Locally

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Overview

“Act local, think global” is relevant due to the rising consumer trends of buying organic produce, and supporting local farming. The application aims to empower local farming and manufacturing by driving sales, garnering customer attention and support. It achieves these goals through highlighting UAE-based food products, fresh produce and packaged food items. Locally incorporates established technologies such as QR codes and mobile applications.

Design

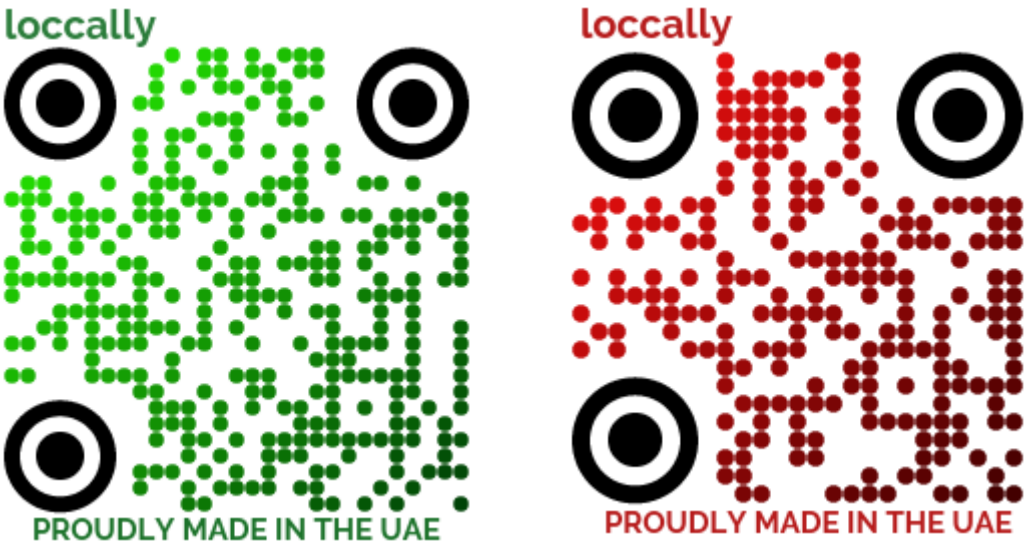
“Made in the UAE” or “Made Local” banners are seen across supermarket locations across the country. Locally aims to become a place where locally produced items are highlighted.

Solution

A QR-code distinctive sticker, called Localcode, is attached to locally made UAE products such as produce (fruits & vegetables), and other food items. The sticker design looks similar to the fruit sticker on most fruit and vegetables, however, the Localcode carries a QR code taking the user to the mobile application to display more information about the item.

An example of a sticker on produce:

Locally QR-equipped sticker:



(Two version of the Locally sticker scaled to actual size [at Zoom level 100%])

The QR code presents the colors of the uae flag; green, black, red, and white, emphasizing the locality of our app. The QR code's coordinates are 230 pixels by 230 pixels, and the letterheads add 33 pixels in height, which is suitable to be attached, or printed within, a produce basket or container.

The left Localcode translates into the literal text "green apple royal farm," and the right Localcode translates into the literal text "red apple royal farm." Both texts are to be processed by the Locally iPhone app, resulting in screens of 'green apples' made in a UAE farm called 'royal farm.' The Localcode aims to be recognized by shoppers without needing any recall on what the Localcode actually is and what purpose it serves, and after the first few times meeting the Localcode, users will hopefully recognize the Locally platform immediately. Additionally, planning an expansion strategy, while simultaneously keeping the theme of a global potential in hindsight, the Localcode and accompanying app can be localized to match a given country.
For example, here's the Localcode localized to the country of Ukraine:

The accompanying iPhone app, used to scan the Localcode and retrieve information, is compromised of many screens, each serving a dedicated feature. The application disseminates numerous info, which can be categorized in few lines:

- Origin of product and information about the product's farm (or factory)
    - Includes: economic impact, history of establishment, location and contact details
- Nutritional information recipes
- Future aspects: Coupons, sales, and promotions

The design of the Locally app is to be elaborated upon in the following section.

Design

Since the requirement was centered around a local market, the design of Locally's flagship sticker, Localcode, and accompanying iPhone application was centered around the Emirati identity. The colors of the UAE flag were centerpieces to the entire color palette of the Locally ecosystem. Furthermore, the Locally app was carefully designed with the 6 major design principles, visibility, feedback, constraint, mapping, consistency, and affordances. The implementation of those design principles will be further explained in the following section.

