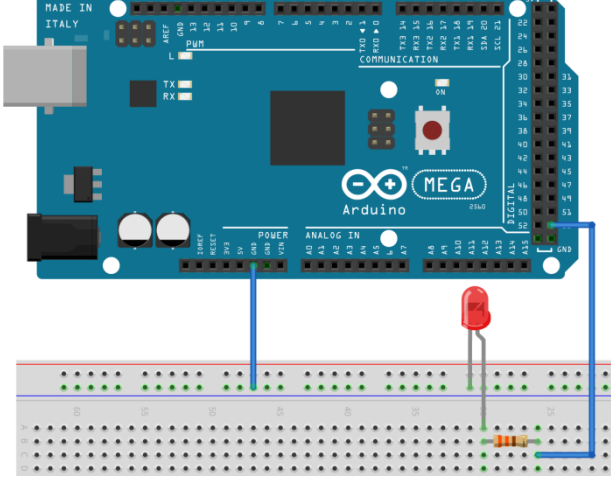

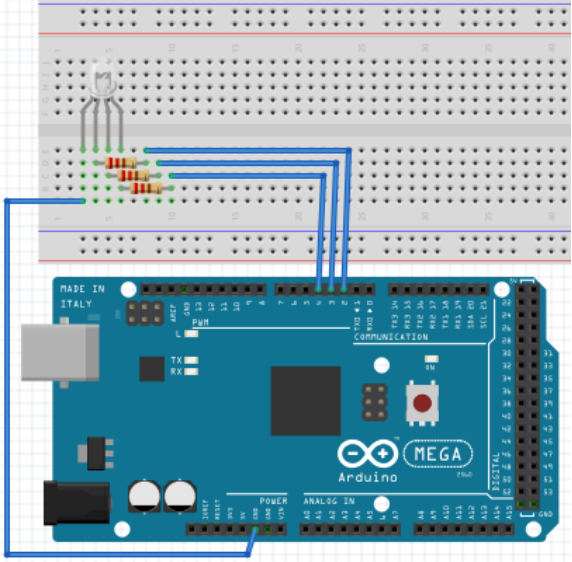

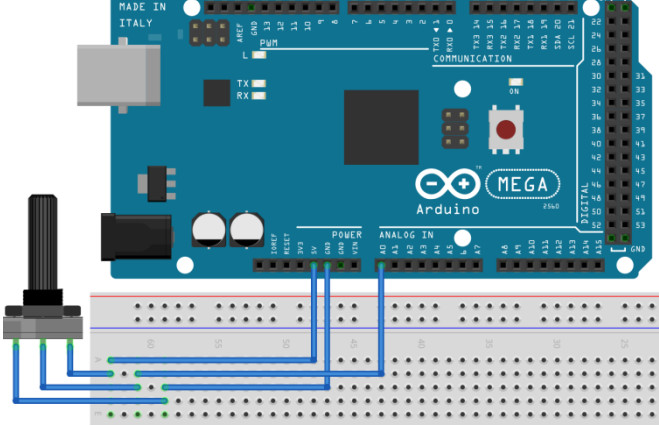
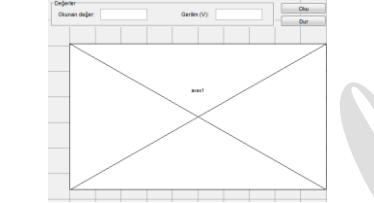
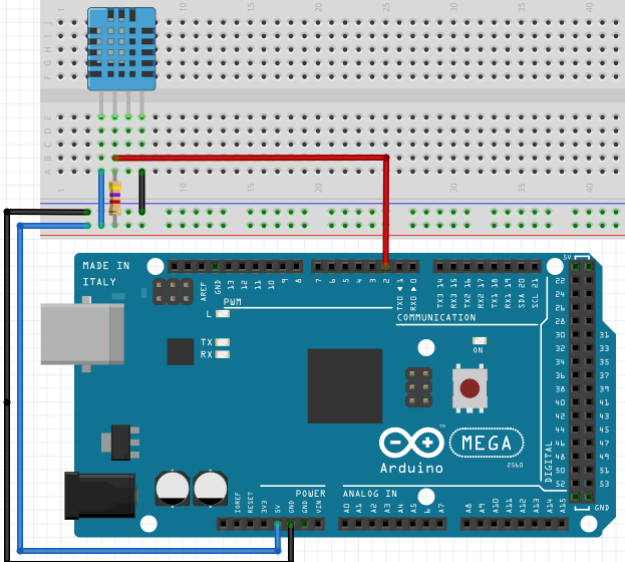
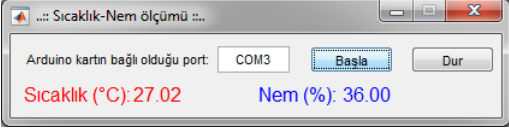


