

# LAMPIRAN A

## DATABASE REFERENSI



Tmp\_0



Tmp\_1



Tmp\_2



Tmp\_3



Tmp\_4



Tmp\_5



Tmp\_6



Tmp\_7



Tmp\_8



Tmp\_9



Tmp\_10



Tmp\_11



Tmp\_12



Tmp\_13



Tmp\_14



Tmp\_15



Tmp\_16



Tmp\_17



Tmp\_18



Tmp\_19



**LAMPIRAN B**  
**PERANGKAT LUNAK**

## Project.m

```
clear all  
clc
```

```
proyek = figure('Color',[0.8 0.8 0.8], ...  
    'PaperPosition',[0 70 100 100], ...  
    'PaperUnits','points', ...  
    'Position',[100 70 500 122], ...  
    'Tag','fig11', ...  
    'ToolBar','none',...  
    'Menubar','none',...  
    'Numbertitle','off',...  
    'Name','Proyek');
```

```
tb_show = uicontrol('Parent',proyek, ...  
    'Units','points', ...  
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...  
    'Callback','show', ...  
    'ListboxTop',0, ...  
    'Position',[220 25.75 120.5 16.5], ...  
    'String','Show My Webcam', ...  
    'Tag','Pushbutton9');
```

```
tb_tangkap = uicontrol('Parent',proyek, ...  
    'Units','points', ...  
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...  
    'Callback','tangkap', ...  
    'ListboxTop',0, ...  
    'Position',[120 25.75 67.5 16.5], ...  
    'String','Capture', ...  
    'Tag','Pushbutton9');
```

```
tb_run = uicontrol('Parent',proyek, ...  
    'Units','points', ...  
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...  
    'Callback','my_menu', ...  
    'ListboxTop',0, ...  
    'Position',[20 25.75 67.5 16.5], ...  
    'String','Run', ...  
    'Tag','Pushbutton9');
```

## **show.m**

```
imaqhwinfo('winvideo');  
imaqhwinfo;  
imaqhwinfo('winvideo');  
vid=videoinput('winvideo');  
preview(vid)
```

## **tangkap.m**

```
trig = 1;  
set(vid,'FramesPerTrigger',trig);  
start(vid)  
data=getdata(vid);  
size(data);  
figure;  
for k=1:trig;imshow(data(:,:,k));pause(0.3);end  
gambar = getframe(gcf,[88 68 320 240]);
```

## inputdata.m

```
clc;
clear all;
tot_database=0;
no_plat = ";pemilik=";
isi_database = figure('Color',[0.8 0.8 0.8], ...
    'PaperPosition',[0 70 100 100], ...
    'PaperUnits','points', ...
    'Position',[90 100 400 572], ...
    'Tag','fig11', ...
    'ToolBar','none',...
    'Menubar','none',...
    'Numbertitle','off',...
    'Name','Input Database');

input_noplat = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[120.5 325.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText4');

input_pemilik = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[120.5 280.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText5');

input_alamat = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[120.5 245.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText6');

input_tipe = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[120.5 210.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText8');

input_buat = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[120.5 170.75 80.25 20], ...
    'Style','edit', ...
```

```

    'Tag','EditText9');

input_rakit = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[120.5 135.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText10');

input_silinder = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[120.5 95.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText11');

input_warna = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[320.5 325.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText12');

input_rangka = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[320.5 285.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText13');

input_mesin = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[320.5 245.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText14');

input_TNKB = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[320.5 205.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText15');

input_bbakar = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...

```



```

'Position',[320.5 165.75 80.25 20], ...
'Style','edit', ...
'Tag','EditText16');

input_BPKB = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[320.5 125.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText17');

input_masalaku = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[320.5 85.75 80.25 20], ...
    'Style','edit', ...
    'Tag','EditText18');

t1 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[20 315 90.25 30.25], ...
    'String','Masukkan Nomor Plat', ...
    'Style','text', ...
    'Tag','StaticText7');

t2 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[20 275 90.25 30.25], ...
    'String','Masukkan Nama Pemilik', ...
    'Style','text', ...
    'Tag','StaticText8');

t3 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[20 235 90.25 30.25], ...
    'String','Masukkan alamat', ...
    'Style','text', ...
    'Tag','StaticText9');

