handle to pcpleadavf (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load G
II=rgb2gray(G);
handles.II=II;
axes(handles.axes34)
set(imshow(II));

handles.c=c;
axes(handles.axes33)
set(imshow(c));
% c

bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes35)
set(imshow(bw3));

handles.yyy=yyy;
axes(handles.axes36)
set(plot(xxx,yyy));
save yyy

% --- Executes on button press in leadvlima.
function leadvlima_Callback(hObject, eventdata, handles)
% hObject    handle to leadvlima (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB

```

```

% handles      structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'}, 'Buka
Gambar')
H=imread([pathname,filename]);
get(hObject,'value');
handles.H=H;
axes(handles.axes37)
set(imshow(H));
save H

% --- Executes on button press in pcdleadvlima.
function pcdleadvlima_Callback(hObject, eventdata, handles)
% hObject      handle to pcdleadvlima (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load H
II=rgb2gray(H);
handles.II=II;
axes(handles.axes39)
set(imshow(II));

handles.c=c;
axes(handles.axes38)
set(imshow(c));
bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)
handles.bw3=bw3;
axes(handles.axes40)
set(imshow(bw3));
handles.yyy=yyy;
axes(handles.axes41)
set(plot(xxx,yyy));
save yyy

% --- Executes on button press in leadvempat.
function leadvempat_Callback(hObject, eventdata, handles)
% hObject      handle to leadvempat (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'}, 'Buka
Gambar')
I=imread([pathname,filename]);
get(hObject,'value');
handles.I=I;
axes(handles.axes42)
set(imshow(I));
save I

% --- Executes on button press in pcdleadvempat.
function pcdleadvempat_Callback(hObject, eventdata, handles)
% hObject      handle to pcdleadvempat (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB

```

```

% handles      structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load I
II=rgb2gray(I);
handles.II=II;
axes(handles.axes44)
set(imshow(II));
handles.c=c;
axes(handles.axes43)
set(imshow(c));
% c
bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes45)
set(imshow(bw3));

handles.yyy=yyy;
axes(handles.axes46)
set(plot(xxx,yyy));
save yyy

% --- Executes on button press in leadvtiga.
function leadvtiga_Callback(hObject, eventdata, handles)
% hObject      handle to leadvtiga (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'},'Buka
Gambar')
J=imread([pathname,filename]);
get(hObject,'value');
handles.J=J;
axes(handles.axes47)
set(imshow(J));
save J

% --- Executes on button press in pcdleadvtiga.
function pcdleadvtiga_Callback(hObject, eventdata, handles)
% hObject      handle to pcdleadvtiga (see GCBO)
% eventdata    reserved - to be defined in a future version of
MATLAB
% handles      structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load J
II=rgb2gray(J);
handles.II=II;
axes(handles.axes49)
set(imshow(II));
handles.c=c;
axes(handles.axes48)
set(imshow(c));
% c

```

```

bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes50)
set(imshow(bw3));

handles.yyy=yyy;
axes(handles.axes51)
set(plot(xxx,yyy));
save yyy

% --- Executes on button press in leadvdua.
function leadvdua_Callback(hObject, eventdata, handles)
% hObject    handle to leadvdua (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'},'Buka
Gambar')
K=imread([pathname,filename]);
get(hObject,'value');
handles.K=K;
axes(handles.axes52)
set(imshow(K));
save K

% --- Executes on button press in pcdleadvdua.
function pcdleadvdua_Callback(hObject, eventdata, handles)
% hObject    handle to pcdleadvdua (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load K
II=rgb2gray(K);
handles.II=II;
axes(handles.axes54)
set(imshow(II));
handles.c=c;
axes(handles.axes53)
set(imshow(c));
% c

bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes55)
set(imshow(bw3));

handles.yyy=yyy;
axes(handles.axes56)
set(plot(xxx,yyy));
save yyy

```

```

% --- Executes on button press in leadvsatu.
function leadvsatu_Callback(hObject, eventdata, handles)
% hObject    handle to leadvsatu (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
[filename,pathname]=uigetfile({'*.jpg;*.bmp;*.png;*.tif'},'Buka
Gambar')
L=imread([pathname,filename]);
get(hObject,'value');
handles.L=L;
axes(handles.axes57)
set(imshow(L));
save L

