

```
1. /**
2.  * AppDelegate.h
3.  * CellStylesExample
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11. @interface AppDelegate : UIResponder <UIApplicationDelegate>
12.
13. @property (strong, nonatomic) UIWindow *window;
14.
15. @property (strong, nonatomic) UINavigationController *navigationController;
16.
17. @end
```

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7.  */
8.
9. #import "AppDelegate.h"
10.
11. #import "MasterViewController.h"
12.
13. @implementation AppDelegate
14.
15. @synthesize window = _window;
16. @synthesize navigationController = _navigationController;
17.
18. - (BOOL)application:(UIApplication *)application didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
19. {
20.     self.window = [[UIWindow alloc] initWithFrame:[[UIScreen mainScreen] bounds]];
21.     // Override point for customization after application launch.
22.
23.     MasterViewController *masterViewController = [[MasterViewController alloc] initWithNibName:@"MasterViewController" bundle:nil];
24.     self.navigationController = [[UINavigationController alloc] initWithRootViewController:masterViewController];
25.     self.window.rootViewController = self.navigationController;
26.     [self.window makeKeyAndVisible];
27.     return YES;
28. }
29.
30. - (void)applicationWillResignActive:(UIApplication *)application
31. {
32.     // Sent when the application is about to move from active to inactive state. This can occur for certain types of temporary interruptions
33.     // (such as an incoming phone call or SMS message) or when the user quits the application and it begins the transition to the background state.
34.     // Use this method to pause ongoing tasks, disable timers, and throttle down OpenGL ES frame rates. Games should use this method to pause
35.     // the game.
36. }
37.
38. - (void)applicationDidEnterBackground:(UIApplication *)application
39. {
40.     // Use this method to release shared resources, save user data, invalidate timers, and store enough application state information to
41.     // restore your application to its current state in case it is terminated later.
42.     // If your application supports background execution, this method is called instead of applicationWillTerminate: when the user quits.
43. }
44.
45. - (void)applicationWillEnterForeground:(UIApplication *)application
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48.     // background.
49. }
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45. }
46.
47. - (void)applicationDidBecomeActive:(UIApplication *)application
48. {
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background, optionally refresh the user interface.
50. }
51.
52. - (void)applicationWillTerminate:(UIApplication *)application
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```
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8.
9. #import "MasterViewController.h"
10.
11. @interface MasterViewController ()
12.
13. @property (strong, nonatomic) NSMutableDictionary *fruits;
14.
15. @end
16.
17. @implementation MasterViewController
18.
19. @synthesize fruits = _fruits;
20.
21. - (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
22. {
23.     self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
24.     if (self) {
25.         self.title = @"Cell Styles";
26.
27.         // load dictionary from plist
28.         self.fruits = [[NSMutableDictionary alloc] initWithContentsOfFile:
29.             [[NSBundle mainBundle] pathForResource:@"Fruits" ofType:@"plist"]];
30.     }
31.     return self;
32. }
33.
34. - (void)viewDidLoad
35. {
36.     [super viewDidLoad];
37. }
38.
39. - (void)viewDidUnload
40. {
41.     [super viewDidUnload];
42. }
43.
44. - (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
45. {
46.     return (interfaceOrientation != UIInterfaceOrientationPortraitUpsideDown);
47. }
48.
```

```
49. - (void)insertNewObject:(id)sender
50. {
51. }
52.
53. #pragma mark - Table View
54.
55. - (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
56. {
57.     return 1;
58. }
59.
60. - (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
61. {
62.     return self.fruits.allKeys.count;
63. }
64.
65. - (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
66. {
67.     static NSString *CellIdentifier = @"Cell";
68.
69.     UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:CellIdentifier];
70.     if (cell == nil) {
71.         cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleValue1 reuseIdentifier:CellIdentifier];
72.         cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;
73.     }
74.
75.     // main cell text is fruit name, detail text is description of fruit
76.     cell.textLabel.text = [self.fruits.allKeys objectAtIndex:indexPath.row];
77.     cell.detailTextLabel.text = [self.fruits objectForKey:[self.fruits.allKeys objectAtIndex:indexPath.row]];
78.
79.     return cell;
80. }
81.
82. @end
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```
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23.     MasterViewController *masterViewController = [[MasterViewController alloc] initWithNibName:@"MasterViewController" bundle:nil];
24.     self.navigationController = [[UINavigationController alloc] initWithRootViewController:masterViewController];
25.     self.window.rootViewController = self.navigationController;
26.     [self.window makeKeyAndVisible];
27.     return YES;
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11. @interface MasterViewController : UITableViewController
12.
13. @property (weak, nonatomic) IBOutlet UITableViewCell *customCell;
14.
15. @end
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12.
13. @property (strong, nonatomic) NSMutableDictionary *fruits;
14.
15. @end
16.
17. @implementation MasterViewController
18.
19. @synthesize customCell = _customCell;
20. @synthesize fruits = _fruits;
21.
