

**L
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N**

```

classdef
Sistem_Identifikasi_Nilai_U
ang_Logam <
matlab.apps.AppBase

    % Properties that
    correspond to app
    components
    properties (Access =
    public)

    SISTEMIDENTIFIKASIAppUIFigu
    re matlab.ui.Figure
        OUTPUTPanel
    matlab.ui.container.Panel

    HasilIdentifikasiLabel
    matlab.ui.control.Label
        UITable
    matlab.ui.control.Table
        UIAxes_10
    matlab.ui.control.UIAxes
        PROSESPanel
    matlab.ui.container.Panel

    PerhitunganJumlahPixelLogam
    Panel
    matlab.ui.container.Panel

    HasilOperasiMorfologiLabel_
    3 matlab.ui.control.Label

    HasilSegmentasiCitraLabel_3
    matlab.ui.control.Label

    CitraGrayscaleLabel_3
    matlab.ui.control.Label
        UIAxes_18
    matlab.ui.control.UIAxes
        UIAxes_17
    matlab.ui.control.UIAxes
        UIAxes_16
    matlab.ui.control.UIAxes

    KlasifikasiWarnaPanel
    matlab.ui.container.Panel
        CitraYCbCrLabel
    matlab.ui.control.Label
        UIAxes_14
    matlab.ui.control.UIAxes
    INPUTPanel
    matlab.ui.container.Panel
    PauseButton
    matlab.ui.control.Button
        AkuisisiCitraLabel
    matlab.ui.control.Label
    ExitButton
    matlab.ui.control.Button
    ResetButton
    matlab.ui.control.Button
    StartButton
    matlab.ui.control.Button
        UIAxes_12
    matlab.ui.control.UIAxes
    end

    properties (Access =
    private)
    cam;
    isPaused = false;
    end

    % Callbacks that handle
    component events
    methods (Access =
    private)

        % Button pushed
    function: StartButton
        function
    StartButtonPushed(app,
    event)

    app.cam = webcam(1);
    Img = snapshot(app.cam );

```

```

imshow(Img, 'Parent',
app.UIAxes_12);
axis(app.UIAxes_12,
'image');
app.isPaused = false;

while true
if app.isPaused
pause(0.1);
continue;
end

Img = snapshot(app.cam);
imshow(Img, 'Parent',
app.UIAxes_12);
imshow(Img, 'Parent',
app.UIAxes_10);
R = Img(:,:,1);
G = Img(:,:,2);
B = Img(:,:,3);
Img_gray = 0.299 * R +
0.587 * G + 0.114 * B;
imshow(Img_gray, 'Parent',
app.UIAxes_16);

threshold =
graythresh(Img_gray);
bw = imbinarize(Img_gray,
threshold);ss
bw = imcomplement(bw);
imshow(bw, 'Parent',
app.UIAxes_17);

bw = bwareaopen(bw, 1000);
bw = imfill(bw, 'holes');
imshow(bw, 'Parent',
app.UIAxes_18);

[B, L] = bwlabel(bw);
stats = regionprops(B,
'Area', 'Centroid',
'Eccentricity');
YCbCr = rgb2ycbcr(Img);
Cb = YCbCr(:,:,2);

```

```

imshow(Cb, 'Parent',
app.UIAxes_14);

data_koin = zeros(L, 1);
Boundaries =
bwboundaries(bw,
'noholes');
for n = 1:L
boundary = Boundaries{n};
bw_label = (B == n);
Cb_label =
mean(Cb(bw_label));
delta_sq =
diff(boundary).^2;
perimeter =
sum(sqrt(sum(delta_sq,2)));
area = stats(n).Area;
eccentricity =
stats(n).Eccentricity;
metric =
4*pi*area/perimeter^2;
centroid =
stats(n).Centroid;

nilai = 0;
plot_color = [];
text_color = [];
is_coin = false;

if Cb_label > 120
if area > 13000 & area <
15000
nilai = 100;
elseif area > 15000 & area
< 17000
nilai = 1000;
elseif area > 17000 & area
< 21000
nilai = 200;
elseif area > 21000 & area
< 23000
nilai = 500;
end
plot_color = 'g';
text_color = 'y';

