# NextStep HealthTech Mobile App Development

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## Introduction

**NextStep HealthTech** is an organization devoted to supporting people in their health and wellness. Our project was centered around adding features to their mobile applications that would advance the goal of supporting the well-being of their users. The features were developed using React Native, which allows for iOS and Android development with only one set of code. The first two features are interactive audio-based content players, and the third feature is a habit tracker.

The project will be considered successful if the stakeholders are able to integrate the features into the app in a way that allows them to compete with competitors who have similar features, *and* at least 75% of users polled say that it helped improve their daily health in a significant way.

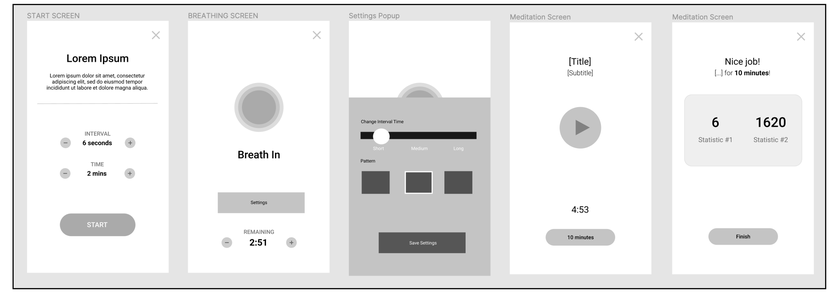
## Requirements

**Software requirements:** interactive content display w/ audio where users can control the intervals of the content, an audio based content player/renderer that displays a success screen with relevant statistics, and a data input table tracking that notifys users of scheduled habits and reoccurring items.

**Non-functional requirements:** good usability that makes each feature appear simple and easy to understand, well documented and easily scalable code, and a high amount of code testing coverage.

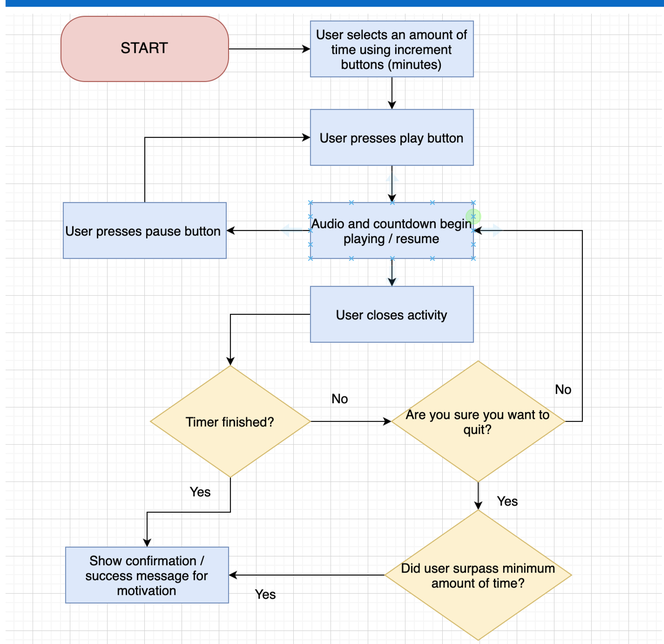
**Security requirements:** awareness of potential security vulnerabilities when the functionality is integrated into the existing app, and a maintaining of confidentiality of the specifics of the app.

## UX Design & Prototypes




It was important that the user experience be suitable for everyone, including younger age groups. UX prototypes were designed using Figma prior to the development of the components and screens.