22. - (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
23. {
24.     self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
25.     if (self) {
26.         self.title = @"Custom Cells";
27.
28.         // load dictionary from plist
29.         self.fruits = [[NSMutableDictionary alloc] initWithContentsOfFile:
30.             [[NSBundle mainBundle] pathForResource:@"Fruits" ofType:@"plist"]];
31.
32.     }
33.     return self;
34. }
35.
36. - (void)viewDidLoad
37. {
38.     [super viewDidLoad];
39. }
40.
41. - (void)viewDidUnload
42. {
43.     [super viewDidUnload];
44. }
45.
46. - (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
47. {
48.     return (interfaceOrientation != UIInterfaceOrientationPortraitUpsideDown);

```

```
49. }
50.
51. #pragma mark - Table View
52.
53. - (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
54. {
55.     return 1;
56. }
57.
58. - (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
59. {
60.     return self.fruits.count;
61. }
62.
63. - (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
64. {
65.     static NSString *CellIdentifier = @"Cell";
66.
67.     UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:CellIdentifier];
68.     if (cell == nil) {
69.         // load cell from nib into self.customCell
70.         [[NSBundle mainBundle] loadNibNamed:@"CustomCell" owner:self options:nil];
71.
72.         // current cell should use newly loaded cell
73.         cell = self.customCell;
74.
75.         // clear cell so it can be loaded again
76.         self.customCell = nil;
77.     }
78.
79.     // main cell text is fruit name
80.     UILabel *leftLabel = (UILabel *)[cell viewWithTag:10];
81.     leftLabel.text = [self.fruits.allKeys objectAtIndex:indexPath.row];
82.
83.     // detail text is description of fruit
84.     UILabel *rightLabel = (UILabel *)[cell viewWithTag:11];
85.     rightLabel.text = [self.fruits objectForKey:[self.fruits.allKeys objectAtIndex:indexPath.row]];
86.
87.     return cell;
88. }
89.
90. @end
```

```
1. //
2. // AddFruitViewController.h
3. // EditableTableViewController
4. //
5. // Created by Tommy MacWilliam on 3/27/12.
6. // Copyright (c) 2012 __MyCompanyName__. All rights reserved.
7. //
8.
9. #import <UIKit/UIKit.h>
10.
11. @protocol AddTodoDelegate
12. - (void)didFinishWithTodo:(NSString *)todo;
13. @end
14.
15. @interface AddTodoViewController : UIViewController
16.
17. @property (weak, nonatomic) id<AddTodoDelegate> delegate;
18. @property (weak, nonatomic) IBOutlet UITextField *textField;
19.
20. - (IBAction)buttonPressed:(id)sender;
21.
22. @end
```

```
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5. // Created by Tommy MacWilliam on 3/27/12.
6. // Copyright (c) 2012 __MyCompanyName__. All rights reserved.
7. //
8.
9. #import "AddToDoViewController.h"
10.
11. @implementation AddToDoViewController
12.
13. @synthesize delegate = _delegate;
14. @synthesize textField = _textField;
15.
16. - (void)viewDidLoad
17. {
18.     [super viewDidLoad];
19. }
20.
21. - (void)viewDidUnload
22. {
23.     [super viewDidUnload];
24. }
25.
26. - (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
27. {
28.     return (interfaceOrientation == UIInterfaceOrientationPortrait);
29. }
30.
31. - (void)buttonPressed:(id)sender
32. {
33.     [self.delegate didFinishWithToDo:self.textField.text];
34. }
35.
36. @end
```

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9. #import <UIKit/UIKit.h>
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11. @interface AppDelegate : UIResponder <UIApplicationDelegate>
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13. @property (strong, nonatomic) UIWindow *window;
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15. @property (strong, nonatomic) UINavigationController *navigationController;
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14.
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16. @synthesize navigationController = _navigationController;
17.
18. - (BOOL)application:(UIApplication *)application didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
19. {
20.     self.window = [[UIWindow alloc] initWithFrame:[[UIScreen mainScreen] bounds]];
21.     // Override point for customization after application launch.
22.
23.     MasterViewController *masterViewController = [[MasterViewController alloc] initWithNibName:@"MasterViewController" bundle:nil];
24.     self.navigationController = [[UINavigationController alloc] initWithRootViewController:masterViewController];
25.     self.window.rootViewController = self.navigationController;
26.     [self.window makeKeyAndVisible];
27.     return YES;
28. }
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30. - (void)applicationWillResignActive:(UIApplication *)application
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33.     // (such as an incoming phone call or SMS message) or when the user quits the application and it begins the transition to the background state.
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35.     // the game.
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57. @end
```

```
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4. //
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7. //
8.
9. #import "AddTodoViewController.h"
10. #import <UIKit/UIKit.h>
11.
12. @interface MasterViewController : UITableViewController <AddTodoDelegate>
13.
14. -(void)addTodo;
15.
16. @end
```

```
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3. // EditableTableViewController
4. //
5. // Created by Tommy MacWilliam on 3/27/12.