```

```

is_coin = true; %
elseif Cb_label < 120 &&
area < 17000
nilai = 500;
plot_color = 'r';
text_color = 'w';
is_coin = true;
end
if is_coin
hold(app.UIAxes_10, 'on');
plot(app.UIAxes_10,
boundary(:,2),
boundary(:,1), plot_color,
'LineWidth', 3);

text(app.UIAxes_10,
centroid(1), centroid(2),
num2str(nilai), ...
'Color', text_color,
'FontSize', 27,
'FontWeight', 'bold', ...
'HorizontalAlignment',
'center', 'FontName',
'Times New Roman');

hold(app.UIAxes_10, 'off');
end

data_koin(n) = nilai;

if ~isempty(app.UIAxes_14)
hold(app.UIAxes_14, 'on');
text(app.UIAxes_14,
centroid(1), centroid(2),
num2str(Cb_label), ...
'Color', 'm', 'FontSize',
13, 'FontWeight', 'bold',
...
'HorizontalAlignment',
'center', 'FontName',
'Arial');
hold(app.UIAxes_14, 'off');
end
end

```

```

hold(app.UIAxes_18, 'on');
for n = 1:L
area = stats(n).Area;
centroid =
stats(n).Centroid;
text(app.UIAxes_18,
centroid(1), centroid(2),
num2str(area), ...
'Color', 'r', 'FontSize',
13, 'FontWeight', 'bold',
...
'HorizontalAlignment',
'center', 'FontName',
'Arial');
end
hold(app.UIAxes_18, 'off');

nilai_100 = sum(data_koin
== 100);
nilai_200 = sum(data_koin
== 200);
nilai_500 = sum(data_koin
== 500);
nilai_1000 = sum(data_koin
== 1000);
nilai_total = nilai_100 +
nilai_200 + nilai_500 +
nilai_1000;

jumlah_100 = nilai_100 *
100;
jumlah_200 = nilai_200 *
200;
jumlah_500 = nilai_500 *
500;
jumlah_1000 = nilai_1000 *
1000;
jumlah_total = jumlah_100 +
jumlah_200 + jumlah_500 +
jumlah_1000;

cell_koin = cell(5,3);
cell_koin{1,1} = 'Rp. 100';
cell_koin{2,1} = 'Rp. 200';
cell_koin{3,1} = 'Rp. 500';

```

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cell_koin{4,1} = 'Rp.
1000';
cell_koin{6,1} = 'TOTAL';
cell_koin{1,2} =
num2str(nilai_100);
cell_koin{2,2} =
num2str(nilai_200);
cell_koin{3,2} =
num2str(nilai_500);
cell_koin{4,2} =
num2str(nilai_1000);
cell_koin{6,2} =
num2str(nilai_total);
cell_koin{1,3} = ['Rp. ',
num2str(jumlah_100)];
cell_koin{2,3} = ['Rp. ',
num2str(jumlah_200)];
cell_koin{3,3} = ['Rp. ',
num2str(jumlah_500)];
cell_koin{4,3} = ['Rp. ',
num2str(jumlah_1000)];
cell_koin{6,3} = ['Rp. ',
num2str(jumlah_total)];

set(app.UITable, 'Data',
cell_koin, 'RowName', 1:4);
drawnow;
end

                end

                % Button pushed
function: PauseButton
                function
PauseButtonPushed(app,
event)

app.isPaused =
~app.isPaused;
if app.isPaused
app.PauseButton.Text =
'Resume';
else

```

```

app.PauseButton.Text =
'Pause';
end

                end

                % Button pushed
function: ResetButton
                function
ResetButtonPushed(app,
event)

selection =
uiconfirm(app.SISTEMIDENTIF
IKASIAppUIFigure, 'Apakah
Anda yakin ingin mereset
sistem?', ...
'Konfirmasi Reset', ...
'Options', {'Ya', 'Tidak'},
...
'DefaultOption', 'Tidak',
...
'CancelOption', 'Tidak');

if strcmp(selection, 'Ya')
performReset(app);
end

function performReset(app)
app.isPaused = false;
app.PauseButton.Text =
'Pause';

                if isValid(app.cam)
                delete('app.cam');
                end

cla(app.UIAxes_12,
'reset');
cla(app.UIAxes_16,
'reset');
cla(app.UIAxes_17,
'reset');
cla(app.UIAxes_18,
'reset');

```

```

cla(app.UIAxes_10,
'reset');
cla(app.UIAxes_14,
'reset');

xticks(app.UIAxes_12, []);
yticks(app.UIAxes_12, []);
xticks(app.UIAxes_16, []);
yticks(app.UIAxes_16, []);
xticks(app.UIAxes_17, []);
yticks(app.UIAxes_17, []);
xticks(app.UIAxes_18, []);
yticks(app.UIAxes_18, []);
xticks(app.UIAxes_10, []);
yticks(app.UIAxes_10, []);
xticks(app.UIAxes_14, []);
yticks(app.UIAxes_14, []);

set(app.UITable, 'Data',
[]);
end
    end

    % Button pushed
function: ExitButton
    function
ExitButtonPushed(app,
event)

selection =
uiconfirm(app.SISTEMIDENTIFIKASIAppUIFigure, 'Apakah
Anda yakin ingin keluar?',
...
'Konfirmasi Keluar', ...
'Options', {'Ya', 'Tidak'},
...
'DefaultOption', 'Tidak',
...
'CancelOption', 'Tidak');

if strcmp(selection, 'Ya')
delete(app.SISTEMIDENTIFIKASIAppUIFigure);
end

```

```

end
end

% Component
initialization
    methods (Access =
private)

