figure

Create a figure graphics object

Syntax

```
figure
figure('PropertyName',PropertyValue,...)
figure(h)
h = figure(...)
```

Description

`figure` creates figure graphics objects. Figure objects are the individual windows on the screen in which MATLAB displays graphical output.

`figure` creates a new figure object using default property values.

`figure('PropertyName',PropertyValue,...)` creates a new figure object using the values of the properties specified. MATLAB uses default values for any properties that you do not explicitly define as arguments.

`figure(h)` does one of two things, depending on whether or not a figure with handle `h` exists. If `h` is the handle to an existing figure, `figure(h)` makes the figure identified by `h` the current figure, makes it visible, and raises it above all other figures on the screen. The current figure is the target for graphics output. If `h` is not the handle to an existing figure, but is an integer, `figure(h)` creates a figure and assigns it the handle `h`. `figure(h)` where `h` is not the handle to a figure, and is not an integer, is an error.

`h = figure(...)` returns the handle to the figure object.

Remarks

To create a figure object, MATLAB creates a new window whose characteristics are controlled by default figure properties (both factory installed and user defined) and properties specified as arguments. See the [properties](#) section for a description of these properties.

You can specify properties as property name/property value pairs, structure arrays, and cell arrays (see the `set` and `get` reference pages for examples of how to specify these data types).

Use `set` to modify the properties of an existing figure or `get` to query the current values of figure properties.

The `gcf` command returns the handle to the current figure and is useful as an argument to the `set` and `get` commands.

Figures can be docked in the desktop. The `Dockable` property determines whether you can dock the figure.

Example

To create a figure window that is one quarter the size of your screen and is positioned in the upper left corner, use the root object's ScreenSize property to determine the size. ScreenSize is a four–element vector: [left, bottom, width, height]:

```
scrsz = get(0,'ScreenSize');
figure('Position',[1 scrsz(4)/2 scrsz(3)/2 scrsz(4)/2])
```

You can add your own title to a figure by setting the Name property and you can turn off the figure number with the NumberTitle property:

```
figure('Name','Simulation Plot Window','NumberTitle','off')
```

Object Hierarchy
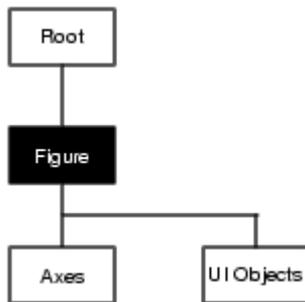
Setting Default Properties

You can set default figure properties only on the root level.

```
set(0,'DefaultFigureProperty',PropertyValue...)
```

where *Property* is the name of the figure property and PropertyValue is the value you are specifying. Use set and get to access figure properties.

See Also

axes, uicontrol, uimenu, close, clf, gcf, rootobject

Object Creation Functions for related functions

Figure Properties descriptions of all figure properties

See Figure Properties in the user guide for more information on figures.

◀ fieldnames   Figure Properties ▶