Design Principle #1: Visibility

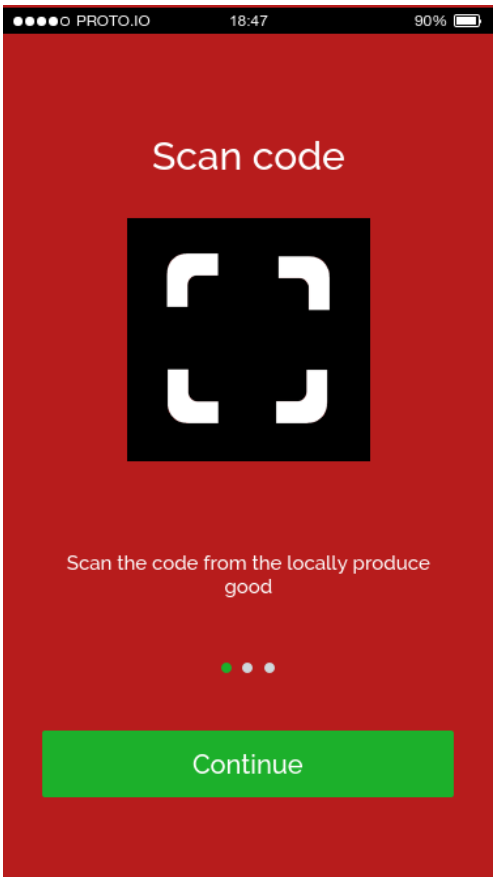
(The homepage follows the industry standards industry standards, of a clean navigationally cleat welcome page design)

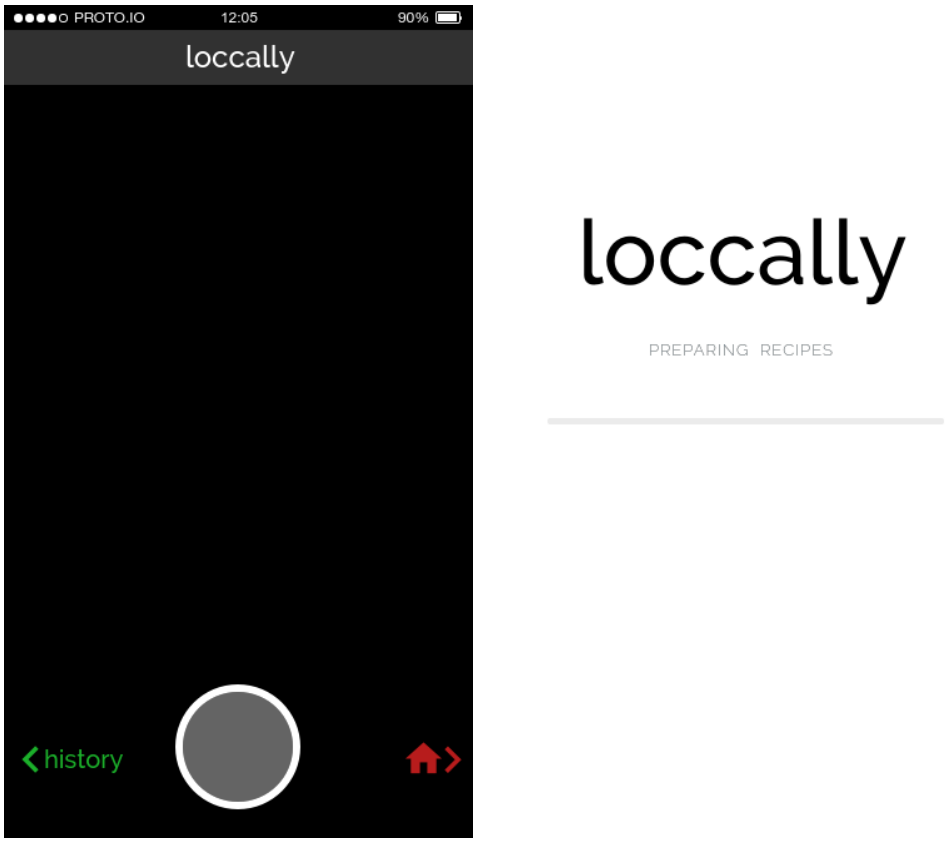
Every aspect of the Locally system serves a clear and distinctive purpose. In terms of visibility, Locally has been designed with the careful consideration of industry standards, visual cues, navigation signals, and labeling. The end goal-goal was to assign each button, or gesture, an obvious purpose. Moreover, the design process put in mind that placing buttons and other interactive objects in unexpected places is a faulty practice and proposes a hefty compromise to the user experience.As an example, the Locally welcome page is designed, shown above. Another applied example would be the screen coming after a user presses on the “Let's get you started” button, called the onboarding screen, shown below. As a matter of