        % Create UIFigure
and components
    function
createComponents(app)

        % Get the file
path for locating images
        pathToMLAPP =
fileparts(mfilename('fullpa
th')));

        % Create
SISTEMIDENTIFIKASIAppUIFigu
re and hide until all
components are created

app.SISTEMIDENTIFIKASIAppUI
Figure =
uifigure('Visible', 'off');

app.SISTEMIDENTIFIKASIAppUI
Figure.Color = [0.9412
0.9412 0.9412];

app.SISTEMIDENTIFIKASIAppUI
Figure.Position = [92 92
1512 701];

app.SISTEMIDENTIFIKASIAppUI
Figure.Name = 'SISTEM
IDENTIFIKASI App';

app.SISTEMIDENTIFIKASIAppUI
Figure.Icon =
fullfile(pathToMLAPP,
'Logo.png');

```

```

app.SISTEMIDENTIFIKASIAppUI
Figure.WindowState =
'maximized';

                % Create
INPUTPanel
                app.INPUTPanel
=
uipanel(app.SISTEMIDENTIFIK
ASIAppUIFigure);

app.INPUTPanel.Title =
'INPUT';

app.INPUTPanel.FontWeight =
'bold';

app.INPUTPanel.FontSize =
14;

app.INPUTPanel.Position =
[19 160 254 515];

                % Create
UIAxes_12
                app.UIAxes_12 =
uiaxes(app.INPUTPanel);

app.UIAxes_12.XTick = [];

app.UIAxes_12.YTick = [];

app.UIAxes_12.Tag =
'UIAxes';

app.UIAxes_12.Position = [5
244 229 201];

                % Create
StartButton
                app.StartButton
= uibutton(app.INPUTPanel,
'push');

```

```

app.StartButton.ButtonPushedFcn =
createCallbackFcn(app,
@StartButtonPushed, true);

app.StartButton.BackgroundColor = [0.9412 0.9412
0.9412];

app.StartButton.Position =
[52 197 150 30];

app.StartButton.Text =
'Start';

                % Create
ResetButton
                app.ResetButton
= uibutton(app.INPUTPanel,
'push');

app.ResetButton.ButtonPushedFcn =
createCallbackFcn(app,
@ResetButtonPushed, true);

app.ResetButton.Position =
[50 100 150 29];

app.ResetButton.Text =
'Reset';

                % Create
ExitButton
                app.ExitButton
= uibutton(app.INPUTPanel,
'push');

app.ExitButton.ButtonPushedFcn =
createCallbackFcn(app,
@ExitButtonPushed, true);

```

```

app.ExitButton.Position =
[51 51 150 32];

app.ExitButton.Text =
'Exit';

% Create
AkuisisiCitraLabel

app.AkuisisiCitraLabel =
uicontrol(app.INPUTPanel);

app.AkuisisiCitraLabel.Font
Size = 14;

app.AkuisisiCitraLabel.Posi
tion = [97 446 87 25];

app.AkuisisiCitraLabel.Text
= 'Akuisisi Citra';

% Create
PauseButton

app.PauseButton
= uicontrol(app.INPUTPanel,
'push');

app.PauseButton.ButtonPushedFcn =
createCallbackFcn(app,
@PauseButtonPushed, true);

app.PauseButton.BackgroundColor = [0.9412 0.9412
0.9412];

app.PauseButton.Position =
[51 146 150 30];

app.PauseButton.Text =
'Pause';

% Create
PROSESPanel

app.PROSESPanel
=
uicontrol(app.SISTEMIDENTIFIK
ASIAppUIFigure);

app.PROSESPanel.Title =
'PROSES';

app.PROSESPanel.FontWeight
= 'bold';

app.PROSESPanel.FontSize =
14;

app.PROSESPanel.Position =
[284 26 845 648];

% Create
KlasifikasiWarnaPanel

app.KlasifikasiWarnaPanel =
uicontrol(app.PROSESPanel);

app.KlasifikasiWarnaPanel.T
itle = 'Klasifikasi Warna';

app.KlasifikasiWarnaPanel.F
ontSize = 14;

app.KlasifikasiWarnaPanel.P
osition = [17 35 811 271];