```

```
t5 = uicontrol('Parent',isi_database, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[20 200 90.25 30.25], ...
'String','Masukkan tipe', ...
'Style','text', ...
'Tag','StaticText11');
```

```
t6 = uicontrol('Parent',isi_database, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[20 165 90.25 30.25], ...
'String','Masukkan tahun buat', ...
'Style','text', ...
'Tag','StaticText12');
```

```
t7 = uicontrol('Parent',isi_database, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[20 130 90.25 30.25], ...
'String','Masukkan tahun rakit', ...
'Style','text', ...
'Tag','StaticText13');
```

```
t8 = uicontrol('Parent',isi_database, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[20 95 90.25 30.25], ...
'String','Masukkan isi silinder', ...
'Style','text', ...
'Tag','StaticText14');
```

```
t9 = uicontrol('Parent',isi_database, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[220.5 325.75 80.25 30], ...
'String','Masukkan warna', ...
'Style','text', ...
'Tag','StaticText15');
```

```
t10 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[220.5 285.75 80.25 30], ...
    'String','Masukkan no rangka', ...
    'Style','text', ...
    'Tag','StaticText16');
```

```
t11 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[220.5 245.75 80.25 30], ...
    'String','Masukkan no mesin', ...
    'Style','text', ...
    'Tag','StaticText17');
```

```
t12 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[220.5 205.75 80.25 30], ...
    'String','Masukkan warna TNKB', ...
    'Style','text', ...
    'Tag','StaticText18');
```

```
t13 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[220.5 165.75 80.25 30], ...
    'String','Masukkan bahan bakar', ...
    'Style','text', ...
    'Tag','StaticText19');
```

```
t14 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[220.5 125.75 80.25 30], ...
    'String','Masukkan BPKB', ...
    'Style','text', ...
    'Tag','StaticText19');
```

```
t15 = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[220.5 85.75 80.25 30], ...
    'String','Masukkan Masa Berlaku', ...
    'Style','text', ...
    'Tag','StaticText19');
```

```
tb_simpan = uicontrol('Parent',isi_database, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'Callback','simpan', ...
    'ListboxTop',0, ...
    'Position',[120 55.75 67.5 16.5], ...
    'String','Simpan', ...
    'Tag','Pushbutton9');
```

## **simpan.m**

```
no_platx = "";
pemilikx = "";
alamatx = "";
tipex = "";
buatx = "";
rakitx = "";
silinderx = "";
warnax = "";
rangkax = "";
mesinx = "";
TNKBx = "";
bbakarx = "";
BPKBx = "";
masalakux = "";
no_platx = get(input_noplat, 'string');
pemilikx = get(input_pemilik, 'string');
alamatx = get(input_alamat, 'string');
tipex = get(input_tipe, 'string');
buatx = get(input_buat, 'string');
rakitx = get(input_rakit, 'string');
silinderx = get(input_silinder, 'string');
warnax = get(input_warna, 'string');
rangkax = get(input_rangka, 'string');
mesinx = get(input_mesin, 'string');
TNKBx = get(input_TNKB, 'string');
bbakarx = get(input_bbakar, 'string');
BPKBx = get(input_BPKB, 'string');
masalakux = get(input_masalaku, 'string');
tot_database = tot_database + 1;
database(1,tot_database,1).noplat = no_platx;
database(1,tot_database,2).pemilik = pemilikx;
database(1,tot_database,3).alamat = alamatx;
database(1,tot_database,5).tipe = tipex;
database(1,tot_database,6).buat = buatx;
database(1,tot_database,7).rakit = rakitx;
database(1,tot_database,8).silinder = silinderx;
database(1,tot_database,9).warna = warnax;
database(1,tot_database,10).rangka = rangkax;
database(1,tot_database,11).mesin = mesinx;
database(1,tot_database,12).TNKB = TNKBx;
database(1,tot_database,13).bbakar = bbakarx;
database(1,tot_database,14).BPKB = BPKBx;
database(1,tot_database,15).masalaku = masalakux;

save('database.mat', 'database', 'tot_database');
msgbox('DATA TELAH DISIMPAN', 'JEMMY', 'NONE')
```

