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L A M P I R A N

CODING PROGRAM

```
function varargout =
aplikasi(varargin)
% APLIKASI MATLAB code for
aplikasi.fig
%      APLIKASI, by itself,
creates a new APLIKASI or
raises the existing
%      singleton*.
%
%      H = APLIKASI returns
the handle to a new APLIKASI
or the handle to
%      the existing
singleton*.
%
%
APLIKASI('CALLBACK',hObject,ev
entData,handles,...) calls the
local
%      function named CALLBACK
in APLIKASI.M with the given
input arguments.
%
%
APLIKASI('Property','Value',..
.) creates a new APLIKASI or
raises the
%      existing singleton*.
Starting from the left,
property value pairs are
%      applied to the GUI
before aplikasi_OpeningFcn
gets called.  An
%      unrecognized property
name or invalid value makes
property application
%      stop.  All inputs are
passed to aplikasi_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
aplikasi

% Last Modified by GUIDE v2.5
30-Jun-2023 19:23:52

% Begin initialization code -
DO NOT EDIT
gui_Singleton = 1;
gui_State = struct('gui_Name',
mfilename, ...

'gui_Singleton',
gui_Singleton, ...

'gui_OpeningFcn',
@aplikasi_OpeningFcn, ...

'gui_OutputFcn',
@aplikasi_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
aplikasi is made visible.
function
aplikasi_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 aplikasi (see
VARARGIN)

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

% Update handles structure
guidata(hObject, handles);
movegui(hObject, 'center');
% UIWAIT makes aplikasi wait
for user response (see
UIRESUME)
% uiwait(handles.figure1);


% --- Outputs from this
function are returned to the
command line.
function varargout =
aplikasi_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 pushbutton4.
function
pushbutton4_Callback(hObject,
eventdata, handles)
% hObject    handle to
pushbutton4 (see GCBO)
% eventdata  reserved - to be
defined in a future version of
MATLAB
% handles    structure with
handles and user data (see
GUIDATA)
%Menampilkan menu image
[nama_file, nama_folder] =
uigetfile('*.jpg');
if ~isequal(nama_file,0)
    Img =
imread(fullfile(nama_folder,
nama_file));
    axes(handles.axes1)
    imshow(Img)
    title('Citra RGB')
    handles.Img = Img;
    guidata(hObject,handles)
else
    return
end

% --- Executes on button press
in pushbutton5.
function
pushbutton5_Callback(hObject,
eventdata, handles)
% hObject    handle to
pushbutton5 (see GCBO)
% eventdata  reserved - to be
defined in a future version of
MATLAB
% handles    structure with
handles and user data (see
GUIDATA)
Img = handles.Img;
Img_gray = rgb2gray(Img)
axes(handles.axes2)
imshow(Img_gray)
title('Citra Grayscale')
pixel_dist =
str2double(get(handles.edit5,'
String'));
GLCM =
graycomatrix(Img_gray,'Offset'
,[0 pixel_dist;...
    -pixel_dist pixel_dist; -
pixel_dist 0; -pixel_dist -
pixel_dist]);

stats =
graycoprops(GLCM,{'Contrast','
Correlation','Energy','Homogen
eity'});
Contrast = stats.Contrast;
Correlation =
stats.Correlation;
Energy = stats.Energy;
Homogeneity =
stats.Homogeneity;

data =
get(handles.uitable2,'Data');
data{1,1} =
num2str(Contrast(1));
data{1,2} =
```

```
num2str(Contrast(2));
data{1,3} =
num2str(Contrast(3));
data{1,4} =
num2str(Contrast(4));
data{1,5} =
num2str(mean(Contrast));

data{2,1} =
num2str(Correlation(1));
data{2,2} =
num2str(Correlation(2));
data{2,3} =
num2str(Correlation(3));
data{2,4} =
num2str(Correlation(4));
data{2,5} =
num2str(mean(Correlation));

data{3,1} =
num2str(Energy(1));
data{3,2} =
num2str(Energy(2));
data{3,3} =
num2str(Energy(3));
data{3,4} =
num2str(Energy(4));
data{3,5} =
num2str(mean(Energy));

data{4,1} =
num2str(Homogeneity(1));
data{4,2} =
num2str(Homogeneity(2));
data{4,3} =
num2str(Homogeneity(3));
data{4,4} =
num2str(Homogeneity(4));
data{4,5} =
num2str(mean(Homogeneity));
set(handles.uitable2,'Data',da
ta)

% --- Executes on button press
in pushbutton6.
function
pushbutton6_Callback(hObject,
eventdata, handles)
% hObject    handle to
pushbutton6 (see GCBO)
% eventdata  reserved - to be
defined in a future version of
MATLAB
% handles    structure with
handles and user data (see
GUIDATA)

axes(handles.axes1)
cla reset
set(gca,'Xtick',[])
set(gca,'Ytick',[])

axes(handles.axes2)
cla reset
set(gca,'Xtick',[])
set(gca,'Ytick',[])

set(handles.uitable2,'Data',[]
)

function
edit2_Callback(hObject,
eventdata, handles)
% hObject    handle to edit2
(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 edit2 as
text
%
str2double(get(hObject,'String
')) returns contents of edit2
as a double


% --- Executes during object
creation, after setting all
properties.
function
edit2_CreateFcn(hObject,
eventdata, handles)
% hObject    handle to edit2
(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,'Backgroun
```

```
dColor'),
get(0,'defaultUicontrolBackgro
undColor'))

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



function
edit3_Callback(hObject,
eventdata, handles)
% hObject    handle to edit3
(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 edit3 as
text
%
str2double(get(hObject,'String
')) returns contents of edit3
as a double


% --- Executes during object
creation, after setting all
properties.
function
edit3_CreateFcn(hObject,
eventdata, handles)
% hObject    handle to edit3
(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,'Backgroun
dColor'),
get(0,'defaultUicontrolBackgro
undColor'))

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



function
edit5_Callback(hObject,
eventdata, handles)
% hObject    handle to edit5
(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 edit5 as
text
%
str2double(get(hObject,'String
')) returns contents of edit5
as a double


% --- Executes during object
creation, after setting all
properties.
function
edit5_CreateFcn(hObject,
eventdata, handles)
% hObject    handle to edit5
(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,'Backgroun
dColor'),
get(0,'defaultUicontrolBackgro
undColor'))

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