fact, the 7 aforementioned design principles were utilized in applying every screen of the Locally iPhone application.

Design Principle #2:

Feedback is of prime importance to the user's interactive experience. As an example, when the user presses a button, they should get feedback, whether a vibration, a sound highlighting, or visual animation, after pressing said button. Feedback is essentially sending information back to the user about what action has been done. In Locally, the capture of a Localcode activates the shutter sound through the phone speakers. After successfully capturing a Localcode, the phone screen will freeze, making this first step an integrated experience.

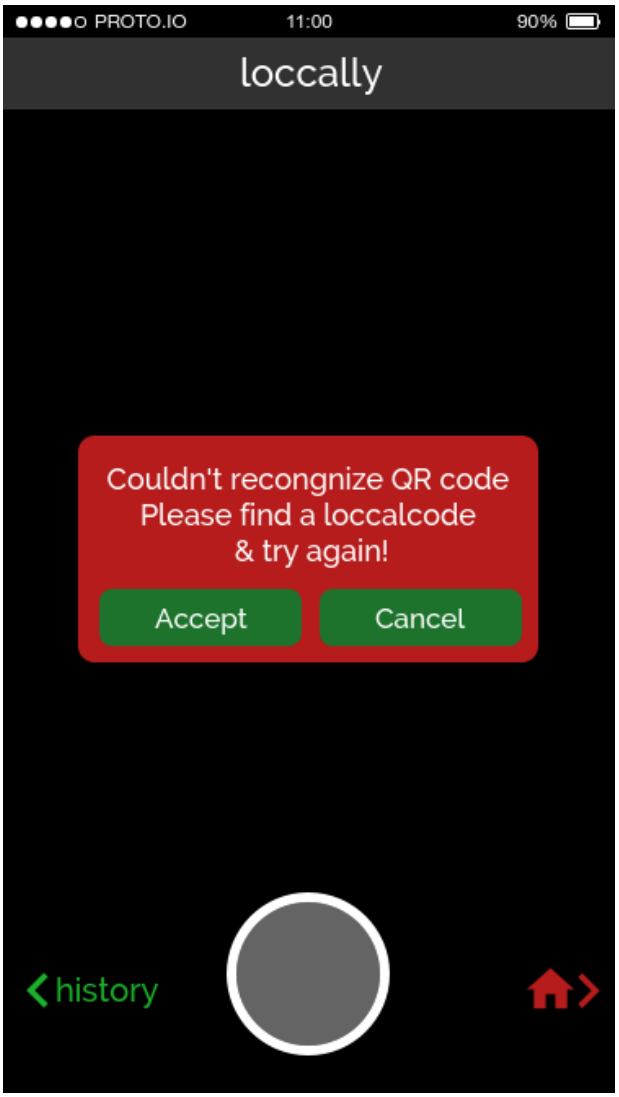




(Locally's Localcode camera capture screen and loading screen)

Design Principle #3: Constraint

The Locally user is constrained from making unnecessary actions by producing no feedback to in-valuable actions. The constraint principle is manifested primarily through the camera screen, where the user is expected to often scan faulty Localcodes or mistakenly capturing junk pictures. The solution to this scenario adapted by the Locally design is displaying an error message on top of the camera screen.



(Camera screen showcasing constraint to faulty input from the user)

Design Principle #4: Mapping

Mapping in the mobile age has become a prime factor on how users interact with their devices. Touchscreens have facilitated momentous feedback to its' users. Mapping is the relationship between controls and their movement and results in the real world. A popular example, Locally has utilized, is scrolling down inside an app screen would unveil new screens. Locally's Products History page applies this scrolling mapping technique, which matches the real-life gesture of pulling up, to unveiling new information.