## **protescari.m**

```
test = get(input1, 'string');
```

## hasill.m

```
hasill = figure('Color',[0.8 0.8 0.8], ...  
    'PaperPosition',[0 70 100 100], ...  
    'PaperUnits','points', ...  
    'Position',[100 100 500 572], ...  
    'Tag','fig11', ...  
    'ToolBar','none',...  
    'Menubar','none',...  
    'Numbertitle','off',...  
    'Name','Hasil Penelusuran Database');
```

```
tX1 = uicontrol('Parent',hasill, ...  
    'Units','points', ...  
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...  
    'FontName','Arial', ...  
    'FontSize',12, ...  
    'FontWeight','bold', ...  
    'Position',[250 355 200.25 30.25], ...  
    'String','HASIL PENELUSURAN DATABASE', ...  
    'Style','text', ...  
    'Tag','StaticText7');
```

```
tX2 = uicontrol('Parent',hasill, ...  
    'Units','points', ...  
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...  
    'FontName','Arial', ...  
    'HorizontalAlignment','Left',...  
    'FontSize',12, ...  
    'FontWeight','bold', ...  
    'Position',[20 280 90.25 30.25], ...  
    'String','Nama Pemilik :      ', ...  
    'Style','text', ...  
    'Tag','StaticText8');
```

```
tH2 = uicontrol('Parent',hasill, ...  
    'Units','points', ...  
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...  
    'FontName','Arial', ...  
    'HorizontalAlignment','Left',...  
    'FontSize',12, ...  
    'FontWeight','bold', ...  
    'Position',[110 280 230.25 30.25], ...  
    'String','', ...  
    'Style','text', ...  
    'Tag','StaticText14');
```

```
tX3 = uicontrol('Parent',hasill, ...  
    'Units','points', ...  
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...  
    'FontName','Arial', ...  
    'HorizontalAlignment','Left',...  
    'FontSize',12, ...  
    'FontWeight','bold', ...  
    'Position',[20 245 90.25 30.25], ...
```

```

'String','Alamat      :', ...
'Style','text', ...
'Tag','StaticText9');

tH3 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[110 245 230.25 30.25], ...
'String'," , ...
'Style','text', ...
'Tag','StaticText15');

tX4 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[20 210 90.25 30.25], ...
'String','Tipe      :', ...
'Style','text', ...
'Tag','StaticText10');

tH4 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[110 210 230.25 30.25], ...
'String'," , ...
'Style','text', ...
'Tag','StaticText16');

tX5 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[20 170 90.25 30.25], ...
'String','Tahun buat :', ...
'Style','text', ...
'Tag','StaticText12');

tH5 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...

```

```
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[110 170 230.25 30.25], ...
'String'," ...
'Style','text', ...
'Tag','StaticText17');
```

```
tX6 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[20 130 90.25 30.25], ...
'String','Tahun rakit :', ...
'Style','text', ...
'Tag','StaticText13');
```

```
tH6 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[110 130 230.25 30.25], ...
'String'," ...
'Style','text', ...
'Tag','StaticText18');
```

```
tX7 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[20 90 90.25 30.25], ...
'String','Isi Silinder :', ...
'Style','text', ...
'Tag','StaticText14');
```

```
tH7 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[110 90 230.25 30.25], ...
'String'," ...
'Style','text', ...
```



```
'Tag','StaticText19');

tX8 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[370 280 90.25 30.25], ...
    'String','Warna :    ', ...
    'Style','text', ...
    'Tag','StaticText15');

tH8 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[460 280 230.25 30.25], ...
    'String'," , ...
    'Style','text', ...
    'Tag','StaticText20');

tX9 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[370 240 90.25 30.25], ...
    'String','No Rangka :    ', ...
    'Style','text', ...
    'Tag','StaticText16');

tH9 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[460 240 230.25 30.25], ...
    'String'," , ...
    'Style','text', ...
    'Tag','StaticText21');

tX10 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
```

```
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[370 200 90.25 30.25], ...
'String','No Mesin :    ', ...
'Style','text', ...
'Tag','StaticText17');
```

```
tH10 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[460 200 230.25 30.25], ...
'String',' ', ...
'Style','text', ...
'Tag','StaticText22');
```

```
tX11 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[370 160 90.25 30.25], ...
'String','Warna TNKB :    ', ...
'Style','text', ...
'Tag','StaticText18');
```

```
tH11 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[460 160 230.25 30.25], ...
'String',' ', ...
'Style','text', ...
'Tag','StaticText23');
```

```
tX12 = uicontrol('Parent',hasill, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'HorizontalAlignment','Left',...
'FontSize',12, ...
'FontWeight','bold', ...
'Position',[370 120 90.25 30.25], ...
'String','Bahan Bakar :    ', ...
'Style','text', ...
'Tag','StaticText19');
```

```
tH12 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[460 120 230.25 30.25], ...
    'String'," , ...
    'Style','text', ...
    'Tag','StaticText24');
```

```
tX13 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[370 80 90.25 30.25], ...
    'String','BPKB :      ', ...
    'Style','text', ...
    'Tag','StaticText20');
```

```
tH13 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[460 80 230.25 30.25], ...
    'String'," , ...
    'Style','text', ...
    'Tag','StaticText25');
```

```
tX14 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
    'Position',[370 40 90.25 30.25], ...
    'String','Masa Berlaku :      ', ...
    'Style','text', ...
    'Tag','StaticText21');
```

```
tH14 = uicontrol('Parent',hasill, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'FontName','Arial', ...
    'HorizontalAlignment','Left',...
    'FontSize',12, ...
    'FontWeight','bold', ...
```

```

'Position',[460 40 230.25 30.25], ...
'String',' ', ...
'Style','text', ...
'Tag','StaticText265');

tb_ok = uicontrol('Parent',hasil, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'Callback','close', ...
'ListboxTop',0, ...
'Position',[120 25.75 67.5 16.5], ...
'String','ok', ...
'Tag','Pushbutton9');

hasil = 'false';
nilai = 0;
%pake = 0;
for i=1:tot_database,
    nilai = strcmp(my_result,database(1,i,1).noplai);
    if nilai == 1
        set(tH2,'String',database(1,i,2).pemilik);
        set(tH3,'String',database(1,i,3).alamat);
        set(tH4,'String',database(1,i,5).tipe);
        set(tH5,'String',database(1,i,6).buat);
        set(tH6,'String',database(1,i,7).rakit);
        set(tH7,'String',database(1,i,8).silinder);
        set(tH8,'String',database(1,i,9).warna);
        set(tH9,'String',database(1,i,10).rangka);
        set(tH10,'String',database(1,i,11).mesin);
        set(tH11,'String',database(1,i,12).TNKB);
        set(tH12,'String',database(1,i,13).bbakar);
        set(tH13,'String',database(1,i,14).BPKB);
        set(tH14,'String',database(1,i,15).masalaku);
        hasil = 'true';
        nilai = 0;
    else
        if (i==tot_database)&(nilai==0)
            if hasil==false
                msgbox('TIDAK ADA DALAM DATABASE','JEMMY','none');
            end;
        end;
    end;
end;
end