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7. //
8.
9. #import "AddTodoViewController.h"
10. #import "MasterViewController.h"
11.
12. @interface MasterViewController ()
13.
14. @property (strong, nonatomic) NSMutableArray *todos;
15.
16. @end
17.
18. @implementation MasterViewController
19.
20. @synthesize todos = _todos;
21.
22. - (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
23. {
24.     self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
25.     if (self) {
26.         self.title = @"TODOs";
27.         self.todos = [[NSMutableArray alloc] init];
28.     }
29.     return self;
30. }
31.
32. - (void)viewDidLoad
33. {
34.     [super viewDidLoad];
35.
36.     self.navigationItem.leftBarButtonItem = self.editButtonItem;
37.
38.     UIBarButtonItem *addButton = [[UIBarButtonItem alloc] initWithBarButtonSystemItem:UIBarButtonSystemItemAdd target:self action:@selector(
addTodo)];
39.     self.navigationItem.rightBarButtonItem = addButton;
40. }
41.
42. - (void)viewDidUnload
43. {
44.     [super viewDidUnload];
45. }
46.
47. - (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
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```
48. {
49.     return (interfaceOrientation != UIInterfaceOrientationPortraitUpsideDown);
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51.
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54. - (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
55. {
56.     return 1;
57. }
58.
59. - (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
60. {
61.     return [self.todos count];
62. }
63.
64. - (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
65. {
66.     static NSString *CellIdentifier = @"Cell";
67.
68.     UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:CellIdentifier];
69.     if (cell == nil) {
70.         cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault reuseIdentifier:CellIdentifier];
71.         cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;
72.     }
73.
74.     // set text of cell to be fruit text
75.     cell.textLabel.text = [self.todos objectAtIndex:indexPath.row];
76.
77.     return cell;
78. }
79.
80. - (BOOL)tableView:(UITableView *)tableView canEditRowAtIndexPath:(NSIndexPath *)indexPath
81. {
82.     return YES;
83. }
84.
85. - (void)tableView:(UITableView *)tableView commitEditingStyle:(UITableViewCellEditingStyle)editingStyle forRowAtIndexPath:(NSIndexPath *)indexPath
86. {
87.     // row was deleted
88.     if (editingStyle == UITableViewCellEditingStyleDelete) {
89.         // update model
90.         [self.todos removeObjectAtIndex:indexPath.row];
91.
92.         // update view
93.         [tableView deleteRowsAtIndexPaths:[NSArray arrayWithObject:indexPath] withRowAnimation:UITableViewRowAnimationFade];
94.     }
```

```
95. }
96.
97. - (void)tableView:(UITableView *)tableView moveRowAtIndexPath:(NSIndexPath *)fromIndexPath toIndexPath:(NSIndexPath *)toIndexPath
98. {
99.     // determine what fruit was moved
100.    NSString *moved = [self.todos objectAtIndex:fromIndexPath.row];
101.
102.    // remove fruit from previous location in the model
103.    [self.todos removeObjectAtIndex:fromIndexPath.row];
104.
105.    // re-insert fruit at new locaation in the model
106.    [self.todos insertObject:moved atIndex:toIndexPath.row];
107. }
108.
109. - (BOOL)tableView:(UITableView *)tableView canMoveRowAtIndexPath:(NSIndexPath *)indexPath
110. {
111.     return YES;
112. }
113.
114. - (void)tableView:(UITableView *)tableView didSelectRowAtIndexPath:(NSIndexPath *)indexPath
115. {
116.     // create and show new alertview with a message to the user
117.     UIAlertView *alert = [[UIAlertView alloc] initWithTitle:@"You selected "
118.                                                         message:[self.todos objectAtIndex:indexPath.row]
119.                                                         delegate:nil
120.                                                         cancelButtonTitle:@"Thanks!"
121.                                                         otherButtonTitles:nil];
122.     [alert show];
123. }
124.
125. - (void)addTodo
126. {
127.     // create new view controller
128.     AddTodoViewController* addTodoViewController = [[AddTodoViewController alloc] initWithNibName:@"AddTodoViewController" bundle:nil];
129.
130.     // attach delegate
131.     addTodoViewController.delegate = self;
132.
133.     // display view controller
134.     [self.navigationController pushViewController:addTodoViewController animated:YES];
135. }
136.
137. - (void)didFinishWithTodo:(NSString *)todo
138. {
139.     // update model
140.     [self.todos addObject:todo];
141.
142.     // update view
```

```
143.     [self.tableView reloadData];
144.
145.     // return to tableview
146.     [self.navigationController popViewControllerAnimated:YES];
147. }
148.
149. @end
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43. }
44.
45. - (void)applicationWillEnterForeground:(UIApplication *)application
46. {
47.     // Called as part of the transition from the background to the inactive state; here you can undo many of the changes made on entering the
48.     // background.
```



```
45. }
46.
47. - (void)applicationDidBecomeActive:(UIApplication *)application
48. {
49.     // Restart any tasks that were paused (or not yet started) while the application was inactive. If the application was previously in the
background, optionally refresh the user interface.