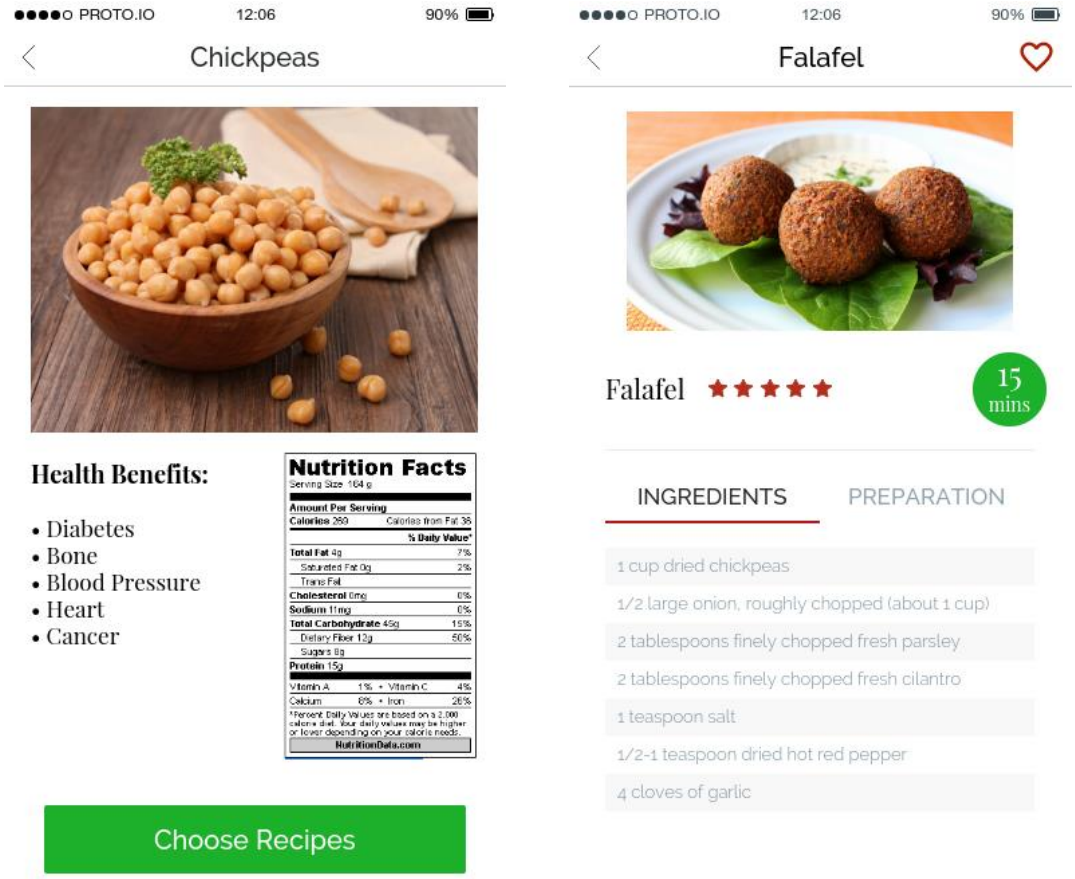
(Products' History page using scrolling mapping mechanism)

Another mapping mechanism used in Locally's camera screen, pictured above, was using the house icon to indicate where the green button takes the user, the homepage. Also, the use of arrows has been implemented in the Locally iPhone application, which in turn guides the user in the navigation experience.