## User Flow & Interaction

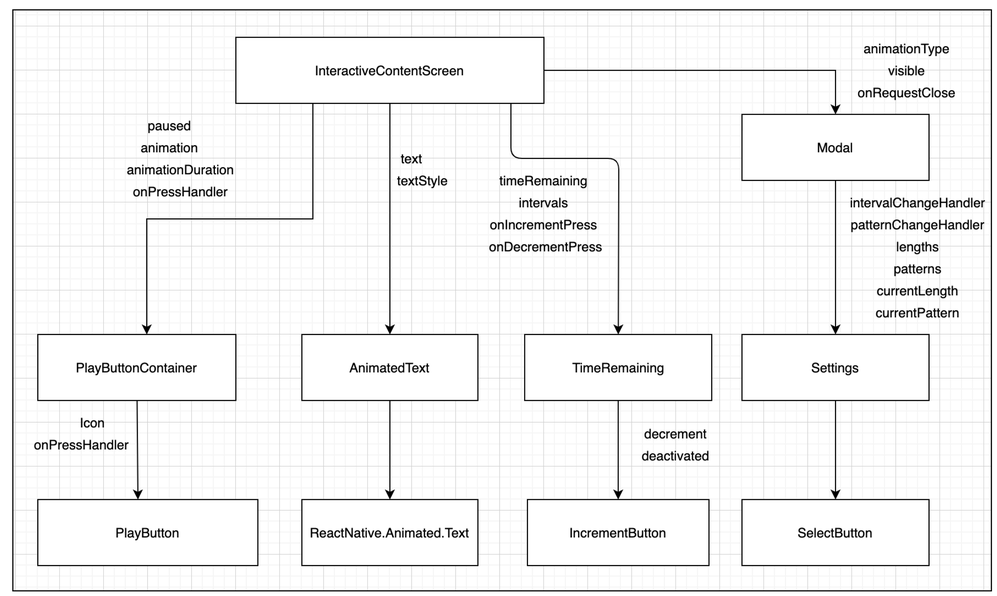



Many user flow diagrams (like the one seen here) and logic diagrams were created before starting development.

The one shown here on the left is a user flow diagram for the audio content player, in which a user selects an amount of time, presses play, etc. Most diagrams created are more complicated than this, but would be difficult to show.

Since the application is run on a mobile device, all the interactions are performed via tapping on buttons, primarily a play button and a settings button that allows the user to change certain settings (like time and the type of content being played).

## System Components




Each modular component has its own React code and CSS styling, as well as its own Jest code testing file.

Components are passed state from the top-down using props (properties). Props edit a component works, so for example the AnimatedText component has a style prop that changes what the text looks like. State is a method for dynamically changing information and variables. Props can be used to give the state to the component, such as the current value of a variable.

The ability to split application screens & functionality into individual modular components allowed for the re-use and unique customization of certain components in other features.

## Technologies Used

The code was written in **TypeScript (JavaScript)**, which was compiled into builds for multiple platforms, including iOS and Android. Using the **React Native** mobile framework, only one version of the source code was needed for multiple platforms.

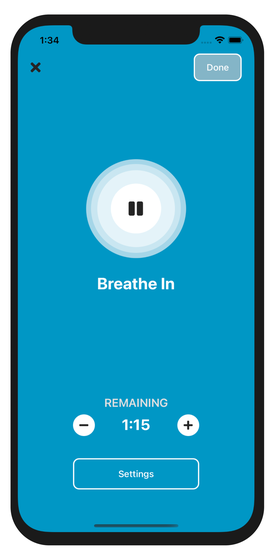
Version control was handled using **Git,** and source code was hosted on **GitHub**. Github was also used as our team's project management tool.

**Visual Studio Code** was used as the IDE for writing the application, which is a freeware code editor made by Microsoft.

**CSS** written as JavaScript was used for the styling and UI of the components and screens.

Other technologies used include **Jest** (code testing framework) and **Figma** (UX design software).

## Final Product / Results




The first feature is an **interactive audio based content player that uses timers**. It runs a set number of intervals over an explicit period of time. The length of the intervals can be changed as well as the overall length of time the content runs for.

The second feature is another interactive audio based content player, but with an option for infinite playback, as well as a success screen that shows statistics.

The third feature is a **habit tracker.** It allows the user to set explicit times when they need to do specific tasks and how many times they need to do it. It can be set to remind them about these tasks at specific times.

The features we have developed have met the standards of the stakeholders and will assist them in maintaining competition with other apps by bringing relevant features to their app. We are confident the features will be able to improve the daily health of the users through their simplicity and accesibility.

## Acknowledgements

**NextStep HealthTech:** For sponsoring this project and assisting in development every step of the way!

Also a big thanks to **Professors Benedetto and Plumlee** for their support!