

FINAL YEAR PRESENTATION

Report



rethink

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Executive Summary:

The project consists of an app, rethink which aims to assist users in swift and smart decision making.

Imagine yourself in a shopping mall, unable to decide which color is suits you better or which brand to go for. ReThink will allow you to capture the options available to you using your cell phone's camera. You can share the images with your friends and family no matter where you are. This application also provides user to get reviews on new trends and products, from food to clothing, accessories, gadgets, appliances etc. The user can simply use saved images from gallery or use web search in order ask to ask the followers and recipients their valuable feedback. Once the image is saved, the user can either send it to specific followers via personal message or share it with everyone via the share-to-all feature. The question will be visible to all the followers for 24 hours on everyone's application home. The votes will then be statistically evaluated and the user can see which option gets the higher votes.

Design: The application will be built using the ionic framework which is an open source front-end SDK for developing hybrid mobile apps with HTML5. iOS. Android applications will be the primary focus though, we plan to deploy on other platforms in future.



IBA



rethink

because decisions cost money.

Project Supervisor
Mr Syed Mazhar Hasan

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Tools
Ionic - Hybrid Mobile App Framework
AngularJS | Facebook API | Other API's

why?

There is nothing more frustrating than being indecisive. A bad decision often costs a lot of money, time and efforts. Seldom you come across a situation where you are left bewildered by various options. available to you. Shopping alone in the super market leads to hassle and inconvenience.

what?

Confused between two colours of the shirt you want to buy? Or two restaurants you wish to dine-in at? With rethink, make correct decisions at your fingertips. An app that assists you in swift and smart decision making.

how?

rethink aims to connect users to their friends and family instantly and get their valuable suggestions on the options available to them. Users can capture pictures of the products they are perplexed between and can share with their friends and family to get their opinions for better decision making. Rethink provides quick and flexible solution to your daily worries!

Project Description:

Background and Motivation

There is nothing more frustrating than being indecisive. A bad decision often costs a lot of money, time and efforts. Seldom have you come across a situation where you are left bewildered by various options available to you. Shopping alone in the super market leads to hassle and inconvenience.

Confused between two colours of the shirt you want to buy? Or two restaurants you wish to dine-in at?

With rethink, make correct decisions at your fingertips. An app that assists you in swift and smart decision making.

Project Goal

rethink aims to connect users to their friends and family instantly and get their valuable suggestions on the options available to them.

Users can capture pictures of the products they are perplexed between and can share with their friends and family to get their opinions for better decision making. rethink provides quick and flexible solution to your daily worries!

Project Requirements

a. Functional Requirements

- Users are able to administer the question and share it with their followers.
- Question remain on the application's home page for 24 hours.
- When a question is sent to the follower, they get a push notification so they are notified immediately and are able to give a prompt response.
- Votes will then be counted and push message is given when someone votes.
- A supporting website for marketing purpose.
- Tutorial video on how the app works
- A central web server to keep the data flow live and up to date.
- Connectivity to a central database from each application.
- Report functionality.

b. Constraints

- Secure access for each user.
- Breach-safe; no third party can access information of others.
- Live with minimum delay in communication.
- Fast server minimizing risks of a crash.
- User friendly and easy to understand.
- Simple and minimalistic design.
- Appealing graphical user interface.
- Efficient troubleshooting.
- Error prevention.

c. Objectives

the objective of this application is to provide a platform where people can freely get an opinion about any two things. Whether you are shopping in a store, confused about which brand to buy or which color is better or you are sitting at home, planning to buy a new gadget, rethink will help you make the best decision instantly.

Validation and Acceptance Tests

Software and Applications products require validation and testing. The purpose is to establish evidence that the requirements are met and that it performs adequately in its actual or expected surroundings. Applications require testing and validation in the environment in which they are used. Effective testing comes from a well-structured approach and a well-defined testing methodology so our software is highly satisfying to our users. In contrast, poor testing results in buggy software that gives rise to a long stream of repeated testing and project delays.

For my project, I am going to go through a series of tests just to make sure that it satisfies its users and that it fulfills the purpose of its development.

