UITextFieldDelegate Protocol Reference

User Experience: Controls

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UITextFieldDelegate Protocol Reference

Conforms to	NSObject
Framework	/System/Library/Frameworks/UIKit.framework
Availability	Available in iOS 2.0 and later.
Declared in	UITextField.h
Related sample code	BonjourWeb MoviePlayer

Overview

The `UITextFieldDelegate` protocol defines the messages sent to a text field delegate as part of the sequence of editing its text. All of the methods of this protocol are optional.

Tasks

Managing Editing

- `textFieldShouldBeginEditing:` (page 7)
  Asks the delegate if editing should begin in the specified text field.
- `textFieldDidBeginEditing:` (page 6)
  Tells the delegate that editing began for the specified text field.
- `textFieldShouldEndEditing:` (page 8)
  Asks the delegate if editing should stop in the specified text field.
- `textFieldDidEndEditing:` (page 7)
  Tells the delegate that editing stopped for the specified text field.

Editing the Text Field's Text

- `textField:shouldChangeCharactersInRange:replacementString:` (page 6)
  Asks the delegate if the specified text should be changed.
- `textFieldShouldClear:` (page 8)
  Asks the delegate if the text field's current contents should be removed.

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- textFieldShouldReturn: (page 9)
Asks the delegate if the text field should process the pressing of the return button.

Instance Methods

textField:shouldChangeCharactersInRange:replacementString:

Asks the delegate if the specified text should be changed.

```
- (BOOL)textField:(UITextField *)textField
    shouldChangeCharactersInRange:(NSRange)range replacementString:(NSString *)string
```

Parameters

textField
The text field containing the text.

range
The range of characters to be replaced

string
The replacement string.

Return Value
YES if the specified text range should be replaced; otherwise, NO to keep the old text.

Discussion
The text field calls this method whenever the user types a new character in the text field or deletes an existing character.

Availability
Available in iOS 2.0 and later.

Declared In
UITextField.h

textFieldDidBeginEditing:

Tells the delegate that editing began for the specified text field.

```
- (void)textFieldDidBeginEditing:(UITextField *)textField
```

Parameters

textField
The text field for which an editing session began.

Discussion
This method notifies the delegate that the specified text field just became the first responder. You can use this method to update your delegate's state information. For example, you might use this method to show overlay views that should be visible while editing.

Implementation of this method by the delegate is optional.

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Availability
Available in iOS 2.0 and later.

Declared In
`UITextField.h`

textFieldDidEndEditing:

Tells the delegate that editing stopped for the specified text field.

```
- (void)textFieldDidEndEditing:(UITextField *)textField
```

Parameters

textField
The text field for which editing ended.

Discussion
This method is called after the text field resigns its first responder status. You can use this method to update your delegate's state information. For example, you might use this method to hide overlay views that should be visible only while editing.

Implementation of this method by the delegate is optional.

Availability
Available in iOS 2.0 and later.

Declared In
`UITextField.h`

textFieldShouldBeginEditing:

Asks the delegate if editing should begin in the specified text field.

```
- (BOOL)textFieldShouldBeginEditing:(UITextField *)textField
```

Parameters

textField
The text field for which editing is about to begin.

Return Value
`YES` if an editing session should be initiated; otherwise, `NO` to disallow editing.

Discussion
When the user performs an action that would normally initiate an editing session, the text field calls this method first to see if editing should actually proceed. In most circumstances, you would simply return `YES` from this method to allow editing to proceed.

Implementation of this method by the delegate is optional. If it is not present, editing proceeds as if this method had returned `YES`.

Availability
Available in iOS 2.0 and later.

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Declared In
`UITextField.h`

textFieldShouldClear:

Asks the delegate if the text field's current contents should be removed.

```
- (BOOL)textFieldShouldClear:(UITextField *)textField
```

Parameters

`textField`
The text field containing the text.

Return Value
`YES` if the text field's contents should be cleared; otherwise, `NO`.

Discussion
The text field calls this method in response to the user pressing the built-in clear button. (This button is not shown by default but can be enabled by changing the value in the `clearButtonMode` property of the text field.) This method is also called when editing begins and the `clearsOnBeginEditing` property of the text field is set to `YES`.

Implementation of this method by the delegate is optional. If it is not present, the text is cleared as if this method had returned `YES`.

Availability
Available in iOS 2.0 and later.

Declared In
`UITextField.h`

textFieldShouldEndEditing:

Asks the delegate if editing should stop in the specified text field.

```
- (BOOL)textFieldShouldEndEditing:(UITextField *)textField
```

Parameters

`textField`
The text field for which editing is about to end.

Return Value
`YES` if editing should stop; otherwise, `NO` if the editing session should continue

Discussion
This method is called when the text field is asked to resign the first responder status. This might occur when your application asks the text field to resign focus or when the user tries to change the editing focus to another control. Before the focus actually changes, however, the text field calls this method to give your delegate a chance to decide whether it should.

Normally, you would return `YES` from this method to allow the text field to resign the first responder status. You might return `NO`, however, in cases where your delegate detects invalid contents in the text field. By returning `NO`, you could prevent the user from switching to another control until the text field contained a valid value.

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Note: If you use this method to validate the contents of the text field, you might also want to provide feedback to that effect using an overlay view. For example, you could temporarily display a small icon indicating the text was invalid and needs to be corrected. For more information about adding overlays to text fields, see the methods of `UITextField`.

Be aware that this method provides only a recommendation about whether editing should end. Even if you return `NO` from this method, it is possible that editing might still end. For example, this might happen when the text field is forced to resign the first responder status by being removed from its parent view or window.

Implementation of this method by the delegate is optional. If it is not present, the first responder status is resigned as if this method had returned `YES`.

Availability
Available in iOS 2.0 and later.

Declared In
`UITextField.h`

textFieldShouldReturn:

Asks the delegate if the text field should process the pressing of the return button.

```
- (BOOL)textFieldShouldReturn:(UITextField *)textField
```

Parameters

textField

The text field whose return button was pressed.

Return Value
`YES` if the text field should implement its default behavior for the return button; otherwise, `NO`.

Discussion
The text field calls this method whenever the user taps the return button. You can use this method to implement any custom behavior when the button is tapped.

Availability
Available in iOS 2.0 and later.

Declared In
`UITextField.h`

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Document Revision History

This table describes the changes to *UITextFieldDelegate Protocol Reference*.

Date	Notes
2008-06-16	New document describing the protocol that defines messages sent to a text field delegate as part of its text-editing sequence.

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Document Revision History

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