```

## get\_img.m

```
clc;
clear gbr1;

[namafile,direktori]=uigetfile('*.bmp','Buka file');
eval(['cd "' direktori '";']);
gbr1 = imread([direktori,namafile],'bmp');
size(gbr1)
%gbr1 = image(namafile);
%gbr1 = rgb2gray(gbr2);
colormap(gray);
if isrgb(gbr1)==1
    gbr1 = rgb2gray(gbr1);
end;
ori_image=imagesc(gbr1,...
    'parent',ax1);
set(win1,'CurrentAxes',ax1);
[lbr_im,pjg_im]=size(gbr1)
set(ed_file,'string',[direktori,namafile]);
```

## break\_img.m

```
%-----
% ROUTINE TO GET PLAT AND DIVIDE INTO CHARACTER
% this routine generated base on signature method
%-----
clc;
figure(2);
colormap(gray);
[brs,klm]=size(gbr1);
dvd=6;
a = (brs-rem(brs,dvd))/dvd;
aw = 1;
%maks=0; %----->untuk plat terang
maks=1000000; %----->untuk plat gelap
%-----
% BREAK IMAGE AND GET CANDIDATE FOR PLAT
%-----
for i=1:dvd,
    ak = i*a;
    pc1=gbr1(aw:ak,:);
    subplot(dvd,2,i+(i*1)-1);
    imagesc(pc1); %color
    set(gca,'fontsize',6);
    [brs,klm]=size(pc1);
    thresh=2*(sum(sum(pc1))/(brs*klm));
    pc1=(pc1<=thresh);
    sum1=sum(sum(pc1));
%----- cari kandidat untuk plat dg latar terang
% if (maks <= sum1)
%     maks = sum1;
%     cand = pc1;
```

```

% end;
%----- cari kandidat untuk plat dg latar hitam
if (maks >= sum1)
    maks = sum1;
    cand = pc1;
end;
disp(['tresh, peak & min ' num2str(i) ' = ' num2str(thresh) ', ' num2str(sum1) ' & ' num2str(maks)
]);
aw = ak + 1 ;
% subplot(dvd,2,i+(i*1)-1);
% imagesc(pc1); %black&white
% set(gca,'fontsize',6);
subplot(dvd,2,i+(i*1));
plot(sum(pc1),'-r');
set(gca,'fontsize',6);
end;
%cand=pc1;
set(win1,'CurrentAxes',ax2);
im=imagesc(cand,'parent',ax2);

%-----
% CROP PLATE FROM CANDIDATE IMAGES
%-----
clc;
[bar,kol]=size(cand);
colormap(gray);
cw=sum(cand);
%----- left & right cropping
sls=cw-max(cw);% dikurangi dengan nilai maksimum ridge
kk=[sls 0];
bkiri=1;
bkanan=length(kk);

%mencari nilai terkecil dr kiri
i=1;
while kk(i) > -3,
    bkiri=i;
    i=i+1;
end;
%mencari nilai terkecil dari kanan
i=kol;
while kk(i) > -3,
    bkanan=i;
    i=i-1;
end;
ccand1=cand;
ccand1(:,1:bkiri)=[];
ccand1(:,bkanan-bkiri-1:kol-bkiri)=[];
[br,kl]=size(ccand1);
%----- top & bottom cropping
rw=sum(ccand1');
rw=[rw max(rw)];
rw1=[rw max(rw)];
rw1(1)=[];

