MATLAB Function Reference

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figure

Create 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.

Making a Figure Current

The current figure is the target for graphics output. There are two ways to make a figure h the current figure.

- Make the figure h current, visible, and displayed on top of other figures:

```
figure(h)
```

- Make the figure h current, but do not change its visibility or stacking with respect to other figures:

```
set(0,'CurrentFigure',h)
```

Examples

Specifying Figure Size and Screen Location

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])
```

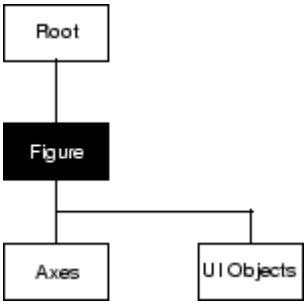
Specifying the Figure Window Title

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')
```

See the Properties section for a description of all figure properties.

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 MATLAB Graphics User Guide for more information on figures.

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fieldnames Figure Properties