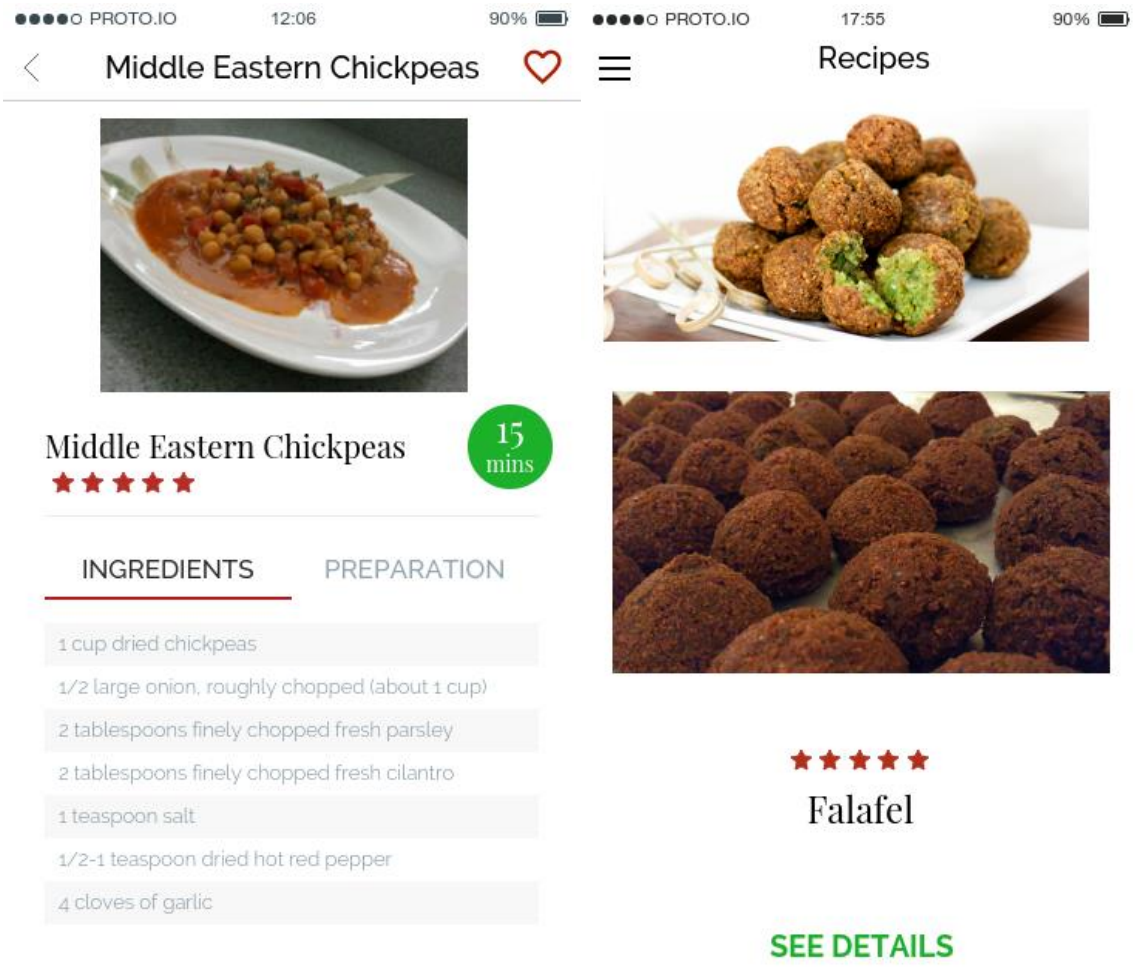
Design Principle #5: Consistency

Consistency, admittedly, is one of the most impactful user interface principles. For our application, the user interacts with the software through the screen of the iPhone. The external consistency between all iOS applications are encouraged to utilize this interactive feature of the iPhone and following the footsteps of a plethora of great applications, our app

carries on the legacy. Another consistent principle was designing the “back,”menu,” and miscellaneous buttons to match one another throughout the entire application, while taking into attention the consistent use of colorings. Font sizes, font colors are also consistent throughout the screens of Locally.



(The screens showcasing internal consistency)



(Further examples)

This internal consistent design of the Locally screens throughout the entire app facilitates an easy and extensively usable user experience.

Design Principle #6: Affordance

Throughout the application, affordance is afforded through the use of metaphors and previous product experience. For example, most people are familiar with the concept of QR codes, and the Localcode builds on that collective knowledge, embraces it, and inceptions a new customer experience. Affordance is an attribute of an object that allows people to know how to use it. An example in the Locally iPhone app is the big circle in the middle of camera

screen, which is broken down as History, on the left-hand side, and the House button, on the right-hand side. This button structure invites the user to explore the screen due to their:

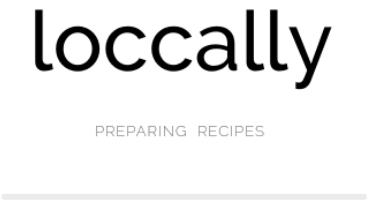
- Middle-of-the-screen placing and color
- Indicate swiping through the use of arrows, not just pressing on them, virtually on the left and right hand side of the same button
- Having identical size and location for both the History button on the left and the House button on the right turns the user's attention to those buttons along with the bigger circle button

Because interfaces lack a physical aspect, their affordance capability is better conceptualized as 'perceived' affordances, which are therefore split into two parts, learned conventions and given clues. Another practice which easifies the Locally experience, is for the Localcode to be captured immediately by the camera while inside the Camera screen application. Locally includes a "capture picture" button, the circular one in the screenshot above, to map the action of taking a picture of a Localcode to a physical button even when it isn't needed. When a user opens the app and directs his phone's back camera to a Localcode, the app will automatically process this action without the need for pressing the button by the user. However, if the user encounters a non-Localcode QR code and decides to direct his phone's camera of its direction, an error message will pop-up prompting the user to try again.