50. }
51.
52. - (void)applicationWillTerminate:(UIApplication *)application
53. {
54.     // Called when the application is about to terminate. Save data if appropriate. See also applicationDidEnterBackground:.
55. }
56.
57. @end
```

```
1. /**
2.  * FruitImageViewController.h
3.  * FruitTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11. @interface FruitImageViewController : UIViewController {
12.     UILabel *_fruitTitle;
13.     UIImageView *_fruitImageView;
14.     UIBarButtonItem *_barButton;
15.     NSString *_fruit;
16.     NSString *_imageName;
17. }
18.
19. @property (nonatomic, retain) IBOutlet UILabel *fruitTitle;
20. @property (nonatomic, retain) IBOutlet UIImageView *fruitImageView;
21. @property (nonatomic, retain) IBOutlet UIBarButtonItem *barButton;
22. @property (nonatomic, retain) NSString *fruit;
23. @property (nonatomic, retain) NSString *imageName;
24.
25. - (IBAction)barButtonPressed;
26.
27. @end
```

```
1. /**
2.  * FruitImageViewController.m
3.  * FruitTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import "FruitImageViewController.h"
10.
11. @implementation FruitImageViewController
12.
13. @synthesize fruitTitle = _fruitTitle;
14. @synthesize fruitImageView = _fruitImageView;
15. @synthesize fruit = _fruit;
16. @synthesize imageName = _imageName;
17. @synthesize barButton = _barButton;
18.
19. - (void)didReceiveMemoryWarning
20. {
21.     [super didReceiveMemoryWarning];
22. }
23.
24. #pragma mark - View lifecycle
25.
26. - (void)viewDidLoad
27. {
28.     [super viewDidLoad];
29.
30.     // add button to right of navigation bar
31.     self.navigationItem.rightBarButtonItem = self.barButton;
32. }
33.
34. /**
35.  * Remember, viewDidLoad is not called every time the tableview is going to be shown, but viewWillAppear is
36.  *
37.  */
38. - (void)viewWillAppear:(BOOL)animated
39. {
40.     [super viewWillAppear:animated];
41.
42.     // display fruit information (passed from the previous controller)
43.     self.navigationItem.title = self.fruit;
44.     self.fruitTitle.text = [NSString stringWithFormat:@"This is the %@", self.fruit];
45.     self.fruitImageView.image = [UIImage imageNamed:self.imageName];
46. }
47.
48. /**
```

```
49.  * Display a friendly message to the user
50.  * Fired when user presses barButton in the navigation menu
51.  *
52.  */
53. - (IBAction) barButtonPressed
54. {
55.     // create and show alert message
56.     UIAlertView *alert = [[UIAlertView alloc] initWithTitle:@"Hello!"
57.                                                            message:@"Hi there!"
58.                                                            delegate:nil
59.                                                            cancelButtonTitle:@"Go away!"
60.                                                            otherButtonTitles:@"Hi!", nil];
61.
62.     [alert show];
63. }
64.
65. @end
```

```
1. /**
2.  * FruitWebViewController.h
3.  * FruitTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11. @interface FruitWebViewController : UIViewController {
12.     UIWebView *_webView;
13.     NSString *_fruit;
14. }
15.
16. @property (nonatomic, retain) IBOutlet UIWebView *webView;
17. @property (nonatomic, retain) NSString *fruit;
18.
19. @end
```

```
1. /**
2.  * FruitWebViewController.m
3.  * FruitTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import "FruitWebViewController.h"
10.
11. @implementation FruitWebViewController
12.
13. @synthesize fruit = _fruit;
14. @synthesize webView = _webView;
15.
16.
17. - (void)didReceiveMemoryWarning
18. {
19.     [super didReceiveMemoryWarning];
20. }
21.
22. #pragma mark - View lifecycle
23.
24. - (void)viewDidLoad
25. {
26.     [super viewDidLoad];
27.
28.     // allow user to pinch-zoom page (though wikipedia disables this)
29.     self.webView.scalesPageToFit = YES;
30.     self.webView.multipleTouchEnabled = YES;
31. }
32.
33. - (void)viewWillAppear:(BOOL)animated
34. {
35.     [super viewWillAppear:animated];
36.     self.navigationItem.title = [NSString stringWithFormat:@"Wikipedia: %@", self.fruit];
37.
38.     // request wikipedia page for selected object
39.     [self.webView loadRequest:[NSURLRequest requestWithURL:[NSURL URLWithString:
40.         [NSString stringWithFormat:@"http://en.wikipedia.org/wiki/%@", self.fruit]]]];
41. }
42.
43. @end
```

```
1. /**
2.  * MasterViewController.h
3.  * FruitTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11. @class FruitWebViewController;
12.
13. @interface MasterViewController : UITableViewController
14.
15. @property (strong, nonatomic) IBOutlet FruitWebViewController *fruitWebViewController;
16.