Uygulama	MATLAB ORTAMINDAN LED YAKIP SÖNDÜRME	
Malzemeler	1 x 330 Ω direnç 1 x LED	
Devre şeması		
Kod	<pre>// MATLAB - Arduino LED yak-söndür void setup() { pinMode(53,OUTPUT); Serial.begin(9600); } void loop() { if (Serial.available()) { char x=Serial.read(); if (x=='A') digitalWrite(53,HIGH); if (x=='K') digitalWrite(53,LOW); } }</pre>	
Kod		<pre>function ornek1_OpeningFcn(hObject, eventdata, handles, varargin) clear all global a a=serial('COM3','BaudRate',9600); fopen(a); function pushbutton1_Callback(hObject, eventdata, handles) global a fprintf(a,'A'); set(handles.uiapanel1,'BackgroundColor',[1 0 0]); function pushbutton2_Callback(hObject, eventdata, handles) global a fprintf(a,'K'); set(handles.uiapanel1,'BackgroundColor',[0.941 0.941 0.941]); function pushbutton3_Callback(hObject, eventdata, handles) global a fclose(a); delete(a); clear a; close;</pre>

Uygulama	RGB LED	
Malzemeler	3 x 220 Ω direnç 1 x RGB LED	
Devre şeması		
Kod	<pre>// MATLAB-Arduino RGB LED String ks,ys,ms; int k,y,m; void setup() { pinMode(2,OUTPUT); pinMode(3,OUTPUT); pinMode(4,OUTPUT); Serial.begin(9600); } void loop() { if (Serial.available()>0) { ks=Serial.readStringUntil(','); k=ks.toInt(); analogWrite(2,k); ys=Serial.readStringUntil(','); y=ys.toInt(); analogWrite(3,y); ms=Serial.readStringUntil(','); m=ms.toInt(); analogWrite(4,m); } }</pre>	
		<pre>function ornek2_OpeningFcn(hObject, eventdata, handles, varargin) global port port=serial('COM3','BaudRate',9600); fopen(port); function pushbutton1_Callback(hObject, eventdata, handles) global port r=str2num(get(handles.edit1,'String')); g=str2num(get(handles.edit2,'String')); b=str2num(get(handles.edit3,'String')); set(handles.uipanel2,'BackgroundColor',[r/255 g/255 b/255]); veri=strcat(num2str(r),',',num2str(g),',',num2str(b),','); fprintf(port,veri); function pushbutton2_Callback(hObject, eventdata, handles) global port fclose(port); delete(port); clear port; close;</pre>

Uygulama	MATLAB ORTAMINDAN GERÇEK ZAMANLI GERİLİM OKUMA	
Malzemeler	1 x 10 kΩ pot	
Devre şeması		
Kod	<pre>// MATLAB - Arduino 10k potansiyometreden gerilim okuma int x=0; void setup() { Serial.begin(9600); } void loop() { char y=Serial.read(); if (y=='B') { x=analogRead(A0); Serial.println(x); delay(100); } }</pre> <div style="display: flex; justify-content: space-between;"> <div data-bbox="245 1059 619 1261">  </div> <div data-bbox="651 1059 1513 1951"> <pre>function örnek2_OpeningFcn(hObject, eventdata, handles, varargin) clear all global port global islem islem=1; port=serial('COM3','BaudRate',9600); fopen(port); function pushbutton1_Callback(hObject, eventdata, handles) global port global islem cla(handles.axes1); t=1;v=0; while (islem==1) fprintf(port,'B'); a=fscanf(port,'%d'); set(handles.edit1,'String',num2str(a)); v(t)=5*a/1023; set(handles.edit2,'String',num2str(v(t))); drawnow(); plot(v,'r','LineWidth',2); grid on; xlabel('Zaman (x 100 ms)'); ylabel('Genlik (V)'); t=t+1; pause(0.1); end function pushbutton2_Callback(hObject, eventdata, handles) global port global islem islem=0; fclose(port); delete(port); clear port; close;</pre> </div> </div>	

Uygulama	GERÇEK ZAMANLI SICAKLIK-NEM ÖLÇÜMÜ
Malzemeler	1 x DHT11 sıcaklık-nem sensörü 1 x 4.7 kΩ direnç
Devre şeması	
Kod	<pre>// MATLAB - Arduino sıcaklık ve nem ölçme #include <DHT11.h> DHT11 sensor(2); void setup() { Serial.begin(9600); } void loop() { float nem,isi; int veri=sensor.read(nem,isi); Serial.print(nem,2); Serial.print(","); Serial.print(isi,2); Serial.println(); delay(2000); }</pre>
Kod	
Kod	<pre>function pushbutton1_Callback(hObject, eventdata, handles) global port; global basla; port=serial(get(handles.edit1,'String'),'BaudRate',9600); fopen(port); basla=1; while (basla==1) a=fscanf(port,'%s'); b=strsplit(a,','); set(handles.text4,'String',b(2)); set(handles.text5,'String',b(1)); pause(2); end function pushbutton2_Callback(hObject, eventdata, handles) global port; global basla; basla=0; fclose(port); delete(port); clear port; close;</pre>