Usability

One of the team's main objective when creating the application, is to go by the usability principles that was taught in class and apply it to the application. Below is the list of usability principles and how we have achieved them when creating the application.

A progress bar is displayed after the user has scanned a Localcode. The progress bar would always be displayed after a user input. It keeps the user informed on what is happening to the system. This would help the user to understand what the application is going through. It adds in a layer of transparency. The picture below is an example of a waiting screen.



The application uses words from languages that the user speaks. When users first opens the application, their location is taken into account and gives the user the ability to choose from a universal language like English, or use their local language which the application found through the smartphone's location. The users has the ability to change back and forth between languages.

Navigating through an application can be the most frustrating task when the application is badly organized. At any given screen, the application has a back or menu button, which the user can tap to get out of the screen which they are in.

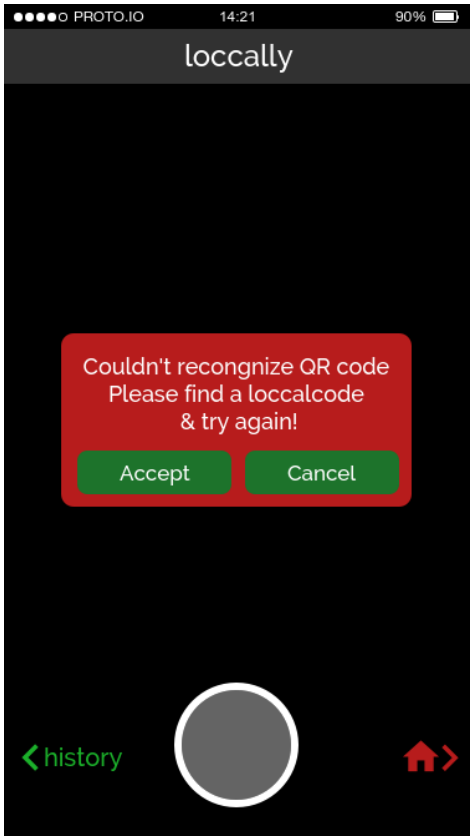
The application has specific colours and designs which is consistent all throughout. The same font, alignment and size are implemented in the app. The User interface is pleasing to look at, enticing the user to use the application.

The application has predictive typing, which lets the user pick the words they want to use from a drop down list. This helps prevent errors from happening, which may lead to unnecessary screens for the user.

The users would not have to memorise or remember on how to use the application, as it is straightforward and simple. It is designed and made into a way that people that are not good with technology, can easily download and use the application.

The user interface has been set up, so that the buttons are clearly visible to the user. There is also no irrelevant information displayed. Having a congested screen discourages users from using the application. It would turn them away.

The application has a recovery screen, which displays the error to the user and how they can go back to the previous screen. It tells the user the problem and a suggestion to solve the problem. The picture below is an example of a recovery screen.