17. @end
```

```
1. /**
2.  * MasterTableViewController.m
3.  * FruitTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import "FruitImageViewController.h"
10. #import "FruitWebViewController.h"
11. #import "MasterViewController.h"
12.
13. @interface MasterViewController ()
14.
15. // private properties
16. @property (strong, nonatomic) NSMutableDictionary *fruits;
17.
18. @end
19.
20. @implementation MasterViewController
21.
22. @synthesize fruits = _fruits;
23. @synthesize fruitWebViewController = _fruitWebViewController;
24.
25. - (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
26. {
27.     self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
28.     if (self) {
29.         self.title = @"Fruits";
30.         self.fruits = [[NSMutableDictionary alloc] initWithContentsOfFile:
31.             [[NSBundle mainBundle] pathForResource:@"Fruits" ofType:@"plist"]];
32.     }
33.     return self;
34. }
35.
36. - (void)viewDidLoad
37. {
38.     [super viewDidLoad];
39. }
40.
41. - (void)viewDidUnload
42. {
43.     [super viewDidUnload];
44. }
45.
46. - (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
47. {
48.     return (interfaceOrientation != UIInterfaceOrientationPortraitUpsideDown);

```



```
49. }
50.
51. #pragma mark - Table View
52.
53. - (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
54. {
55.     return 1;
56. }
57.
58. - (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
59. {
60.     return [self.fruits allKeys].count;
61. }
62.
63. - (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
64. {
65.     static NSString *CellIdentifier = @"Cell";
66.
67.     UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:CellIdentifier];
68.     if (cell == nil) {
69.         cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault reuseIdentifier:CellIdentifier];
70.         cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;
71.     }
72.
73.     cell.textLabel.text = [[self.fruits allKeys] objectAtIndex:indexPath.row];
74.     cell.accessoryType = UITableViewCellAccessoryDetailDisclosureButton;
75.     return cell;
76. }
77.
78. /**
79.  * User selected cell in table, show FruitImageViewController
80.  *
81.  */
82. - (void)tableView:(UITableView *)tableView didSelectRowAtIndexPath:(NSIndexPath *)indexPath
83. {
84.     // allocate a new viewcontroller to display the fruit
85.     FruitImageViewController *fruitImageViewController = [[FruitImageViewController alloc]
86.                                                             initWithNibName:@"FruitImageViewController" bundle:nil];
87.
88.     // pass the selected fruit to the new view controller
89.     fruitImageViewController.fruit = [[self.fruits allKeys] objectAtIndex:indexPath.row];
90.     fruitImageViewController.imageName = [self.fruits objectForKey:[self.fruits allKeys] objectAtIndex:indexPath.row]];
91.
92.     // push new view controller onto the stack
93.     [self.navigationController pushViewController:fruitImageViewController animated:YES];
94. }
95.
96. /**
```

```
97.  * User selected detail button, show FruitWebViewController
98.  *
99.  */
100. - (void)tableView:(UITableView *)tableView accessoryButtonTappedForRowWithIndexPath:(NSIndexPath *)indexPath
101. {
102.     // set the fruit for the viewcontroller to be the selected fruit
103.     self.fruitWebViewController.fruit = [[self.fruits allKeys] objectAtIndex:indexPath.row];
104.
105.     // push new view controller onto the stack
106.     [self.navigationController pushViewController:self.fruitWebViewController animated:YES];
107. }
108.
109. @end
```

```
1. /**
2.  * AppDelegate.h
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11. @interface AppDelegate : UIResponder <UIApplicationDelegate>
12.
13. @property (strong, nonatomic) UIWindow *window;
14.
15. @property (strong, nonatomic) UINavigationController *navigationController;
16.
17. @end
```

```
1. /**
2.  * AppDelegate.m
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import "AppDelegate.h"
10.
11. #import "MasterViewController.h"
12.
13. @implementation AppDelegate
14.
15. @synthesize window = _window;
16. @synthesize navigationController = _navigationController;
17.
18. - (BOOL)application:(UIApplication *)application didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
19. {
20.     self.window = [[UIWindow alloc] initWithFrame:[UIScreen mainScreen] bounds];
21.     // Override point for customization after application launch.
22.
23.     MasterViewController *masterViewController = [[MasterViewController alloc] initWithNibName:@"MasterViewController" bundle:nil];
24.     self.navigationController = [[UINavigationController alloc] initWithRootViewController:masterViewController];
25.     self.window.rootViewController = self.navigationController;
26.     [self.window makeKeyAndVisible];
27.     return YES;
28. }
29.
30. - (void)applicationWillResignActive:(UIApplication *)application
31. {
32.     // Sent when the application is about to move from active to inactive state. This can occur for certain types of temporary interruptions
(such as an incoming phone call or SMS message) or when the user quits the application and it begins the transition to the background state.
33.     // Use this method to pause ongoing tasks, disable timers, and throttle down OpenGL ES frame rates. Games should use this method to pause
the game.
34. }
35.
