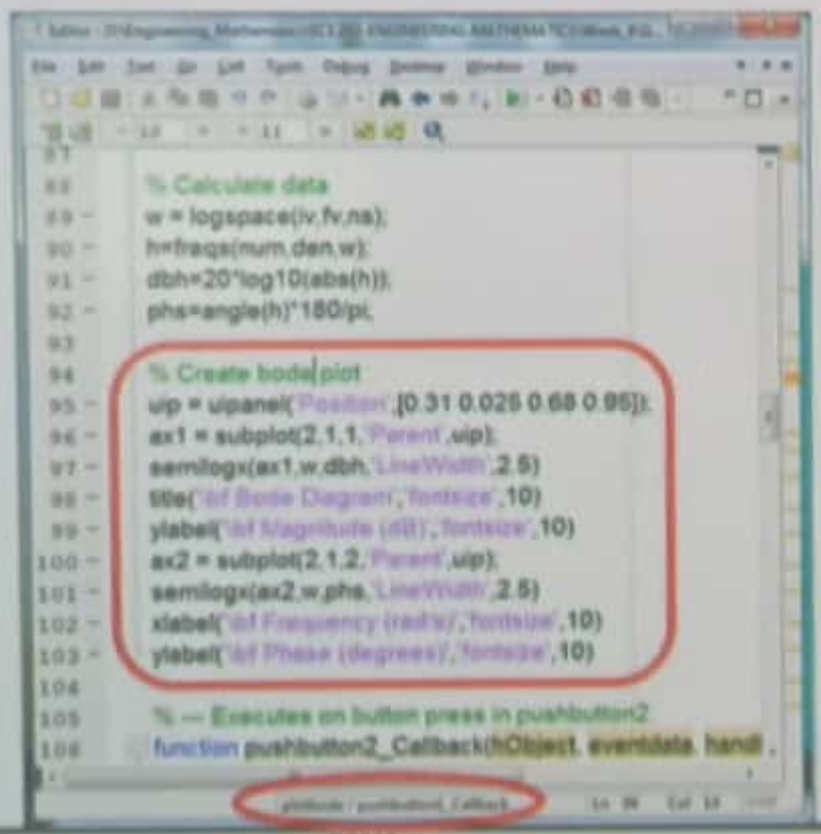
GRAPHICAL USER INTERFACES



```
% Calculate data
w = logspace(iv,fv,ns);
h=freqs(num,den,w);
dbh=20*log10(abs(h));
phs=angle(h)*180/pi;

% Create bode plot
uip = uipanel('Position',[0.31 0.025 0.68 0.95]);
ax1 = subplot(2,1,1,'Parent',uip);
semilogx(ax1,w,dbh,'LineWidth',2.5)
title('\bf Bode Diagram','fontsize',10)
ylabel('\bf Magnitude (dB)','fontsize',10)
ax2 = subplot(2,1,2,'Parent',uip);
semilogx(ax2,w,phs,'LineWidth',2.5)
xlabel('\bf Frequency (rad/s)','fontsize',10)
ylabel('\bf Phase (degrees)','fontsize',10)

% --- Executes on button press in pushbutton2
function pushbutton2_Callback(hObject, eventdata, handl
```

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```
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uip = uipanel('Position',[0.31 0.025 0.68 0.95]);
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ylabel('\bf Phase (degrees)','fontsize',10)

% --- Executes on button press in pushbutton2.