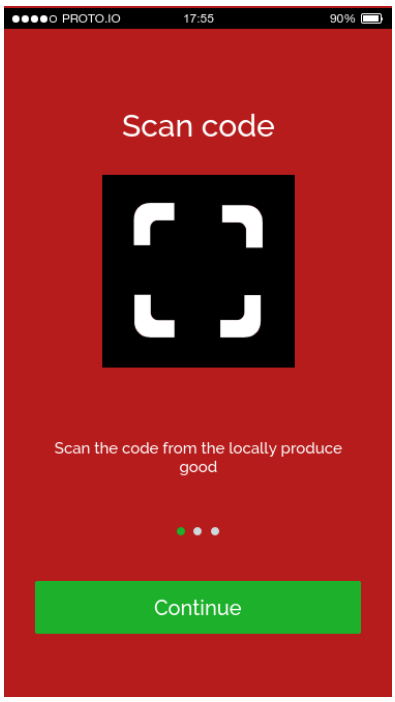


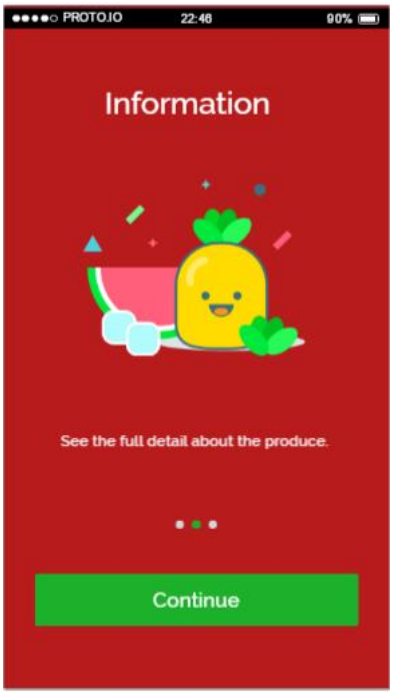
(The recovery screen of a failed scanned)

For first time users, the application has a short tutorial on how to use the application. It is basically three screens which explains and gives the user the idea on how to use the app. The

user can access the tutorial at any time from the settings. Below are the tutorial screens which first time users will be able to access.

Justification





The usability principles are all based on the team's experience from using a number of applications. We have also learnt from the lectures of CSCI224, the correct way to design a user interface. We have learnt from applications we have used in the past, which designs were good and designs that are bad. We have also designed the application based on what we thought was going to attract people to keep using the application.

We have examined the top applications in the play store for android based phones, the app store for IOS based phones and have also looked into the windows store for windows based phones. We have noticed that there is a slight pattern between them. We then implemented our analysis into the application. We based the color of the application due to this. Top food applications were red in color, for example Zomato, Yelp and ZAGAT.

Users

The intended users of the application are for the people who want to support local products as well as the opportunity to try local cuisine by listing recipes that they can make and cook. One of our main target demographics are tourists that are coming into the UAE. Tourists would usually try their best to learn about the country that they are visiting. What better way to experience culture than with local cuisine.

The secondary target is the non local residents living in the UAE. People are content with their lives without having to try something new. Humans are creatures of habit, they would be doing the same things over and over not knowing what they could be missing out on. With the amount of import of goods that are coming into the country, non local residents have the luxury to indulge in their own culture's cuisine while disregarding local cuisines. The application aims to promote and encourage these residents to buy locally produced goods.

The application is designed and built for first time users to easily pick up and efficiently use without any prior knowledge. The use of simple but effective mobile gestures will help achieve the tasks almost instantly.

Functionalities

Tasks Performed by the User

The user has a number of functionalities when using the application. Below is the list of functionalities that the application utilizes.

- Scan Localcode.
- Retrieve information from the scanned .local code.
- Information about the product origin such as geographical location, farm name, farm history, contact information, economic impact, employment information, delivery from farm to the grocery, etc.

- The item's nutritional information would be shown as well as a list of recipes which contains the scanned item.
- View the recipes, those recipes are within the reach of the scanned items (the recipes change based on the scanned item & the recipes shown have to use the scanned item)
- View Scanned items history (and while choosing a scanned item, the relating information & recipes come up within the history tap)
- View most popular scanned products (and perhaps by association, “the most popular locally made in the UAE items you can buy at your local supermarket”)
- For the items’ vendors, they’d have to contact the company in order to add their information to the Locally database, and will then be able to log in and will be able to see information about metrics of items sold, which place has sold the most, etc.