36. - (void)applicationDidEnterBackground:(UIApplication *)application
37. {
38.     // Use this method to release shared resources, save user data, invalidate timers, and store enough application state information to
restore your application to its current state in case it is terminated later.
39.     // If your application supports background execution, this method is called instead of applicationWillTerminate: when the user quits.
40. }
41.
42. - (void)applicationWillEnterForeground:(UIApplication *)application
43. {
44.     // Called as part of the transition from the background to the inactive state; here you can undo many of the changes made on entering the
background.
```

```
45. }
46.
47. - (void)applicationDidBecomeActive:(UIApplication *)application
48. {
49.     // Restart any tasks that were paused (or not yet started) while the application was inactive. If the application was previously in the
background, optionally refresh the user interface.
50. }
51.
52. - (void)applicationWillTerminate:(UIApplication *)application
53. {
54.     // Called when the application is about to terminate. Save data if appropriate. See also applicationDidEnterBackground:.
55. }
56.
57. @end
```

```
1. /**
2.  * DivisionsViewController.h
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11.
12. @interface DivisionsViewController : UITableViewController
13.
14. @property (strong, nonatomic) NSMutableDictionary *divisions;
15.
16. @end
```

```
1. /**
2.  * DivisionsViewController.m
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import "DivisionsViewController.h"
10. #import "TeamsViewController.h"
11.
12. @implementation DivisionsViewController
13.
14. @synthesize divisions = _divisions;
15.
16. - (void)didReceiveMemoryWarning
17. {
18.     [super didReceiveMemoryWarning];
19. }
20.
21. #pragma mark - View lifecycle
22.
23. - (void)viewDidLoad
24. {
25.     [super viewDidLoad];
26.     self.title = @"Divisions";
27. }
28.
29. #pragma mark - Table view data source
30.
31. - (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
32. {
33.     return 1;
34. }
35.
36. - (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
37. {
38.     return [self.divisions count];
39. }
40.
41. - (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
42. {
43.     static NSString *CellIdentifier = @"Cell";
44.
45.     UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:CellIdentifier];
46.     if (cell == nil) {
47.         cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault reuseIdentifier:CellIdentifier];
48.     }
```

```
49.
50.     // set text of cell to be plist key
51.     cell.textLabel.text = [[self.divisions allKeys] objectAtIndex:indexPath.row];
52.     cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;
53.
54.     return cell;
55. }
56.
57. #pragma mark - Table view delegate
58.
59. - (void)tableView:(UITableView *)tableView didSelectRowAtIndexPath:(NSIndexPath *)indexPath
60. {
61.     TeamsViewController *teamsViewController = [[TeamsViewController alloc] initWithNibName:@"TeamsViewController"
62.                                                bundle:nil];
63.     teamsViewController.teams = [self.divisions objectForKey:[self.divisions allKeys] objectAtIndex:indexPath.row]];
64.     [self.navigationController pushViewController:teamsViewController animated:YES];
65. }
66.
67. @end
```



```
1. /**
2.  * MasterViewController.h
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11. @interface MasterViewController : UITableViewController
12.
13. @end
```

```
1. /**
2.  * MasterViewController.m
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import "DivisionsViewController.h"
10. #import "MasterViewController.h"
11.
12. @interface MasterViewController ()
13.
14. @property (nonatomic, retain) NSMutableDictionary *leagues;
15.
16. @end
17.
18. @implementation MasterViewController
19.
20. @synthesize leagues = _leagues;
21.
22. - (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
23. {
24.     self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
25.     if (self) {
26.         self.title = @"Leagues";
27.
28.         // read information from Teams.plist
29.         self.leagues = [[NSMutableDictionary alloc] initWithContentsOfFile:
30.             [[NSBundle mainBundle] pathForResource:@"Teams" ofType:@"plist"]];
31.
32.     }
33.     return self;
34. }
35.
36. - (void)viewDidLoad
37. {
38.     [super viewDidLoad];
39. }
40.
41. - (void)viewDidUnload
42. {
43.     [super viewDidUnload];
44. }
45.
46. - (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
47. {
48.     return (interfaceOrientation != UIInterfaceOrientationPortraitUpsideDown);

```

```
49. }
50.
51. #pragma mark - Table View
52.
53. - (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
54. {
55.     return 1;
56. }
57.
58. - (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
59. {
60.     return [self.leagues count];
61. }
62.
63. // Customize the appearance of table view cells.
64. - (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
65. {
66.     static NSString *CellIdentifier = @"Cell";
67.
68.     UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:CellIdentifier];
69.     if (cell == nil) {
70.         cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault reuseIdentifier:CellIdentifier];
71.         cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;
72.     }
73.
74.     // set text of cell to be plist key
75.     cell.textLabel.text = [[self.leagues allKeys] objectAtIndex:indexPath.row];
76.     cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;
77.
78.     return cell;
79. }
80.