% --- Executes on button press in pcdleadvsatu.
function pcdleadvsatu_Callback(hObject, eventdata, handles)
% hObject    handle to pcdleadvsatu (see GCBO)
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
proyek=guidata(gcbo);
load L
II=rgb2gray(L);
handles.II=II;
axes(handles.axes59)
set(imshow(II));

handles.c=c;
axes(handles.axes58)
set(imshow(c));
% c

bw2 = imdilate(c,se);
bw3=imerode(bw2,se1)

handles.bw3=bw3;
axes(handles.axes60)
set(imshow(bw3));

handles.yyy=yyy;
axes(handles.axes61)
set(plot(xxx,yyy));
save yyy

```


LAMPIRAN 5

Listing Program Pada *Form* Tata Cara Penggunaan Perangkat Lunak

```

function varargout = tutorial(varargin)
% TUTORIAL M-file for tutorial.fig
%     TUTORIAL, by itself, creates a new TUTORIAL or raises the
existing
%     singleton*.
%
%     H = TUTORIAL returns the handle to a new TUTORIAL or the
handle to
%     the existing singleton*.
%
%     TUTORIAL('CALLBACK',hObject,eventData,handles,...) calls
the local
%     function named CALLBACK in TUTORIAL.M with the given input
arguments.
%
%     TUTORIAL('Property','Value',...) creates a new TUTORIAL or
raises the
%     existing singleton*. Starting from the left, property
value pairs are
%     applied to the GUI before tutorial_OpeningFcn gets called.
An
%     unrecognized property name or invalid value makes property
application
%     stop. All inputs are passed to tutorial_OpeningFcn via
varargin.
%
%     *See GUI Options on GUIDE's Tools menu. Choose "GUI allows
only one
%     instance to run (singleton)".
%
% See also: GUIDE, GUIDATA, GUIHANDLES

% Edit the above text to modify the response to help tutorial

% Last Modified by GUIDE v2.5 02-Jul-2012 11:17:44

% Begin initialization code - DO NOT EDIT
gui_Singleton = 1;
gui_State = struct('gui_Name',       mfilename, ...
                  'gui_Singleton',   gui_Singleton, ...
                  'gui_OpeningFcn', @tutorial_OpeningFcn, ...
                  'gui_OutputFcn',  @tutorial_OutputFcn, ...
                  'gui_LayoutFcn',   [] , ...
                  'gui_Callback',    []);
if nargin && ischar(varargin{1})
    gui_State.gui_Callback = str2func(varargin{1});
end

if nargout

```

```
[varargout{1:nargout}] = gui_mainfcn(gui_State, varargin{:});
else
    gui_mainfcn(gui_State, varargin{:});
end
% End initialization code - DO NOT EDIT

% --- Executes just before tutorial is made visible.
function tutorial_OpeningFcn(hObject, eventdata, handles,
varargin)
% This function has no output args, see OutputFcn.
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)
% varargin   command line arguments to tutorial (see VARARGIN)

% Choose default command line output for tutorial
handles.output = hObject;

% Update handles structure
guidata(hObject, handles);

% UIWAIT makes tutorial wait for user response (see UIRESUME)
% uiwait(handles.figure1);

% --- Outputs from this function are returned to the command line.
function varargout = tutorial_OutputFcn(hObject, eventdata,
handles)
% varargout  cell array for returning output args (see VARARGOUT);
% hObject    handle to figure
% eventdata  reserved - to be defined in a future version of
MATLAB
% handles    structure with handles and user data (see GUIDATA)

% Get default command line output from handles structure
varargout{1} = handles.output;
```