Project 3 :: Mobile Application Development :: ATLS 5519

The Kitchen Incubator App - UT Refugee Project

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Project Description:

The National Business Incubation Association defines a business incubator as a **comprehensive assistance program targeted to help start-up and early-stage firms with the goal of improving their chance to grow into healthy, sustainable companies.**

One such incubator project sponsored by the International Rescue Committee of Salt Lake City is a "kitchen incubator" (SPICE) project, which supports entrepreneurial refugees and other - often disadvantaged - community members in developing the necessary skills and accessing the resources and facilities to start a full or part-time food business. Refugees culinary traditions offer the community diversity, which is a reason why I believe an app that would spark customer interest by providing a taste out of the recipe books of SPICE chefs, could provide an avenue toward their goals.

Pseudocode for Algorithms and Project Flow:

References:

http://www.raywenderlich.com/22324/

Flickr search backend to display results per keyword (i.e. ingredient)

http://www.appcoda.com/ios-collection-view-tutorial/

Facebook sharing feature for photos

Beginning iOS 6 Development Textbook

Programming feedback function

https://developer.apple.com/library/ios/featuredarticles/ViewControllerPGforiPhoneOS/Introduction/Introduction.html#//apple_ref/doc/uid/TP40007457

Programming multiple views

Users can search for a key ingredient and a grouping of pictures of a dish will show up that are from the kitchen of SPICE. User taps on the dish they'd like to cook and a web page is pulled up to the recipe/cook's blog. User can send feedback to the cook by tapping a button that brings up a view with a textview to write a message and sends an email to the SPICE kitchen. This app also has a camera button if the user would like to take a picture of their dish, they can do so and share it on the SPICE facebook page. The user can view a map of the city to see specialty grocery stores carrying key ingredients or to find where the cook's food products are sold.

First View:

IBOutlet UICollectionView *collectionView	to reference collection view
IBOutlet UIImageView *imageView	image view within collection view cells

This view, the main view/source view, is a UICollectionView with header room for a search bar. Recipes that turn up as the result of ingredient search are displayed in UICollectionViewCell, cells that are added as subviews (cells need their own class - subclass to UICollectionViewCell). The header section is a supplementary view. Background image and SPICE logo are decoration views on the UICollectionView. UICollectionViewLayout is the class that handles set up of cells in this view. UICollectionViewDelegateFlowLayout protocol allows greater specificity in designing cell spacing and behavior of the layout. The search box is simply a text field object with a border style of none. ViewController class should be set as the delegate for the text field, necessary to dismiss the keyboard when hitting return.

Ray Wenderlich's tutorial on "Beginning UICollectionView" demonstrates how Flickr's image sharing service can be easily accessed (API) by developers to search photos, add photos, comment on photos and more. What the Flickr class does is provide a simple block-based API to perform a search and return an array of FlickrPhotos. FlickrPhoto class stores data about a photo retrieved from Flickr - ie its thumbnail, image and metadata information such as its ID. Setting up a Flickr account for the Kitchen Incubator and searching within those photos at this phase of design seems to be the most practical setup (and most flexible). To be determined is whether it is possible to restrict search to within a single Flickr account.

