



Computing & Information Sciences
FLORIDA INTERNATIONAL UNIVERSITY

Mobile Application Development

lecture9

Fall 2011 - COP 4655 U1

T/R 5:00 - 6:15pm – ECS 134

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Agenda

- Protocols
- UITextField



Protocol and Delegation

- A protocol is a list of methods that is shared among classes.
- Use case: A class delegates responsibility of implementing methods to another class.
 - What actions to take or what values to set.
- Define in a .h file

```
@protocol Drawing
```

```
-(void) paint;
```

```
-(void) erase;
```

```
@optional
```

```
-(void) outline;
```

```
@end
```

Protocol use

- Use the “<” and “>” in the @interface section after class name or the parent class you are inheriting from.
- Specify which are required vs. optional using @required/@optional as needed.
- When implementing you don't need to declare (again) in the interface section.
- If you have more than one protocol just add via comma separated list:
... <Drawing, Printing, Dump>

Protocol Notes

- Protocols are classless... They do not inherit from another class.
- You can extend a protocol like:
@protocol Drawing3D <Drawing>
- When using a protocol, you can inherit from another class that implements methods that conforms to protocol.

UITextField

- Displays editable text and sends an action message to a target object when the user presses the return button.
- Uses of a delegate object to handle editing-related notifications and configurations via: UITextFieldDelegate and UITextInputTraits Protocols.
- Customize the editing behavior of the control and provide guidance for when certain actions should occur.

Managing the Keyboard

- When you tap a textfield the view becomes the first responder (the object instance target for all events) and requests the keyboard to appear.
- You can configure how you want the keyboard to behave, eg., close keyboard when you press done.
- To dismiss the keyboard, send the resignFirstResponder message to the text field that is currently the first responder.

UITextFieldDelegate Protocol

– textFieldShouldBeginEditing:

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

– textFieldDidBeginEditing:

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

– textFieldShouldEndEditing:

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

– textFieldShouldReturn:

The text field calls this method whenever the user taps the return button.

– textFieldDidEndEditing:

This method is called when the text field is asked to resign the first responder status.

Apple Developer Sample Code “HelloWorld”

- Go to Organizer
- Search for HelloWorld
- From Sample Code select the iOS version.

Readings

- Review Kochan Chapter 11. Protocols and Delegation
- Apple Systems Guides: About Text, Web, and Editing Support in iOS
- iOS Reference Library: UITextField Class Reference and UITextFieldDelegate Protocol Reference
- <http://www.icodeblog.com/2010/01/04/uitextfield-a-complete-api-overview/>