```

```

sls=rw-rw1;
ab=sls;
maks=0;
for i=1:length(sls)-1,
    if sls(i) >= maks,
        maks=sls(i);
        catas=i-1;
        batas=i;
    end;
end;
sls(1:catas)=[];
for i=1:length(sls)-1,
    if sls(i) == min(sls),
        bbawah= i;
    end;
end;
ccand2=ccand1;
ccand2(1:batas,:)=[];
size(ccand2)
ccand2(bbawah:bar-catas-1,:)=[];

set(win1,'CurrentAxes',ax3);
im=imagesc(ccand2,'parent',ax3);
plat=ccand2;

```

## get\_char.m

```

%-----
% CROP CHARACTERS FROM PLATE NUMBER IMAGES
%-----
clc;
figure(2);
[bar,kol]=size(ccand2);
cw=sum(ccand2);
my_result=[];
punya = "";
%-----
%----- left & right cropping
%men cari nilai terbesar dr kiri
bkiri=[1];
bkanan=[];
shift = 0;
for i=1:length(cw),
    if shift==0,
        if cw(i)==max(cw),
            if cw(i+1)==cw(i),
                shift=1;
                bkanan=[bkanan i];
            end;
        end;
    else
        if cw(i)==max(cw),
            if cw(i+1)<cw(i),
                shift=0;
            end;
        end;
    end;
end;

```

```

        bkiri=[bkiri i];
    end;
    end;
    end;
end;
%generate char from plat
clear sls;
tinggi=0;
for i=1:length(bkanan),
    subplot(1,length(bkanan),i);
    chr=ccand2(:,bkiri(i):bkanan(i));
    %enhanced cropping for each character
    %----- top & bottom cropping
    rw=sum(chr');
    filter=((15/100)*max(rw));
    rw=[max(rw) rw max(rw)];
    rw=(abs(rw-max(rw))>filter).*rw;
    rw1=[rw max(rw)];
    rw1(1)=[];
    sls=rw-rw1;
    batas=0;
    bbawah=length(sls);
    ii=1;
    while (sls(ii) == 0),
        batas=ii+1; % batas atas
        ii=ii+1;
    end;
    ii=length(sls)-1;
    while (sls(ii) == 0),
        ii=ii-1;
        bbawah=ii+1; % batas bawah
    end;
    batas;
    bbawah;
    n_tinggi = bbawah-batas;
    if n_tinggi < (15*length(sls)/100),
        n_tinggi=tinggi(length(tinggi));
    end;
    tinggi=[tinggi n_tinggi];
    rat_tinggi = floor(sum(tinggi)/(length(tinggi)-1));
    if abs(bbawah-batas-rat_tinggi)>20,
        bbawah=batas+rat_tinggi;
    end;
    chr(1:batas,:)=[];
    [bar,kol]=size(chr);
    chr(bbawah-batas:bar,:)=[];
    imagesc(chr); %hasil akhir
    colormap(gray);
    axis off;
    bp=sum(sum(chr))/(bar*kol);
    % disp(['maks black= ' num2str(bp) '%']);
    if bp<=0.70,
        ocr=my_ocr(chr);
        disp(['cek 4 char = ' num2str(i) ' is ' ocr]);
        my_result=[my_result ocr];
        eval(['char' num2str(i) '=chr;']);
    end;
end;

```



```
end;  
%saving result into different file of char  
end;  
set(ed_result,'String',my_result);
```

```
%my_result
```

