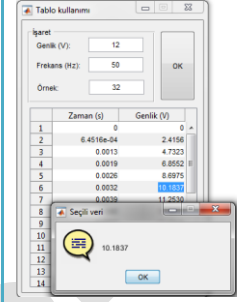


# ◆◆◆ EEMBA ◆◆◆ GENEL UYGULAMALAR - 2

## MATLAB GUI tablo kullanımı

```
function pushbutton1_Callback(hObject, eventdata, handles)
a=str2num(get(handles.edit1,'String')); f=str2num(get(handles.edit2,'String'));
n=str2num(get(handles.edit3,'String'));
set(handles.uitable1,'Data',cell(n,2));
t=linspace(0,1/f,n); v=a*sin(2*pi*f*t); veri=[t' v'];
set(handles.uitable1,'Data',veri);
```

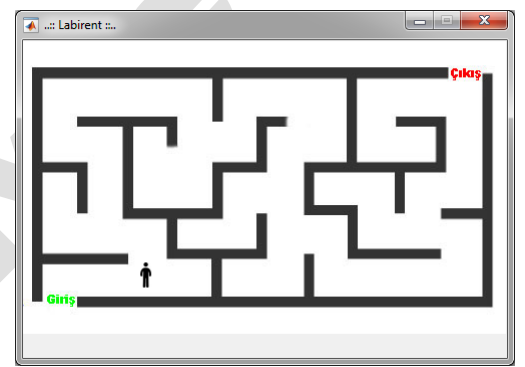
```
function uitable1_CellSelectionCallback(hObject, eventdata, handles)
a=get(handles.uitable1,'Data');
satir=eventdata.Indices(1);
sutun=eventdata.Indices(2);
secili=a(satir,sutun);
msgbox(num2str(secili),'Seçili veri','help');
```



## Labirent oyunu

```
function ornek3_OpeningFcn(hObject, eventdata, handles, varargin)
zemin=imread('labirent','jpg'); axes(handles.axes1); imshow(zemin);
kisi=imread('insan','jpg'); axes(handles.axes2); imshow(kisi);
```

```
function figure1_KeyPressFcn(hObject, eventdata, handles)
a=eventdata.Key; konum=getpixelposition(handles.axes2);
switch a
case 'uparrow'
konum=konum+[0 5 0 0];
case 'downarrow'
konum=konum+[0 -5 0 0];
case 'leftarrow'
konum=konum+[-5 0 0 0];
case 'rightarrow'
konum=konum+[5 0 0 0];
end; setpixelposition(handles.axes2,konum);
```



## Görüntü işleme

```
function pushbutton1_Callback(hObject, eventdata, handles)
global resim
[resim,iptal]=imgetfile; resim=imread(resim); axes(handles.axes1);
imshow(resim);
```

```
function popupmenu1_Callback(hObject, eventdata, handles)
global resim
sec=get(handles.popupmenu1,'Value');
switch sec
case 1
resim=rgb2gray(resim);
case 2
resim=rgb2hsv(resim);
case 3
resim=rgb2ntsc(resim);
case 4
resim=hsv2rgb(resim);
case 5
resim=ntsc2rgb(resim);
end; axes(handles.axes1); imshow(resim);
```

```
function pushbutton2_Callback(hObject, eventdata, handles)
global resim
resim=histeq(resim); axes(handles.axes1); imshow(resim);
```

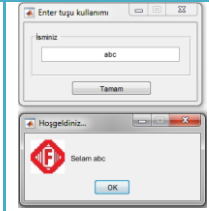
```
function pushbutton4_Callback(hObject, eventdata, handles)
global resim
derece=str2num(get(handles.edit1,'String'));
resim=imrotate(resim,derece); axes(handles.axes1); imshow(resim);
```



## MATLAB GUI 'Enter' tuşu kullanımı

```
function pushbutton1_Callback(hObject, eventdata, handles)
resim=imread('ikon','jpg');
mesaj=['Selam ' get(handles.edit1,'String')];
msgbox(mesaj,'Hoşgeldiniz...','custom',resim);

function edit1_KeyPressFcn(hObject, eventdata, handles)
tus=get(gcf,'CurrentKey');
if strcmp(tus,'return')
pushbutton1_Callback(hObject, eventdata, handles)
end
```



## Saat

```
function zaman(src,evt,fig_handle)
handles=guihandles(fig_handle);
set(handles.text2,'String',datestr(now,'HH:MM:SS'));

function pushbutton1_Callback(hObject, eventdata, handles)
global t
t=timer('ExecutionMode','FixedRate','Period',1,'TimerFcn',{@zaman,hObject});
start(t);
t.StartFcn=@zaman;

function pushbutton2_Callback(hObject, eventdata, handles)
global t
stop(t);
```



## Harmonik analizi

```
clear all; clc;
f=50; t=linspace(0,1/f,256);
wt=2*pi*f*t;
v=5+12*sin(wt)+3*sin(3*wt)+2*sin(7*wt)+1.2*sin(11*wt)+0.5*sin(21*wt);
save('veriler.mat');

function pushbutton1_Callback(hObject, eventdata, handles)
global v
[dosya,yol]=uigetfile({'*.mat','Veri dosyası (*.mat)'},'Dosya seçiniz...');
tamyol=fullfile(yol,dosya);
load(tamyol);
axes(handles.axes1); plot(t,v); grid on;
xlabel('Zaman (s)'); ylabel('Genlik (V)');

function pushbutton2_Callback(hObject, eventdata, handles)
global v
h=fft(v,256)*2/256;
harmonikler=abs(h(2:22));
set(handles.uitable1,'Data',harmonikler);
axes(handles.axes2);
bar([0:21],[h(1)/2 harmonikler]);
grid on; xlabel('Harmonik no'); ylabel('Genlik (V)');
```

