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CMPE 277
Smartphone Application Development, Section 1
Spring 2014



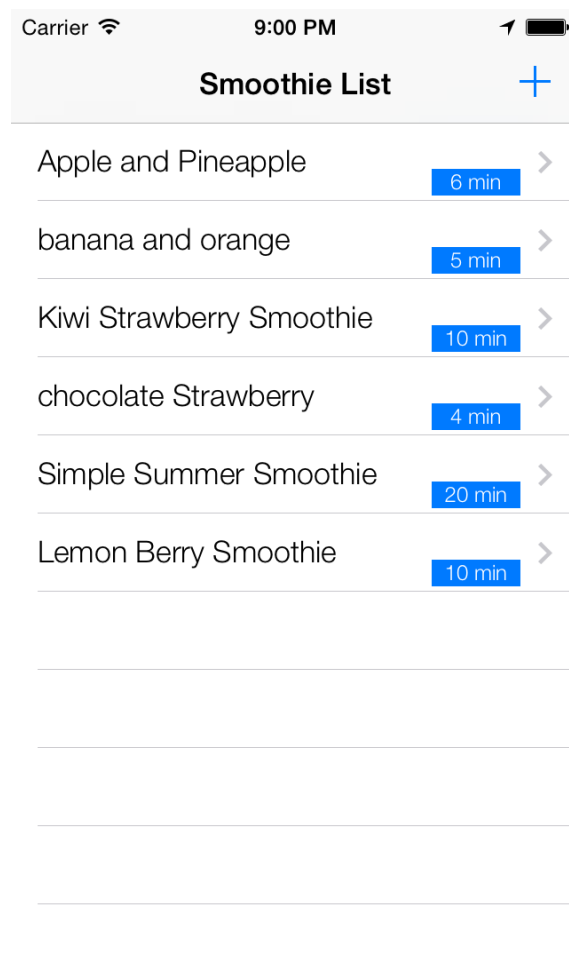
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Assignment - iOS App
App Report,
Smoothie List App

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Goal of the App:

The Smoothie List is an iOS app that utilizes Parse.com as a Backend as a Service (BaaS). This app allows users to save a smoothie's name, ingredients, the time needed to make it, and estimated cost of ingredients on the Parse's database. When a user launches the app, he or she will be able to see the list of smoothies that are already in the database. A user can select and tap on the name to view details about that particular smoothie. The user can also tap on the "+" navigation button to add a new smoothie and save it on the database. Figure 1, shows the table view screen with a list of smoothies.



The screenshot shows the 'Smoothie List' screen of an iOS app. At the top, the status bar displays 'Carrier', signal strength, '9:00 PM', and battery level. Below the status bar is a header with the title 'Smoothie List' and a blue '+' button on the right. The main content is a table with two columns: smoothie names and preparation times. The table lists six smoothies: 'Apple and Pineapple' (6 min), 'banana and orange' (5 min), 'Kiwi Strawberry Smoothie' (10 min), 'chocolate Strawberry' (4 min), 'Simple Summer Smoothie' (20 min), and 'Lemon Berry Smoothie' (10 min). Each row has a chevron icon on the right. Below the table are four empty rows.

Smoothie List	
Apple and Pineapple	6 min
banana and orange	5 min
Kiwi Strawberry Smoothie	10 min
chocolate Strawberry	4 min
Simple Summer Smoothie	20 min
Lemon Berry Smoothie	10 min

Figure 1- Display of Smoothie List using TableView and NavigationController

High-level architecture:

This app relies heavily on Model-View-Controller and Delegate patterns. For user interface design, the app implemented Navigation Controller and Table View. The Navigation Controller comes with segue for connecting to next view for navigation. Each view has its own controller that controls the view elements and contents, and also acts as an intermediary between data model and the views. The app uses Parse.com for backend services. The data itself is saved on the Parse.com. To fetch the data and list it on the table view, the app utilizes PFQueryTableviewController API from the Parse Framework. Figure 2, shows the storyboard diagram and figure 3 shows the implementation of Parse framework. Figure 4, lists the libraries that were used for developing this app.