```
% --- Executes on button press
in pushbutton7.
function
pushbutton7_Callback(hObject,
eventdata, handles)
% hObject    handle to
pushbutton7 (see GCBO)
% eventdata  reserved - to be
defined in a future version of
MATLAB
% handles    structure with
handles and user data (see
GUIDATA)
[nama_file, nama_folder] =
uigetfile('*.jpg');
if ~isequal(nama_file,0)
    Img =
imread(fullfile(nama_folder,
nama_file));
    axes(handles.axes3)
    imshow(Img)
    title('Citra Pattern')
    handles.Img = Img;
    guidata(hObject,handles)

set(handles.pushbutton4,'Enabl
e','on')

set(handles.pushbutton5,'Enabl
e','on')

set(handles.pushbutton6,'Enabl
e','on')

set(handles.pushbutton7,'Enabl
e','off')
else
    return
end



function
edit6_Callback(hObject,
eventdata, handles)
% hObject    handle to edit6
(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 edit6 as
text
%
str2double(get(hObject,'String
')) returns contents of edit6
as a double


% --- Executes during object
creation, after setting all
properties.
function
edit6_CreateFcn(hObject,
eventdata, handles)
% hObject    handle to edit6
(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,'Backgroun
dColor'),
get(0,'defaultUicontrolBackgro
undColor'))

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



function
edit7_Callback(hObject,
eventdata, handles)
% hObject    handle to edit7
(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 edit7 as
text
%
str2double(get(hObject,'String
```

```
')) returns contents of edit7
as a double


% --- Executes during object
creation, after setting all
properties.
function
edit7_CreateFcn(hObject,
eventdata, handles)
% hObject    handle to edit7
(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,'Backgroun
dColor'),
get(0,'defaultUicontrolBackgro
undColor'))

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



function
edit8_Callback(hObject,
eventdata, handles)
% hObject    handle to edit8
(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 edit8 as
text
%
str2double(get(hObject,'String
')) returns contents of edit8
as a double


% --- Executes during object
creation, after setting all
properties.
function
edit8_CreateFcn(hObject,
eventdata, handles)
% hObject    handle to edit8
(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,'Backgroun
dColor'),
get(0,'defaultUicontrolBackgro
undColor'))

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