% Create
UIAxes_14

app.UIAxes_14 =
uiaxes(app.KlasifikasiWarna
Panel);

app.UIAxes_14.XTick = [];

app.UIAxes_14.YTick = [];

app.UIAxes_14.Tag =
'UIAxes';

```



```

app.UIAxes_14.Position =
[270 6 263 199];

        % Create
CitraYCbCrLabel

app.CitraYCbCrLabel =
uilabel(app.KlasifikasiWarnaPanel);

app.CitraYCbCrLabel.FontSize = 14;

app.CitraYCbCrLabel.Position = [373 206 101 25];

app.CitraYCbCrLabel.Text =
'Citra YCbCr';

        % Create
PerhitunganJumlahPixelLogamPanel

app.PerhitunganJumlahPixelLogamPanel =
uipanel(app.PROSESPanel);

app.PerhitunganJumlahPixelLogamPanel.Title =
'Perhitungan Jumlah Pixel Logam';

app.PerhitunganJumlahPixelLogamPanel.FontSize = 14;

app.PerhitunganJumlahPixelLogamPanel.Position = [19
319 808 282];

        % Create
UIAxes_16

app.UIAxes_16 =
uiaxes(app.PerhitunganJumlahPixelLogamPanel);

```

```

app.UIAxes_16.XTick = [];

app.UIAxes_16.YTick = [];

app.UIAxes_16.Tag =
'UIAxes';

app.UIAxes_16.Position =
[13 21 224 190];

        % Create
UIAxes_17

app.UIAxes_17 =
uiaxes(app.PerhitunganJumlahPixelLogamPanel);

app.UIAxes_17.XTick = [];

app.UIAxes_17.YTick = [];

app.UIAxes_17.Tag =
'UIAxes';

app.UIAxes_17.Position =
[283 20 224 190];

        % Create
UIAxes_18

app.UIAxes_18 =
uiaxes(app.PerhitunganJumlahPixelLogamPanel);

app.UIAxes_18.XTick = [];

app.UIAxes_18.YTick = [];

app.UIAxes_18.Tag =
'UIAxes';

app.UIAxes_18.Position =
[542 18 239 190];

        % Create
CitraGrayscaleLabel_3

```

```

app.CitraGrayscaleLabel_3 =
uilabel(app.PerhitunganJuml
ahPixelLogamPanel);

app.CitraGrayscaleLabel_3.F
ontSize = 14;

app.CitraGrayscaleLabel_3.P
osition = [91 216 101 25];

app.CitraGrayscaleLabel_3.T
ext = 'Citra Grayscale';

        % Create
HasilSegmentasiCitraLabel_3

app.HasilSegmentasiCitraLab
el_3 =
uilabel(app.PerhitunganJuml
ahPixelLogamPanel);

app.HasilSegmentasiCitraLab
el_3.FontSize = 14;

app.HasilSegmentasiCitraLab
el_3.Position = [333 217
147 25];

app.HasilSegmentasiCitraLab
el_3.Text = 'Hasil
Segmentasi Citra';

        % Create
HasilOperasiMorfologiLabel_
3

app.HasilOperasiMorfologiLa
bel_3 =
uilabel(app.PerhitunganJuml
ahPixelLogamPanel);

app.HasilOperasiMorfologiLa
bel_3.FontSize = 14;

app.HasilOperasiMorfologiLa
bel_3.Position = [593 218
151 25];

app.HasilOperasiMorfologiLa
bel_3.Text = 'Hasil Operasi
Morfologi';

        % Create
OUTPUTPanel
        app.OUTPUTPanel
=
uipanel(app.SISTEMIDENTIFIK
ASIAppUIFigure);

app.OUTPUTPanel.Title =
'OUTPUT';

app.OUTPUTPanel.FontWeight
= 'bold';

app.OUTPUTPanel.FontSize =
14;

app.OUTPUTPanel.Position =
[1140 65 346 608];

        % Create
UIAxes_10
        app.UIAxes_10 =
uiaxes(app.OUTPUTPanel);

app.UIAxes_10.XTick = [];

app.UIAxes_10.YTick = [];

app.UIAxes_10.Tag =
'UIAxes';

app.UIAxes_10.Position =
[16 332 297 206];

        % Create
UITable

```

```

        app.UITable =
uitable(app.OUTPUTPanel);

app.UITable.BackgroundColor
= [1 1 1;1 1 1];

app.UITable.ColumnName =
{'Nilai'; 'Banyaknya';
'Jumlah'};

app.UITable.RowName =
{'No'};

app.UITable.FontSize = 13;

app.UITable.Position = [16
77 312 189];