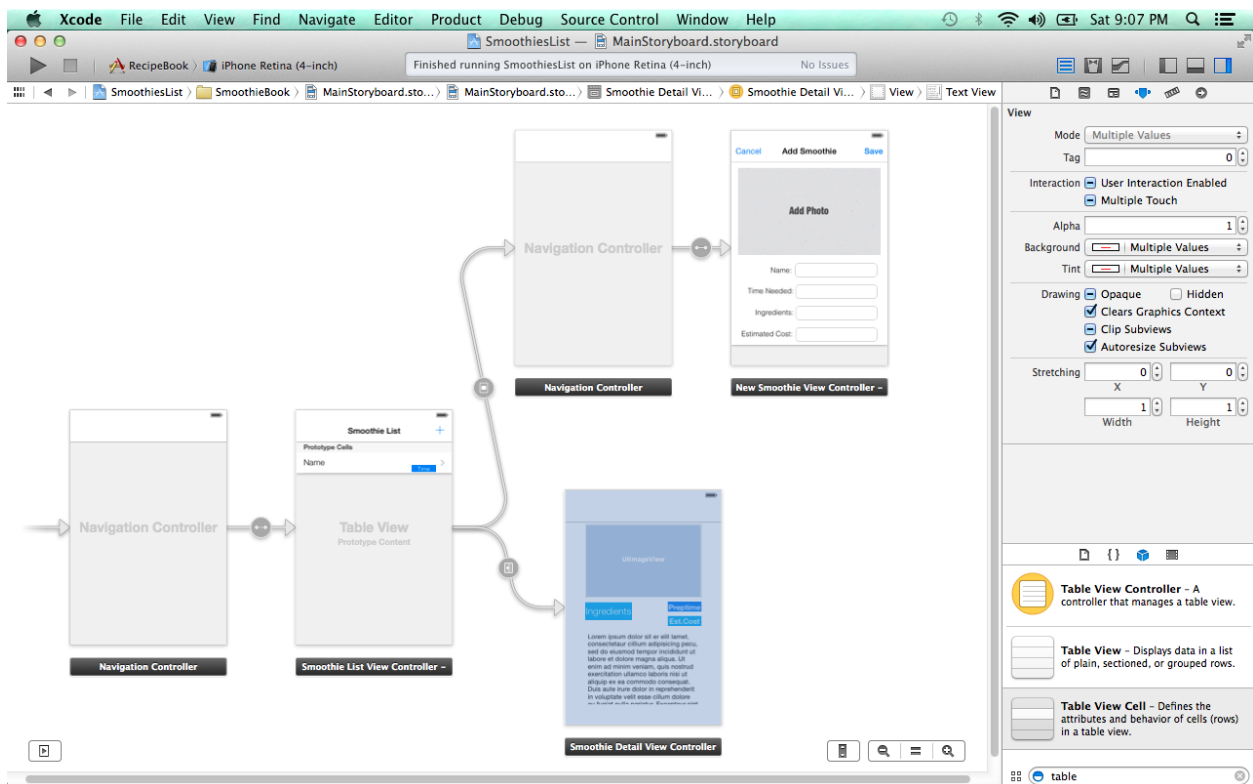


Figure 2- Storyboard Diagram

```
#import <UIKit/UIKit.h>
#import <Parse/Parse.h>

// subclass PFQueryTableViewController from Parse Framework
@interface SmoothieListViewController : PFQueryTableViewController

@end
```

Figure 3 – Sub-classing PFQueryTableViewController

▼ Linked Frameworks and Libraries














Name	Status
 MobileCoreServices.framework	Required ↕
 SystemConfiguration.framework	Required ↕
 StoreKit.framework	Required ↕
 Security.framework	Required ↕
 QuartzCore.framework	Required ↕
 libz.1.1.3.dylib	Required ↕
 CoreLocation.framework	Required ↕
 CoreGraphics.framework	Required ↕
 CFNetwork.framework	Required ↕
 AudioToolbox.framework	Required ↕
 UIKit.framework	Required ↕
 Foundation.framework	Required ↕
 Parse.framework	Required ↕

Figure 4 – Frameworks and Libraries

Technique and Testing:

The application implements high level of MVC design and also uses delegate software design patterns. The app started with a basic foundation and manually unit tested for stability and performance. This app also uses code snippets from various open source projects and each time a piece of code was added, the program was incrementally tested. The Code's debugger tool was very helpful in locating the bugs and errors. This application is a first version and in the future, it can be further polished and some more levels and functions can be added. Figure 5 was captured after successfully uploading a data object to Parse.com.

Parse

Dashboard

Quickstart

Tutorials

Documentation

Downloads

Help

Pricing

Products

Welcome bipi karki

Smoothies...