81. - (void)tableView:(UITableView *)tableView didSelectRowAtIndexPath:(NSIndexPath *)indexPath
82. {
83.     DivisionsViewController *divisionsViewController = [[DivisionsViewController alloc] initWithNibName:@"DivisionsViewController"
84.                                                         bundle:nil];
85.     divisionsViewController.divisions = [self.leagues objectForKey:[self.leagues allKeys] objectAtIndex:indexPath.row];
86.     [self.navigationController pushViewController:divisionsViewController animated:YES];
87. }
88.
89. @end
```

```
1. /**
2.  * TeamsViewController.h
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11. @interface TeamsViewController : UITableViewController
12.
13. @property (strong, nonatomic) NSMutableDictionary *teams;
14.
15. @end
```

```
1. /**
2.  * TeamsViewController.m
3.  * MLBTableViewCellController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import "TeamsViewController.h"
10. #import "TeamViewController.h"
11.
12. @implementation TeamsViewController
13.
14. @synthesize teams = _teams;
15.
16. - (void)didReceiveMemoryWarning
17. {
18.     [super didReceiveMemoryWarning];
19. }
20.
21. #pragma mark - View lifecycle
22.
23. - (void)viewDidLoad
24. {
25.     [super viewDidLoad];
26.     self.navigationItem.title = @"Teams";
27. }
28.
29. #pragma mark - Table view data source
30.
31. - (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
32. {
33.     return 1;
34. }
35.
36. - (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
37. {
38.     return [self.teams count];
39. }
40.
41. - (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
42. {
43.     static NSString *CellIdentifier = @"Cell";
44.
45.     UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:CellIdentifier];
46.     if (cell == nil) {
47.         cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault reuseIdentifier:CellIdentifier];
48.     }
```

```
49.
50.     // set text of cell to be plist key
51.     cell.textLabel.text = [[self.teams allKeys] objectAtIndex:indexPath.row];
52.     cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;
53.
54.     return cell;
55. }
56.
57. #pragma mark - Table view delegate
58.
59. - (void)tableView:(UITableView *)tableView didSelectRowAtIndexPath:(NSIndexPath *)indexPath
60. {
61.     // create new viewcontroller
62.     TeamViewController *teamViewController = [[TeamViewController alloc] initWithNibName:@"TeamViewController"
63.                                             bundle:nil];
64.
65.     // pass data about selected team to viewcontroller
66.     teamViewController.teamId = [self.teams objectForKey:[self.teams allKeys] objectAtIndex:indexPath.row];
67.     teamViewController.team = [[self.teams allKeys] objectAtIndex:indexPath.row];
68.
69.     // show new viewcontroller to user
70.     [self.navigationController pushViewController:teamViewController animated:YES];
71. }
72.
73. @end
```

```
1. /**
2.  * TeamViewController.h
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import <UIKit/UIKit.h>
10.
11. @interface TeamViewController : UIViewController
12.
13. @property (strong, nonatomic) IBOutlet UIWebView *webView;
14. @property (strong, nonatomic) NSString *teamId;
15. @property (strong, nonatomic) NSString *team;
16.
17. @end
```

```
1. /**
2.  * TeamViewController.m
3.  * MLBTableViewController
4.  *
5.  * Tommy MacWilliam <tmacwilliam@cs.harvard.edu>
6.  *
7.  */
8.
9. #import "TeamViewController.h"
10.
11. @implementation TeamViewController
12.
13. @synthesize team=_team;
14. @synthesize teamId=_teamId;
15. @synthesize webView=_webView;
16.
17. - (void)didReceiveMemoryWarning
18. {
19.     [super didReceiveMemoryWarning];
20. }
21.
22. #pragma mark - View lifecycle
23.
24. - (void)viewDidLoad
25. {
26.     [super viewDidLoad];
27.
28.     // fit page to screen and allow user to pinch-zoom
29.     self.webView.scalesPageToFit = YES;
30.     self.webView.multipleTouchEnabled = YES;}
31.
32. - (void)viewDidAppear:(BOOL)animated
33. {
34.     [super viewDidAppear:animated];
35.     self.navigationItem.title = self.team;
36.
37.     // request homepage for selected team
38.     [self.webView loadRequest:[NSURLRequest requestWithURL:[NSURL URLWithString:
39.         [NSString stringWithFormat:@"http://mlb.mlb.com/index.jsp?c_id=%@", self.teamId]]]];
40. }
41.
42. @end
```



```
1. //
2. // AppDelegate.h
3. // TableViewExample
4. //
5. // Created by Tommy MacWilliam on 3/28/12.
6. // Copyright (c) 2012 __MyCompanyName__. All rights reserved.
7. //
8.
9. #import <UIKit/UIKit.h>
10.
11. @class ViewController;
12.
13. @interface AppDelegate : UIResponder <UIApplicationDelegate>
14.
15. @property (strong, nonatomic) UIWindow *window;
16.
17. @property (strong, nonatomic) ViewController *viewController;
18.