- First as the developer, I am going to run the Unit testing in which individual units of source code, sets of one or more computer program modules would be tested to determine if they are fit to use. Intuitively, one can view a unit as the smallest testable part of my application.
- In the next phase we are going to perform the Integration testing where the individual software modules or the small individual units of source code would be merged and tested as group. The input modules that have been unit tested would be grouped in larger aggregates, applied tests defined in an integration test plan to those aggregates and delivers as its output the integrated system ready for system testing.
- Next stage is the System Testing which takes all the integrated application components as inputs which have passed the integration test. It would detect any inconsistency between application units that are integrated together.
- Then is the User Acceptance Testing which is done by the actual users of my application which includes the instructor and the participants of the training to make sure it can handle required tasks in real world scenarios, according to specifications. Or it can also be implemented by making application available through an in-house testing team comprised of actual application users.
- To make sure the developed software properly functions in the heavy work load to check its robustness, availability and error handling under heavy load rather than in normal circumstance, we are going to perform the stress testing. Where much larger number of participants would use the application at the same time.
- Last stage would be the Validation testing which is not a code-check test. It is concerned with ensuring that the application does what it is supposed to do. Here we are going to check whether the users are able to send comparison questions and get votes from its followers.

Technical Design:

Possible Solutions and Design Alternatives

Native Application:

Building native applications means using the native language of the platform, Objective-C on iOS, and Java on Android. The main advantage of native applications is their **performance**. Native apps are compiled into machine code (Dalvik byte code under Android), which gives the best performance you can get from the mobile phone.

Best performance includes fast and fluid animations as well as full access to phone hardware, multi touch support and the latest APIs.

Native development is far from easy. Despite the great number of resources that can be found, it may not be understandable to everyone. As code must be written specifically for each platform, the same code will have to be largely written with little ability to be shared. The logic may be the same, but the language, APIs and the development process is different. This process can be relatively long for complex applications.

Cross platform application development:

Hybrid applications are web applications (or web pages) in the native browser, such as UIWebView in iOS and WebView in Android (not Safari or Chrome). Hybrid apps are developed using HTML, CSS and Javascript, and then wrapped in a native application using platforms like Cordova. This allows you to use any web-native framework you want, and there are plenty of these.

The application development is **faster, simpler, rapid** and the application is easier to maintain. You can change platforms anytime you need, Cordova lets you build your application for more than one platform just by one adding line of code. As for the phone hardware such as the camera or Bluetooth, Cordova has a large repository of plugins you may use.

The main problem with hybrid apps is that they still depend on the native browser, which means they are not as fast as native apps.

Module Level Descriptions

a. Graphical User Interface Modules

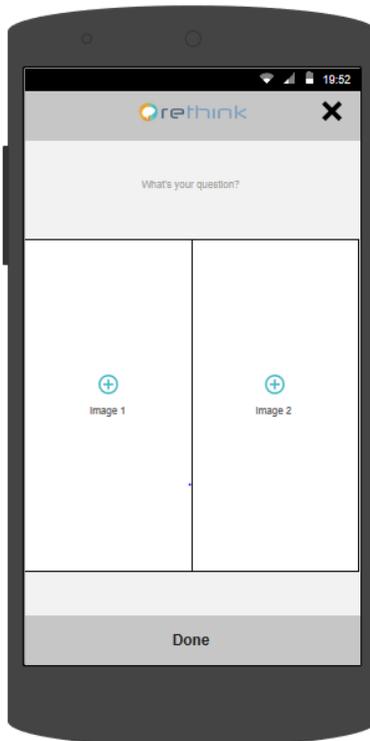
The GUI design of this application will be a minimalistic design in order to make it user friendly. The cleaner the design is, the easier it would be for a user giving them friendly user experience.

There would be 3 basic screens in the design;

The center screen would be the home screen where all the questions would be shared for 24 hours. The second-left screen will show all the questions that your friends have sent directly to you.

The third-right screen will show you all the contacts/ followers who are on your list. You can select the user to open its profile.

The Prototype of rethink is attached for better understanding:



b. Control Modules

- The questions will be only be visible for 24 hours at the home screen.
- In case of private question sending to another user, the question will be available unless and until they open it.
- Authentication for username/password:
- All participants would be provided a username and password combo to log in to the application.

Risk Assessment:

A. Risks of the Project:			
	Low	Medium	High
• Technical risk	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Timing risk	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Budget risk	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

Budget and technical are two considerable risks to the project because marketing and pleasurable user experience is the basic factor of success for such applications. Hence our goal is to develop a high fidelity prototype. Any unforeseen technical or financial problem would have a high impact on the progress of the project.