## **my\_ocr**

```
function [ocr]=my_ocr(im_char)  
%fungsi ini dibuat untuk melakukan pengenalan karakter  
load hrf_tmp.mat;  
ocr=im_char;  
maks=0;  
i_ocr=0;  
[br,kl]=size(ocr);  
for i=0:35,  
    eval(['[b0,k0]=size(tmp_' num2str(i) ');']);  
    %jika iamage yang dikenali ukurannya lebih kecil dari template dilakukan resize image  
    if (b0>br)|(k0>kl)  
        ocr_r= IMRESIZE(ocr,[b0+1 k0+1]);  
        eval(['h = normxcorr2(tmp_' num2str(i) ',ocr_r);']);  
        %--disp('resize');  
    else  
        eval(['h = normxcorr2(tmp_' num2str(i) ',ocr);']);  
    end;  
    % disp(['i=' num2str(i) 'maks=' num2str(max(max(h)))]);  
    if maks<max(max(h)),  
        maks=max(max(h));  
        i_ocr=i;  
    end;  
end;  
  
switch i_ocr  
case 10  
    ocr = 'A';  
case 11  
    ocr = 'B';  
case 12  
    ocr = 'C';  
case 13  
    ocr = 'D';  
case 14  
    ocr = 'E';  
case 15  
    ocr = 'F';  
case 16  
    ocr = 'G';  
case 17  
    ocr = 'H';  
case 18  
    ocr = 'I';  
case 19  
    ocr = 'J';
```

```
case 20
    ocr = 'K';
case 21
    ocr = 'L';
case 22
    ocr = 'M';
case 23
    ocr = 'N';
case 24
    ocr = 'O';
case 25
    ocr = 'P';
case 26
    ocr = 'Q';
case 27
    ocr = 'R';
case 28
    ocr = 'S';
case 29
    ocr = 'T';
case 30
    ocr = 'U';
case 31
    ocr = 'V';
case 32
    ocr = 'W';
case 33
    ocr = 'X';
case 34
    ocr = 'Y';
case 35
    ocr = 'Z';
otherwise
    ocr = num2str(i_ocr);
end
```

## my\_ocr2.m

```
function [ocr]=my_ocr2(im_char)
%fungsi ini dibuat untuk melakukan pengenalan karakter
load hrf_tmp.mat;
ocr=im_char;
maks=0;
i_ocr=0;
[br,kl]=size(ocr);
for i=0:35,
    eval(['[b0,k0]=size(tmp_' num2str(i) ');']);
    %jika image yang dikenali ukurannya lebih kecil dari template dilakukan resize image
    if (b0>br)|(k0>kl)
        ocr_r= IMRESIZE(ocr,[b0+1 k0+1]);
        eval(['h = normxcorr2(tmp_' num2str(i) ',ocr_r);']);
        %--disp('resize');
    else
        eval(['h = normxcorr2(tmp_' num2str(i) ',ocr);']);
    end
    subplot(6,6,i+1);
    imagesc(h);
    colormap(gray);
    axis off;
    %-----
switch i
case 10
    txt = 'A';
case 11
    txt = 'B';
case 12
    txt = 'C';
case 13
    txt = 'D';
case 14
    txt = 'E';
case 15
    txt = 'F';
case 16
    txt = 'G';
case 17
    txt = 'H';
case 18
    txt = 'I';
case 19
    txt = 'J';
case 20
    txt = 'K';
case 21
    txt = 'L';
case 22
    txt = 'M';
case 23
    txt = 'N';
case 24
    txt = 'O';
```

```

case 25
    txt = 'P';
case 26
    txt = 'Q';
case 27
    txt = 'R';
case 28
    txt = 'S';
case 29
    txt = 'T';
case 30
    txt = 'U';
case 31
    txt = 'V';
case 32
    txt = 'W';
case 33
    txt = 'X';
case 34
    txt = 'Y';
case 35
    txt = 'Z';
otherwise
    txt = num2str(i);
end
title(['by tmp ' txt]);
%-----

    disp(['i=' num2str(i) 'maks=' num2str(max(max(h)))]);
    if maks<max(max(h)),
        maks=max(max(h));
        i_ocr=i;
    end;
end;

switch i_ocr
case 10
    ocr = 'A';
case 11
    ocr = 'B';
case 12
    ocr = 'C';
case 13
    ocr = 'D';
case 14
    ocr = 'E';
case 15
    ocr = 'F';
case 16
    ocr = 'G';
case 17
    ocr = 'H';
case 18
    ocr = 'I';
case 19

