elDEARly Design Document

Table of Contents

1.Introduction

The purpose of this document is to outline the design for the app elDEARly. **elDEARly** is an app to aid elderly people in using modern technology and bridge the digital literacy gap between elders and the current generation. To aid seniors in using technology, elDEARly will provide interactive help and easy to follow guides for common tasks like using search engines, youtube, and social media. Elders will be able to use their voice to interact with our chatbot technologies, which are powered by AI and are able to provide rapid assistance. Our chatbot will identify the issue, and give easy-to-read and step-by-step instructions (either by text or video) to seniors, which saves them time and reassures them to continue using technology. elDEARly will achieve this using an easy to use, accessible interface that provides resources on common issues that elderly people face when using technology, as well as text/audio search so that the website can best help seniors if they don't know exactly what issue they are facing. This document will then cover the technologies used and their application, as well as the design of the user interface.

2.System Overview

2.1 High Level Description

The application will only have a frontend which will be using React Native. Several libraries will be used in order to make features of the application. We will also use Expo which is a framework to host React Native Apps.

We decided on using Expo and React Native to build the app for a number of reasons. Given that elDEARly needs to work regardless of platform, React Native gives a way to define UIs without worrying about a change in appearance between platforms. In addition, since our app is meant to be as easy to use as possible there is little need for back end technologies and uses such as authentication or databases, as we are not storing data. elDEARly is first and foremost a guide for seniors to use technology in their daily lives, so learning materials and the like can be made as part of the app rather than stored on the server.

2.2 Low Level Implementation

Components of the app(below is a tentative list of the components we anticipate for the application):

- App.js: This is the main component of the application that is used to render all other pages

- Markdown.js: This is a template component. This component will be used to render the learning material on the Phone, Internet and App pages. It makes it easier to style the learning materials because it bridges the gap between css styling and react native by implementing components equivalent to their css counterparts.
- HomePage.js: This is the main landing page of the app. The user is prompted with the HomePage upon opening the application. They will use this page to navigate to pages that will help answer specific queries.
- PhoneScreen.js: This is where the user will find answers to questions about their phone. There will be a section for featured questions and the user will have the ability to search for relevant content.
- InternetScreen.js: This is where the user will find answers to questions about using the internet. There will be a section for featured questions and the user will have the ability to search for relevant content.
- AppScreen.js: This is where the user will find answers to questions about using various applications on their phone. There will be a section for featured questions and the user will have the ability to search for relevant content.

4. System Architecture

4.1 High level Architecture

The entry point into the application will be the App.js file, consisting of a StackNavigator component which links the homepage to the following subpages: Phone Screen, Internet and App Screen.

4.2 Deployment

Expo will be used for the deployment of elDEARly Application.

To deploy with expo:

- **Run expo build (For both platforms)**
- **Run expo build:android (For android)**
- **Run expo build:ios (For ios):**

Steps for building app:

- For android choose Apk or Android App Bundle option and For Ios choose archive or simulator.
- Generate keystore file or update existing one

- After the keystore is created, it should run the build:
- the terminal should paste an URL to the build to the app

After running commands, Expo builds it on their servers. To check the progress status and track build logs on the portal or by running **expo build:status.** When build is done, you will see the url to your app file – paste it to the browser immediately and download the bundle of apps.

5. Application Flow and State Diagram (Work in Progress)

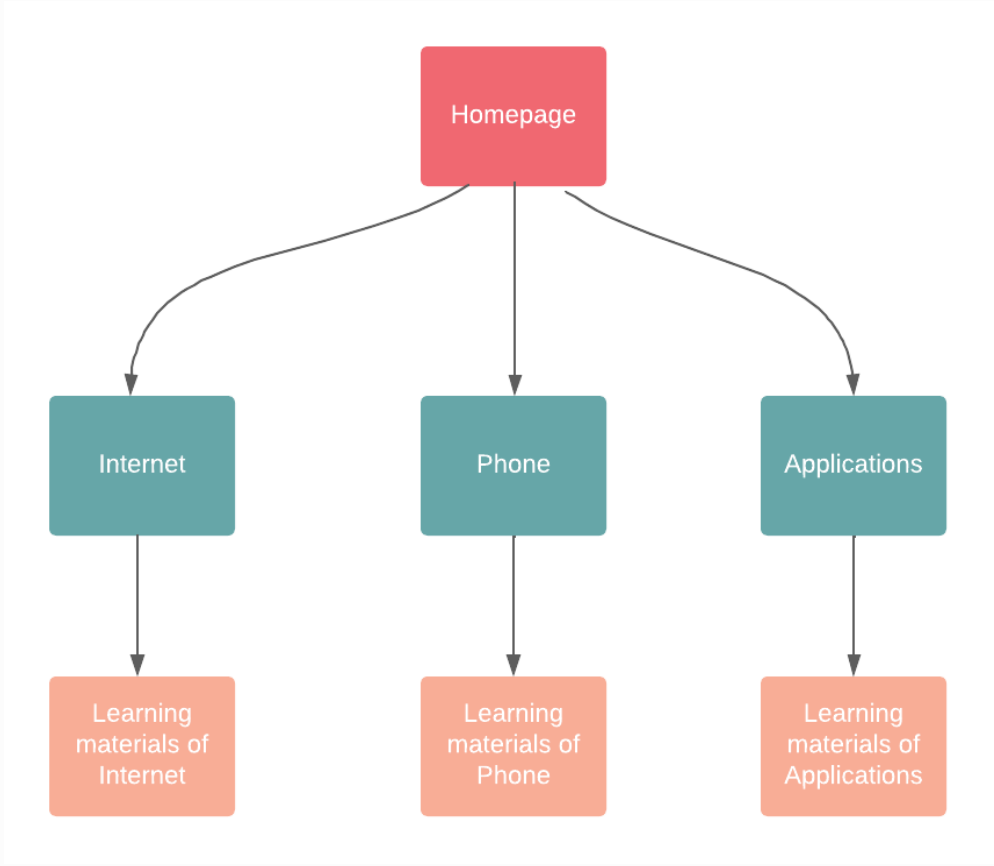


Diagram showing the behavior of the user interface i.e. State diagram and Application Flow.