Analytics

Data Browser

Cloud Code

Push Notifications

Settings

Classes

+ Row

- Row

+ Col

More

Smoothie7

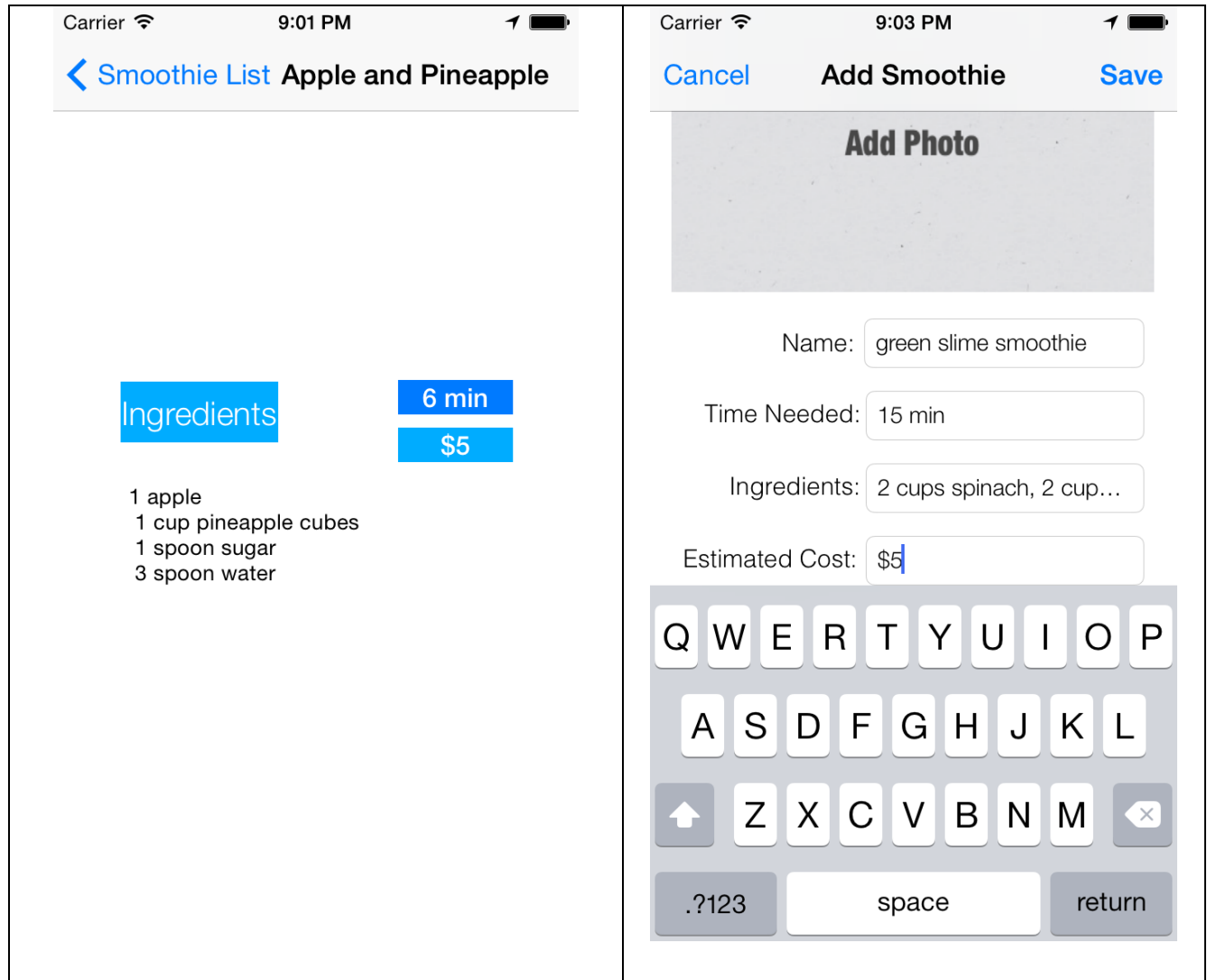
+ New Class

+ Import

	objectId...	name String	createdAt...	updated...	ACL...	imageFile File	prepTI...	ingredients Array	estimated
<input type="checkbox"/>	6VxggnlpOv	green slime smoothie	May 25, 20...	May 25, ...	(und...	green slime smoothie.png	15 min	["2 cups spinach", "2 cups frozen ...	\$5
<input type="checkbox"/>	hTHfBHQ...	Lemon Berry Smoothie	May 25, 20...	May 25, ...	(und...	Lemon Berry Smoothie.pr	10 min	["1 table spoon lemon juice", "1 cu...	\$6
<input type="checkbox"/>	RiB9NIJo...	Simple Summer Sm...	May 25, 20...	May 25, ...	(und...	Simple Summer Smoothie	20 min	["1 banana", "1 cup frozen strawb...	\$6
<input type="checkbox"/>	cA3WEje...	chocolate Strawberry	May 25, 20...	May 25, ...	(und...	chocolate Strawberry.png	4 min	["2 bananas", "4 strawberries", "2 t...	\$10
<input type="checkbox"/>	tABtPTAiQ2	Kiwi Strawberry Sm...	May 25, 20...	May 25, ...	(und...	Kiwi Strawberry Smoothie	10 min	["1 banana", "6 strawberries", "1/2...	\$10
<input type="checkbox"/>	YzZaX2M...	banana and orange	May 25, 20...	May 25, ...	(und...	banana and orange.png	5 min	["banana", "orange", "sugar", "salt"...	
<input type="checkbox"/>	b9G2UV...	Apple and Pineapple	May 25, 20...	May 25, ...	(und...	Apple and Pineapple.png	6 min	["1 apple", "1 cup pineapple cubes...	\$5

Figure 5 – Data browser on Parse.com

Additional Screenshots of the SmoothieList App:



Apple's developer's site, appcoda.com and stackoverflow.com were very helpful during this app development process.

* The source code and more screenshots of the app are included in the project folder along with this report.