function pushbutton2_Callback(hObject, eventdata, handl
```
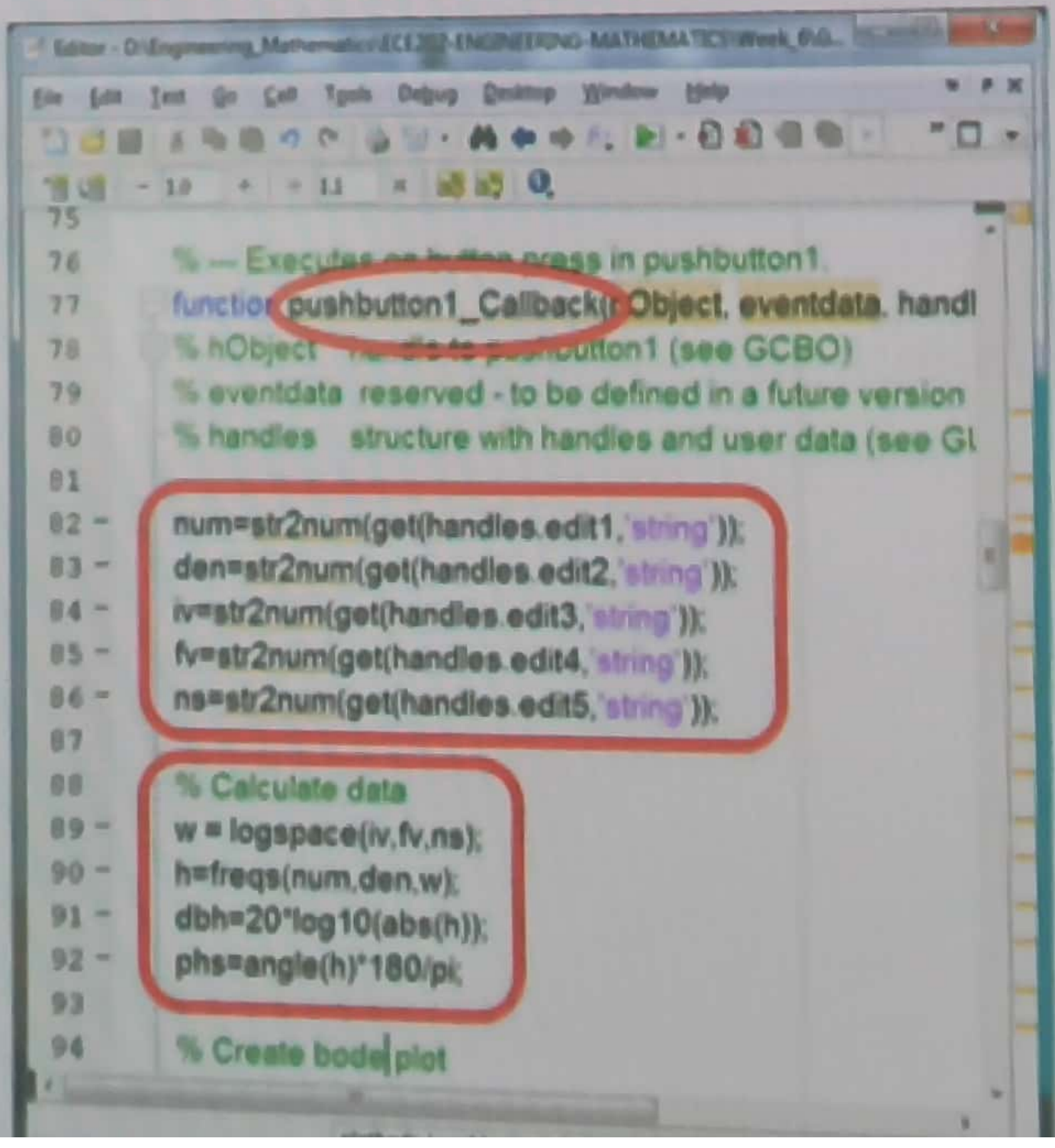
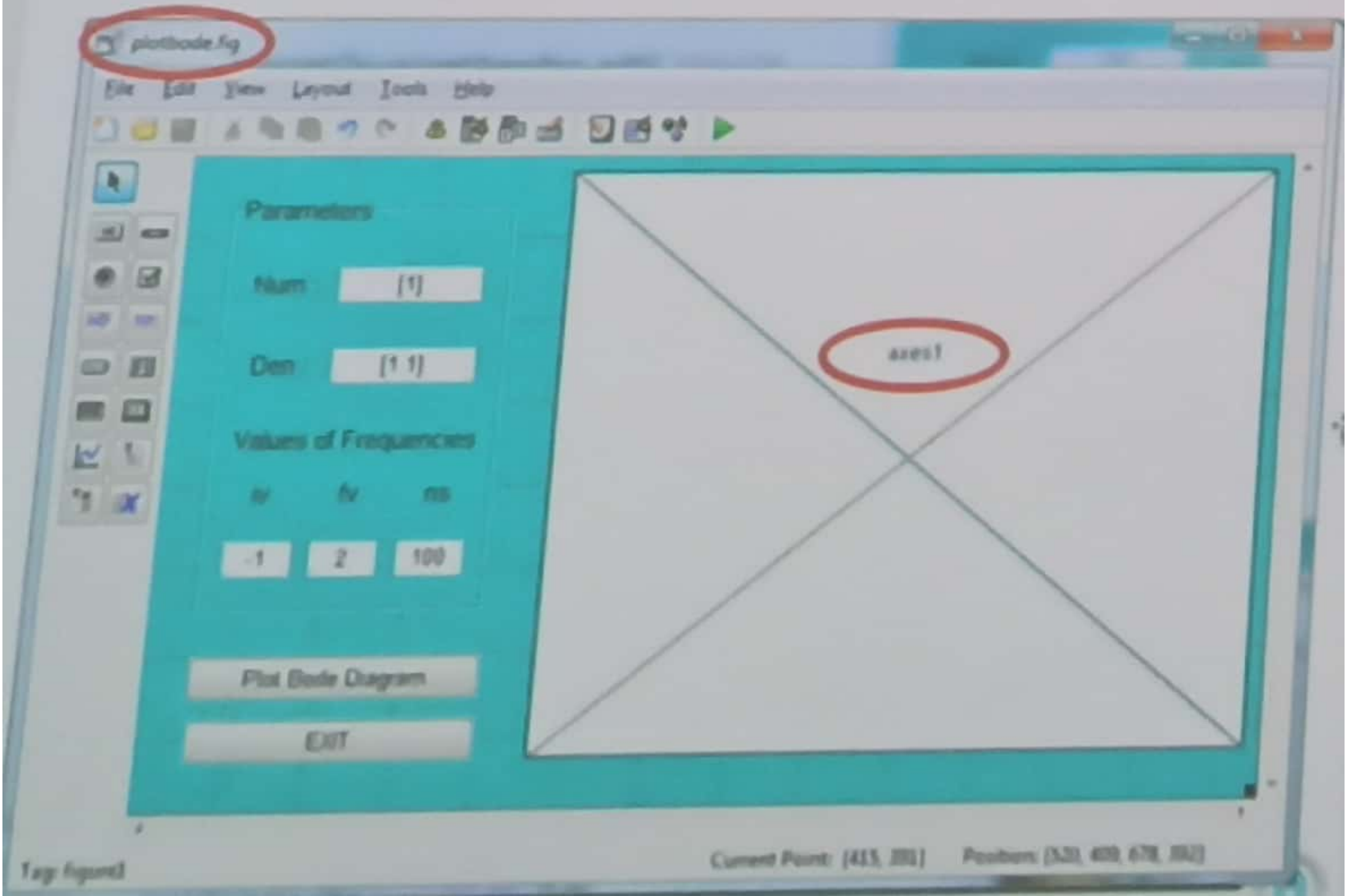

plotbode / pushbutton2_Callback

EE544
User Interface Design and Data Analysis

GRAPHICAL USER INTERFACES



```
75
76      % --- Executes on button press in pushbutton1.
77      function pushbutton1_Callback(hObject, eventdata, handl
78      % hObject    handle to pushbutton1 (see GCBO)
79      % eventdata  reserved - to be defined in a future version
80      % handles    structure with handles and user data (see GI
81
82 -    num=str2num(get(handles.edit1,'string'));
83 -    den=str2num(get(handles.edit2,'string'));
84 -    iv=str2num(get(handles.edit3,'string'));
85 -    fv=str2num(get(handles.edit4,'string'));
86 -    ns=str2num(get(handles.edit5,'string'));
87
88      % Calculate data
89 -    w = logspace(iv,fv,ns);
90 -    h=freqs(num,den,w);
91 -    dbh=20*log10(abs(h));
92 -    phs=angle(h)*180/pi;
93
94      % Create bode plot
```

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