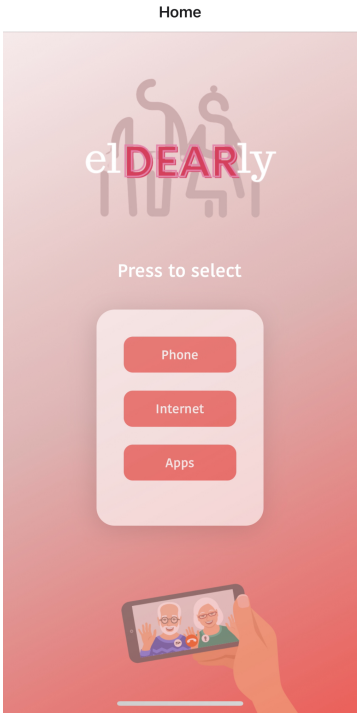
Since we've just completed the creation of the main pages for the app, along with implementing the Text navigation feature and Markdown component enabling us to type Learning Materials up with ease (as of Sprint 1's completion), we are left with the above application flow skeleton. This will be updated as iterative development on the app continues.

6. User Interface

Pages:

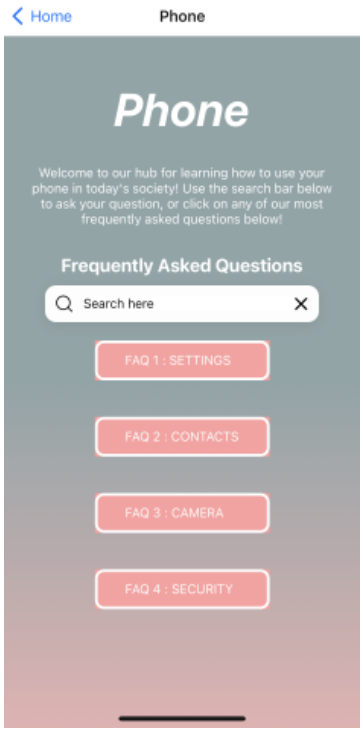
HomePage:

- Header (eldearly logo)
- 3 buttons to select from - Internet,Application, Phone
- Smartphone on hand graphic at the bottom
- Gradient Background
- Clear and brief instructions to support easy navigation of the app



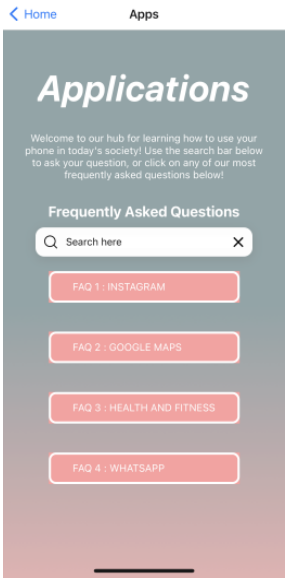
Phone Page:

- Header (title: Phone)
- Application welcome message to engage with audience
- A list of frequently asked questions
- The text search component that filter displayed material to only material that match the filter
- Gradient Background
- Clear and brief instructions to support easy navigation of the app
- Title in bold to make it easy to read



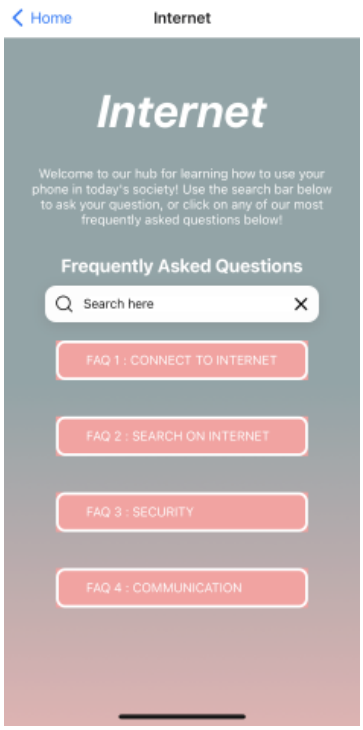
Application Page:

- Header (title: Applications)
- Application welcome message to engage with audience
- A list of frequently asked questions
- The text search component that filter displayed material to only material that match the filter
- Gradient Background
- Clear and brief instructions to support easy navigation of the app
- Title in bold to make it easy to read



Internet Page:

- Header (title: Internet)
- Application welcome message to engage with audience
- A list of frequently asked questions
- The text search component that filter displayed material to only material that match the filter
- Gradient Background
- Clear and brief instructions to support easy navigation of the app
- Title in bold to make it easy to read


Home
Internet
Internet
Welcome to our hub for learning how to use your phone in today's society! Use the search bar below to ask your question, or click on any of our most frequently asked questions below!
Frequently Asked Questions
Search here
FAQ 1 : CONNECT TO INTERNET
FAQ 2 : SEARCH ON INTERNET
FAQ 3 : SECURITY
FAQ 4 : COMMUNICATION