```

```
    ocr = 'J';
case 20
    ocr = 'K';
case 21
    ocr = 'L';
case 22
    ocr = 'M';
case 23
    ocr = 'N';
case 24
    ocr = 'O';
case 25
    ocr = 'P';
case 26
    ocr = 'Q';
case 27
    ocr = 'R';
case 28
    ocr = 'S';
case 29
    ocr = 'T';
case 30
    ocr = 'U';
case 31
    ocr = 'V';
case 32
    ocr = 'W';
case 33
    ocr = 'X';
case 34
    ocr = 'Y';
case 35
    ocr = 'Z';
otherwise
    ocr = num2str(i_ocr);
end
```

## my\_menu.m

```
%clear all;
%clc;
load database;

win1 = figure('Color',[0.8 0.8 0.8], ...
    'PaperPosition',[18 180 576 432], ...
    'PaperUnits','points', ...
    'Position',[20 100 900 472], ...
    'Tag','Fig1', ...
    'ToolBar','none',...
    'Menubar','none',...
    'Numbertitle','off',...
    'Name','My Program');
ax1 = axes('Parent',win1, ...
    'Units','pixels', ...
    'CameraUpVector',[0 1 0], ...
    'Color',[0 0 0], ...
    'FontSize',6,...
    'Position',[21 96 385 308], ...
    'Tag','Axes1', ...
    'XColor',[0 0 0], ...
    'YColor',[0 0 0], ...
    'ZColor',[0 0 0]);
xl_ax1 = text('Parent',ax1, ...
    'Color',[0 0 0], ...
    'HandleVisibility','off', ...
    'HorizontalAlignment','center', ...
    'Position',[0.4973958333333333 -0.07817589576547235 9.160254037844386], ...
    'Tag','Axes1Text4', ...
    'VerticalAlignment','cap');
set(get(xl_ax1,'Parent'),'XLabel',xl_ax1);
yl_ax1 = text('Parent',ax1, ...
    'Color',[0 0 0], ...
    'HandleVisibility','off', ...
    'HorizontalAlignment','center', ...
    'Position',[-0.07552083333333333 0.495114006514658 9.160254037844386], ...
    'Rotation',90, ...
    'Tag','Axes1Text3', ...
    'VerticalAlignment','baseline');
set(get(yl_ax1,'Parent'),'YLabel',yl_ax1);
ax2 = axes('Parent',win1, ...
    'Units','pixels', ...
    'CameraUpVector',[0 1 0], ...
    'Color',[0 0 0], ...
    'FontSize',6,...
    'Position',[437 326 317 45], ...
    'Tag','Axes2', ...
    'XColor',[0 0 0], ...
    'YColor',[0 0 0], ...
    'ZColor',[0 0 0]);
xl_ax2 = text('Parent',ax2, ...
    'Color',[0 0 0], ...
    'HandleVisibility','off', ...
```

```

    'HorizontalAlignment','center', ...
    'Position',[0.4968354430379747 -0.5454545454545454 9.160254037844386], ...
    'Tag','Axes2Text4', ...
    'VerticalAlignment','cap');
set(get(xl_ax2,'Parent'),'XLabel',xl_ax2);
yl_ax2 = text('Parent',ax2, ...
    'Color',[0 0 0], ...
    'HandleVisibility','off', ...
    'HorizontalAlignment','center', ...
    'Position',[-0.09177215189873422 0.4772727272727271 9.160254037844386], ...
    'Rotation',90, ...
    'Tag','Axes2Text3', ...
    'VerticalAlignment','baseline');
set(get(yl_ax2,'Parent'),'YLabel',yl_ax2);
ax3 = axes('Parent',win1, ...
    'Units','pixels', ...
    'CameraUpVector',[0 1 0], ...
    'Color',[0 0 0], ...
    'FontSize',6,...
    'Position',[435 209 230 60], ...
    'Tag','Axes3', ...
    'XColor',[0 0 0], ...
    'YColor',[0 0 0], ...
    'ZColor',[0 0 0]);
xl_ax3 = text('Parent',ax3, ...
    'Color',[0 0 0], ...
    'HandleVisibility','off', ...
    'HorizontalAlignment','center', ...
    'Position',[0.4978165938864627 -0.406779661016949 9.160254037844386], ...
    'Tag','Axes3Text4', ...
    'VerticalAlignment','cap');
set(get(xl_ax3,'Parent'),'XLabel',xl_ax3);
yl_ax3 = text('Parent',ax3, ...
    'Color',[0 0 0], ...
    'HandleVisibility','off', ...
    'HorizontalAlignment','center', ...
    'Position',[-0.1266375545851528 0.4745762711864408 9.160254037844386], ...
    'Rotation',90, ...
    'Tag','Axes3Text3', ...
    'VerticalAlignment','baseline');
set(get(yl_ax3,'Parent'),'YLabel',yl_ax3);
ed_file = uicontrol('Parent',win1, ...
    'Units','points', ...
    'BackgroundColor',[1 1 1], ...
    'ListboxTop',0, ...
    'Position',[10.5 27.75 221.25 15], ...
    'Style','edit', ...
    'Tag','EditText1');
tb_file = uicontrol('Parent',win1, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'ListboxTop',0, ...
    'Position',[237 27 66 16.5], ...
    'String','Car Image', ...
    'Callback','GET_IMG',...
    'Tag','Pushbutton1');