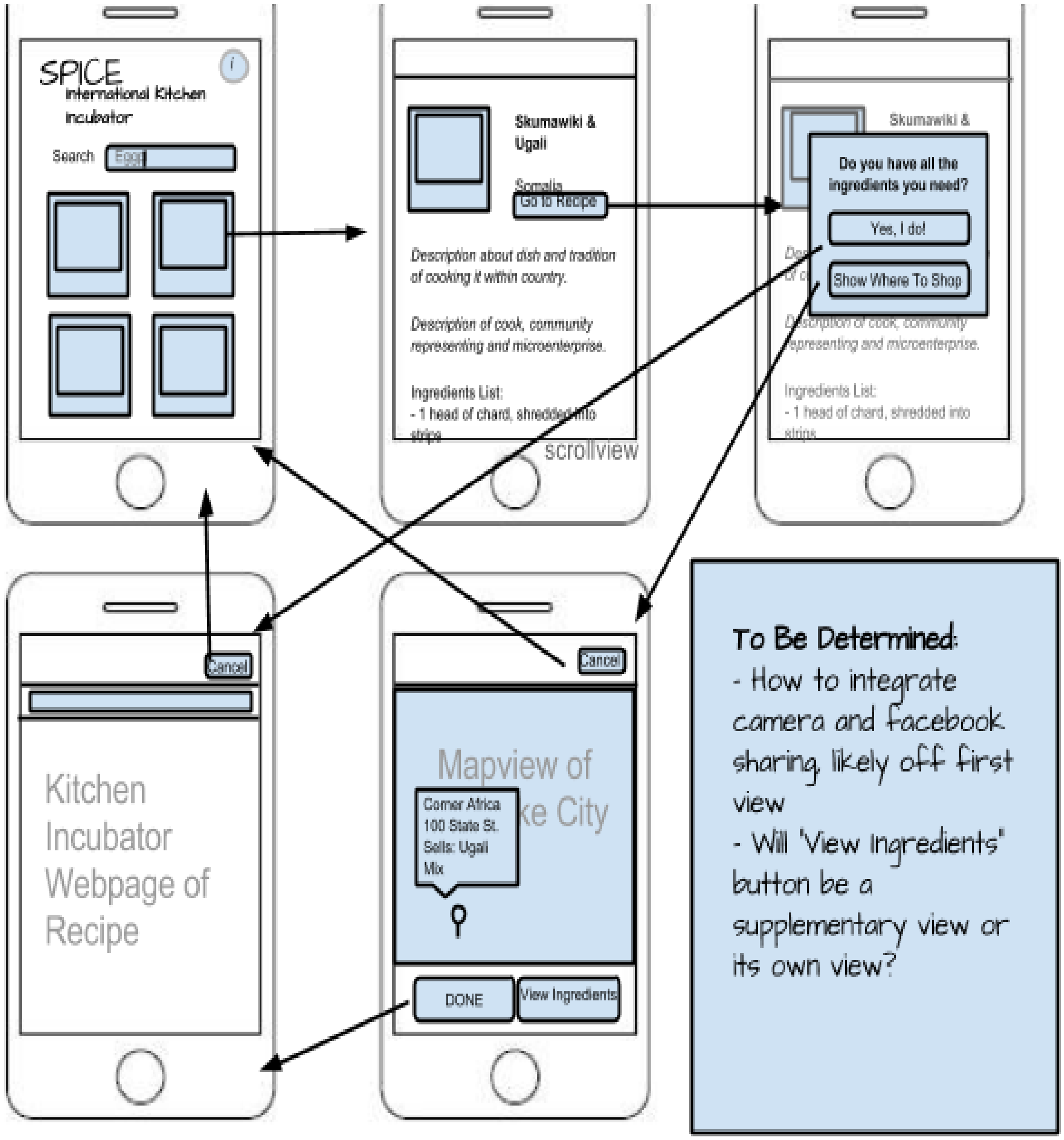
Second View:
IBAction UIButton *recipeButtonPressed
IBOutlet UIImageView *recipeImage
The detail view of collection view cells in view one is the second view controller that contains not only an UIImageView of the cell picture, but also details as the the cook, the ingredients, country of culinary tradition and name of dish. A much simpler view than the first, selected item from collection view on view one will be identified and it's image name passed to view two through the **prepareForSegue:sender** method, identifying objects at index of sections. UICollectionView class provides the **indexPathsForSelectedItems** method and returns the index paths for the selected items. Each index path corresponds to a particular selected item. UICollectionViewDataSource and UICollectionViewDelegate are critical to selecting a recipe. The data source returns information about the number of items in the collection view and their views. The delegate is notified when events happen like cells being selected, highlighted or removed. Collection views are similar to table views, cells are put into a reuse queue and dequeued using a reuse identifier and the **cellForItemAtIndexPath** method.

In this view a recipe button invokes either a UIAlertView or an Action Sheet that prompts the user to select either that they'd like to proceed straight to recipe or they'd like to view the stores in the area that sale ingredients unique to many of the recipes. I'm not confident this action will work as necessary, so flexible design may put two buttons straight on the view that either take the user to view controller 3 (webview) or view controller 4 (mapview). Using the image metadata as an identifier of what webpage to be brought up, IBAction recipeButtonPressed brings up unique webpages specific to each IBOutlet recipeImage.

Frameworks:

1	**MobileCoreServices.framework**	Camera, Imagepicker
2	**Social.framework**	Facebook Share
3	**Mapkit.framework**	Map

Visual Design Template or Example:


SPICE
International Kitchen Incubator
i
Search
Eggs
Skumawiki & Ugali
Somalia
Go to Recipe
Description about dish and tradition of cooking it within country.
Description of cook, community representing and microenterprise.
Ingredients List:
- 1 head of chard, shredded into strips
scrollview
Skumawiki &
Do you have all the ingredients you need?
Yes, I do!
Show Where To Shop
Cancel
Kitchen Incubator Webpage of Recipe
Cancel
Mapview of ...ke City
Corner Africa
100 State St.
Sells: Ugali Mix
DONE
View Ingredients

To Be Determined:
- How to integrate camera and facebook sharing, likely off first view
- Will 'View Ingredients' button be a supplementary view or its own view?

Brief Description of How to Test Project:

App will be reiterated based off testing runs on simulator and iPad device (though it's an iPhone app). Camera only works when testing on a device. Attention needed to examine these details when running app:

1 Keyboard goes away when user taps anywhere outside the text view (submit feedback function)
2 Keyboard disappears when users presses "submit" (facebook and feedback function)
3 App checks for camera on device and displays warning if doesn't exist
4 If app doesn't support multiple orientation, disable orientations except portrait
5 Webview checked as scales to fit page
6 Autolayout turned off for views