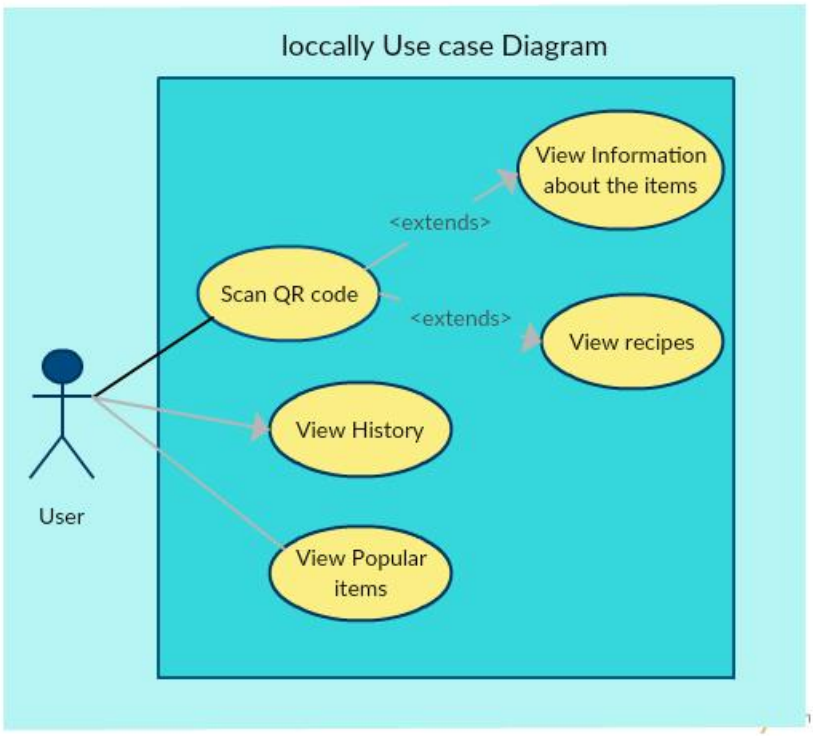
The user has to scan the Localcodes which are the specially made QR codes for the system and contains information about the item that was scanned. The item origins such as where it was grown, farm information, price, etc. would be shown to the user. Additional information such as the items nutritional facts, health benefits and more are also available to the user. A list of recipes from the UAE which contain the item that was scanned would be shown to the user. They would be able to see the location of the other recipes within reach. A video which guides the user how to cook the recipe would be readily available for the user to watch. The users have the ability to view their scanned history as well as the most popular items that were scanned. The vendor has a special log in which contains the metrics of the product. It contains information such as the amount of items that was sold, where it sold the most and many more. It would help the vendor to set a strategic marketing plan to maximize profits.

Task Environment

The users will be using the application when they are in the supermarket or the grocery. Local vendors that have signed up with Locally will be given Localcodes which are distinguishable from other products. When the Localcodes are scanned, information about the item such as product origin, nutritional facts, health benefits and local dishes made from the item will be displayed to the user.

Diagrams

Use Case Diagram



Scenarios

Main Flow of the Application

1. A user sees a Localcode of a good
2. The user scans it using the application's scanner.
3. The application connects to the database and retrieves information about the product.
4. The information is displayed to the user.
5. The user taps on the recipe lists.
6. The list of recipes are shown to the user.
7. The user selects a recipe that they are interested in.
8. The ingredients and the preparation are shown to the user.

Viewing History

1. The user taps on the history.
2. The user's history of old scanned goods are shown.
3. The user taps on a good.
4. The information about the goods is displayed to the user.

Error Scanning Localcode

1. The user sees a Localcode of a good.
2. The user scans the Localcode of the item.
3. The application does not recognize the Localcode.
4. The user scans the Localcode again.
5. The application connects to the database and retrieves information about the product.
6. The information is displayed to the user.
7. The user taps on the recipe lists.
8. The list of recipes are shown to the user.
9. The user selects a recipe that they are interested in.
10. The ingredients and the preparation are shown to the user.

Customer Feedback

The first question about Locally we received:
Do you think people are actually going to be spending time while buying produce at their stalls to take out their phone?
The goal of Locally is to encourage, not hinder the shopping process, opting for product differentiation. The real time spent on the Locally platform is when the shopper is, or more specifically has the time to explore their locally produced foods. Another scenario is when the shopper is waiting in long cashier lines and has free time within the shopping experience. Locally isn't just specified at the aim of disseminating knowledge

Locally can easily be optimized to include a range of customer-focused services. These services include but are not limited to, exclusive promotions coupons and sales on items offered through the Locally platform

The second question about Locally we received:
How does Locally plan to make money? There's little business potential in convincing the vendors, an essential content provider, to contribute to the Locally platform, especially initially.
Answer:
Locally homepage, you know the one with the house, is planned to feature sponsored content in the form of:

- Sponsored recipes
- Specialised ads (banner, column, and video mobile ads) [ads from locally food producers]
- Blog posts and stories
- Sponsored digital media content [Videos such as: People Living in The UAE Try Local Date Recipes

Online Project Prototype

The application's screens were used using the Proto.io platform and can be found at the website below:
https://pr.to/SYQ2LN/