```

```
t1 = uicontrol('Parent',win1, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'FontName','Arial', ...
'FontSize',14, ...
'FontWeight','bold', ...
'Position',[14.25 315 527.25 23.25], ...
'String','Proses Identifikasi Plat Nomor Mobil', ...
'Style','text', ...
'Tag','StaticText1');
t2 = uicontrol('Parent',win1, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'HorizontalAlignment','left', ...
'ListboxTop',0, ...
'Position',[327 284.25 172.5 17.25], ...
'String','Kandidat Gambar', ...
'Style','text', ...
'Tag','StaticText2');
t3 = uicontrol('Parent',win1, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'HorizontalAlignment','left', ...
'ListboxTop',0, ...
'Position',[327 200.25 169.5 20.25], ...
'String','Ekstraksi Plat Nomor', ...
'Style','text', ...
'Tag','StaticText3');
t4 = uicontrol('Parent',win1, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'HorizontalAlignment','left', ...
'ListboxTop',0, ...
'Position',[326.25 108 78.75 15.75], ...
'String','Hasil Identifikasi', ...
'Style','text', ...
'Tag','StaticText4');
ed_result = uicontrol('Parent',win1, ...
'Units','points', ...
'BackgroundColor',[0 0 0], ...
'FontSize',20, ...
'FontWeight','bold', ...
'ForegroundColor',[1 1 1], ...
'ListboxTop',0, ...
'Position',[326.25 75 173.25 32.25], ...
'String','', ...
'Style','edit', ...
'Tag','EditText2');
tb_plat = uicontrol('Parent',win1, ...
'Units','points', ...
'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
'ListboxTop',0, ...
'Position',[327.75 27 70.5 17.25], ...
'String','Find Plate', ...
'Callback','BREAK_IMG',...
'Tag','Pushbutton2');
```



```

tb_ocr = uicontrol('Parent',win1, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'ListboxTop',0, ...
    'Position',[402 27 67.5 17.25], ...
    'String','Run OCR', ...
    'callback','GET_CHAR',...
    'Tag','Pushbutton3');
tb_close = uicontrol('Parent',win1, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'Callback','Close', ...
    'ListboxTop',0, ...
    'Position',[473.25 27.75 67.5 16.5], ...
    'String','Close', ...
    'Tag','Pushbutton4');

tby = uicontrol('Parent',win1, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'ForegroundColor',[0 0 1], ...
    'ListboxTop',0, ...
    'Position',[408 314.25 108 12], ...
    'String',' By : JEMMY', ...
    'Style','text', ...
    'Tag','StaticText5');
tpro = uicontrol('Parent',win1, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'ForegroundColor',[0 0 1], ...
    'ListboxTop',0, ...
    'Position',[416.25 326.25 108 12], ...
    'String','Task : TUGAS AKHIR', ...
    'Style','text', ...
    'Tag','StaticText5');

tb_cari = uicontrol('Parent',win1, ...
    'Units','points', ...
    'BackgroundColor',[0.752941176470588 0.752941176470588 0.752941176470588], ...
    'Callback','hasilll', ...
    'ListboxTop',0, ...
    'Position',[544 150.75 67.5 25.5], ...
    'String','Cari', ...
    'Tag','Pushbutton6');

gbr1 = frame2im(gambar);
colormap(gray);
if isrgb(gbr1)==1
    gbr1 = rgb2gray(gbr1);
end;
ori_image=imagesc(gbr1,...
    'parent',ax1);
gbr1 = imresize(gbr1,4);
set(win1,'CurrentAxes',ax1);
[lbr_im,pjg_im]=size(gbr1)

```