19. @end
```

```
1. //
2. // AppDelegate.m
3. // TableViewExample
4. //
5. // Created by Tommy MacWilliam on 3/28/12.
6. // Copyright (c) 2012 __MyCompanyName__. All rights reserved.
7. //
8.
9. #import "AppDelegate.h"
10.
11. #import "ViewController.h"
12.
13. @implementation AppDelegate
14.
15. @synthesize window = _window;
16. @synthesize viewController = _viewController;
17.
18. - (BOOL)application:(UIApplication *)application didFinishLaunchingWithOptions:(NSDictionary *)launchOptions
19. {
20.     self.window = [[UIWindow alloc] initWithFrame:[[UIScreen mainScreen] bounds]];
21.     // Override point for customization after application launch.
22.     self.viewController = [[ViewController alloc] initWithNibName:@"ViewController" bundle:nil];
23.     self.window.rootViewController = self.viewController;
24.     [self.window makeKeyAndVisible];
25.     return YES;
26. }
27.
28. - (void)applicationWillResignActive:(UIApplication *)application
29. {
30.     // Sent when the application is about to move from active to inactive state. This can occur for certain types of temporary interruptions
31.     // (such as an incoming phone call or SMS message) or when the user quits the application and it begins the transition to the background state.
32.     // Use this method to pause ongoing tasks, disable timers, and throttle down OpenGL ES frame rates. Games should use this method to pause
33.     // the game.
34. }
35.
36. - (void)applicationDidEnterBackground:(UIApplication *)application
37. {
38.     // Use this method to release shared resources, save user data, invalidate timers, and store enough application state information to
39.     // restore your application to its current state in case it is terminated later.
40.     // If your application supports background execution, this method is called instead of applicationWillTerminate: when the user quits.
41. }
42.
43. - (void)applicationWillEnterForeground:(UIApplication *)application
44. {
45.     // Called as part of the transition from the background to the inactive state; here you can undo many of the changes made on entering the
46.     // background.
```

```
45. - (void)applicationDidBecomeActive:(UIApplication *)application
46. {
47.     // Restart any tasks that were paused (or not yet started) while the application was inactive. If the application was previously in the
48.     background, optionally refresh the user interface.
49. }
50. - (void)applicationWillTerminate:(UIApplication *)application
51. {
52.     // Called when the application is about to terminate. Save data if appropriate. See also applicationDidEnterBackground:.
53. }
54.
55. @end
```

```
1. //
2. // ViewController.h
3. // TableViewExample
4. //
5. // Created by Tommy MacWilliam on 3/28/12.
6. // Copyright (c) 2012 __MyCompanyName__. All rights reserved.
7. //
8.
9. #import <UIKit/UIKit.h>
10.
11. @interface ViewController : UITableViewController
12.
13. @property (strong, nonatomic) IBOutlet UITableView *tableView;
14.
15. @end
```

```
1. //
2. // ViewController.m
3. // TableViewExample
4. //
5. // Created by Tommy MacWilliam on 3/28/12.
6. // Copyright (c) 2012 __MyCompanyName__. All rights reserved.
7. //
8.
9. #import "ViewController.h"
10.
11. @interface ViewController ()
12.
13. @property (strong, nonatomic) NSArray *tfs;
14.
15. @end
16.
17. @implementation ViewController
18.
19. @synthesize tableView = _tableView;
20. @synthesize tfs = _tfs;
21.
22. - (void)viewDidLoad
23. {
24.     [super viewDidLoad];
25.
26.     // initialize TF array with contents
27.     self.tfs = [NSArray arrayWithObjects:@"David", @"Tommy", @"Rob", nil];
28. }
29.
30. - (void)viewDidUnload
31. {
32.     [super viewDidUnload];
33. }
34.
35. - (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
36. {
37.     return (interfaceOrientation != UIInterfaceOrientationPortraitUpsideDown);
38. }
39.
40. /**
41.  * TableView has a single section
42.  *
43.  */
44. - (int)numberOfSectionsInTableView:(UITableView *)tableView
45. {
46.     return 1;
47. }
48.
```

```
49. /**
50.  * Each TF has a single row
51.  *
52.  */
53. - (int)tableView:(UITableView *)tableView numberOfRowsInSection:(NSInteger)section
54. {
55.     return self.tfs.count;
56. }
57.
58. /**
59.  * Cell contains text of TF's name
60.  *
61.  */
62. - (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexPath *)indexPath
63. {
64.     // identifier that allows cell to be pulled from cache
65.     static NSString *CellIdentifier = @"Cell";
66.
67.     // try to get cell from cache
68.     UITableViewCell *cell = [tableView dequeueReusableCellWithIdentifier:CellIdentifier];
69.
70.     // no cell in cache, so allocate a new cell
71.     if (cell == nil) {
72.         cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault reuseIdentifier:CellIdentifier];
73.     }
74.
75.     // text of cell is TF's name
76.     cell.textLabel.text = [self.tfs objectAtIndex:indexPath.row];
77.     return cell;
78. }
79.
80. @end
```