        % Create
HasilIdentifikasiLabel

app.HasilIdentifikasiLabel
= uilabel(app.OUTPUTPanel);

app.HasilIdentifikasiLabel.
FontSize = 14;

app.HasilIdentifikasiLabel.
Position = [124 544 106
25];

app.HasilIdentifikasiLabel.
Text = 'Hasil
Identifikasi';

        % Show the
figure after all components
are created

app.SISTEMIDENTIFIKASIAppUI
Figure.Visible = 'on';
        end
    end
end

```

```

        % App creation and
deletion
        methods (Access =
public)

        % Construct app
        function app =
Sistem_Identifikasi_Nilai_U
ang_Logam

        % Create
UIFigure and components

createComponents(app)

        % Register the
app with App Designer

registerApp(app,
app.SISTEMIDENTIFIKASIAppUI
Figure)

        if nargin == 0
            clear app
        end

        % Code that
executes before app
deletion
        function
delete(app)

        % Delete
UIFigure when app is
deleted

delete(app.SISTEMIDENTIFIKA
SIAppUIFigure)
        end
    end
end

```



KARTU MONITORING BIMBINGAN
 MAHASISWA PROGRAM STUDI TEKNIK INFORMATIKA
 FAKULTAS TEKNIK
 UNIVERSITAS MUHAMMADIYAH PAREPARE

PROPOSAL

Mahasiswa : RUDI RAHMAT	Pembimbing I : Muhammad Basri, ST., MT
NIM : 220280174	Pembimbing II : Wahyuddin, S.Kom., M.Kom
Judul Skripsi : IDENTIFIKASI NILAI UANG LOGAM RUPIAH BERDASARKAN WARNA DAN LUAS OBJEK BERBASIS IMAGE PROCESSING	

ARAHAN PEMBIMBING I	HARI/TGL & PARAF PEMBIMBING	ARAHAN PEMBIMBING II	HARI/TGL & PARAF PEMBIMBING
Konsultasi 1		Konsultasi 1 - Ikuti Panduan penulisan - Teor pada BAB II di bawah & pejelasan	
Konsultasi 2		Konsultasi 2 - Perbaiki desain sistem - Daftar pustaka ditinjau kembali	
Konsultasi 3		Konsultasi 3 - Foto asring dimiringkan	
Konsultasi 4		Konsultasi 4 - Daftar pustaka & perbaikan - Urutan pd BAB II & perbaikan	
Konsultasi 5		Konsultasi 5 Acc	

Lanjut ke halaman sebelah

Perhatian :

1. Mahasiswa wajib konsultasi minimal 5 kali
2. Kartu ini wajib dibawa oleh mahasiswa setiap konsultasi dan diisi oleh Pembimbing
3. Kartu ini wajib dilampirkan pada laporan skripsi dan menjadi salah satu persyaratan untuk ikut seminar proposal/tulisan skripsi
4. Kartu ini disimpan di atas kertas karton berwarna hijau muda dan dicetak timbul baik



KARTU MONITORING BIMBINGAN
 MAHASISWA PROGRAM STUDI TEKNIK INFORMATIKA
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Skripsi
HASIL

Mahasiswa : RUDI RAHMAT	Pembimbing I : Muhammad Basri, ST., MT
NIM : 220280174	Pembimbing II : Wahyuddin, S.Kom., M.Kom
Judul Skripsi : IDENTIFIKASI NILAI UANG LOGAM RUPIAH BERDASARKAN WARNA DAN LUAS OBJEK BERBASIS IMAGE PROCESSIN	

ARAHAN PEMBIMBING I	HARI/TGL & PARAF PEMBIMBING	ARAHAN PEMBIMBING II	HARI/TGL & PARAF PEMBIMBING
Konsultasi 1		Konsultasi 1 - proses identifikasi uang logam tua & baru	
Konsultasi 2		Konsultasi 2 - proses hitungan pada Aplikasi	
Konsultasi 3		Konsultasi 3 - proses identifikasi uang logam	
Konsultasi 4		Konsultasi 4 Acc	
Konsultasi 5		Konsultasi 5 Acc	

Lanjut ke halaman sebelah...

Perhatian :

1. Mahasiswa wajib konsultasi minimal 5 kali
2. Kartu ini wajib dibawa oleh mahasiswa setiap konsultasi dan diisi oleh Pembimbing
3. Kartu ini wajib dilampirkan pada laporan skripsi dan menjadi salah satu persyaratan untuk ikut seminar proposal/ujian skripsi
4. Kartu ini dicetak di atas kertas karton berwarna hijau muda dan dicetak timbul baik