A-RHYM Heart Tracker

A multi-device application to log and track your heart rate

Purpose and Audience

A-RHYM Heart Tracker is a multi-device application that provides users with the ability to log and track their heart rate.

High Level Features:
Record a heart rate with a mobile device.
Record the time, date, and location.
Create and add a note to a record.
Offers course of action for irregular heart rate.
Provide a history (daily, weekly, monthly) of irregular heart rate.
Allows user to save and share records with a physician

Target Audience:
- People diagnosed with irregular heartbeat (arrhythmia) and display symptoms of Atrial-Fibrillation (A-Fib) who are required by their physicians to record both regular and irregular heart rates.
- Medical practitioners who monitor and treat A-Fib patients.
- Family and friends living in contact with people diagnosed with irregular heart rate.

Brand Identity

	Buttons
	Button hover/border
	Background
	Menu bar

	Error
	Success

The Font used for header, subhead, and paragraph is Noto Sans.

This is an example of a Header

This is an example of a Subheader

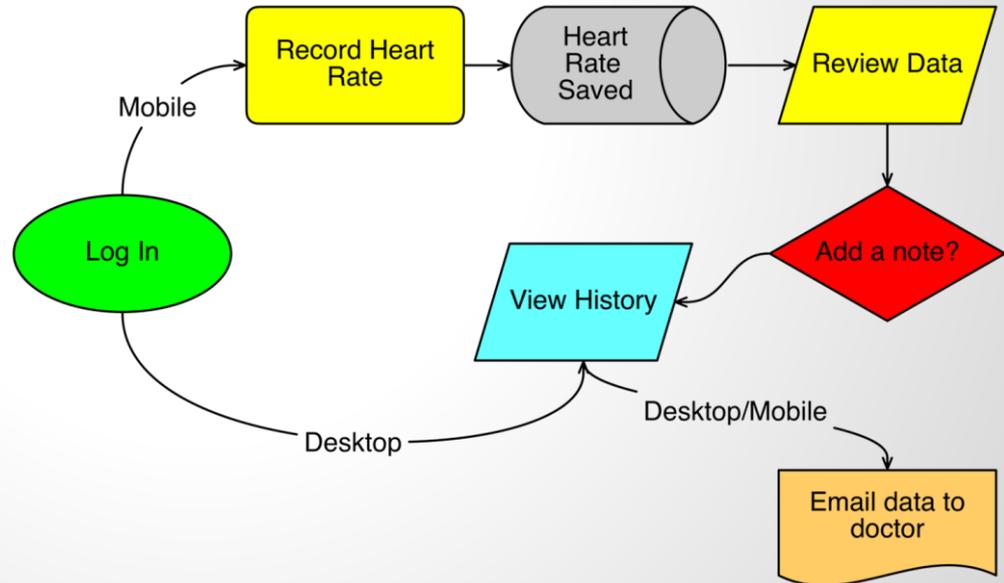This is an example of a paragraph.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Pellentesque consectetur ligula id auctor ullamcorper. Sed aliquet suscipit consequat. Suspendisse nisi mauris, mattis at nulla quis, pulvinar luctus nisl. Sed congue eros in diam auctor, a porttitor eros aliquam. Etiam vestibulum at dui id rutrum. Curabitur eu eleifend enim. Curabitur bibendum turpis in neque egestas, at congue turpis consequat. Curabitur vestibulum, quam congue consequat gravida, erat metus pretium elit, vitae fermentum leo nisi a erat. Nullam non fermentum velit. Maecenas consectetur orci a purus mollis, ac consequat mauris rhoncus. Vivamus id cursus nulla. Donec interdum hendrerit fringilla. Cras a posuere justo, non ornare lectus.

User Stories and Flows

User Story 1

As a user with an irregular heart rate, I want to record my BPM to be informed of what my current health status is and send my history to my physician as needed
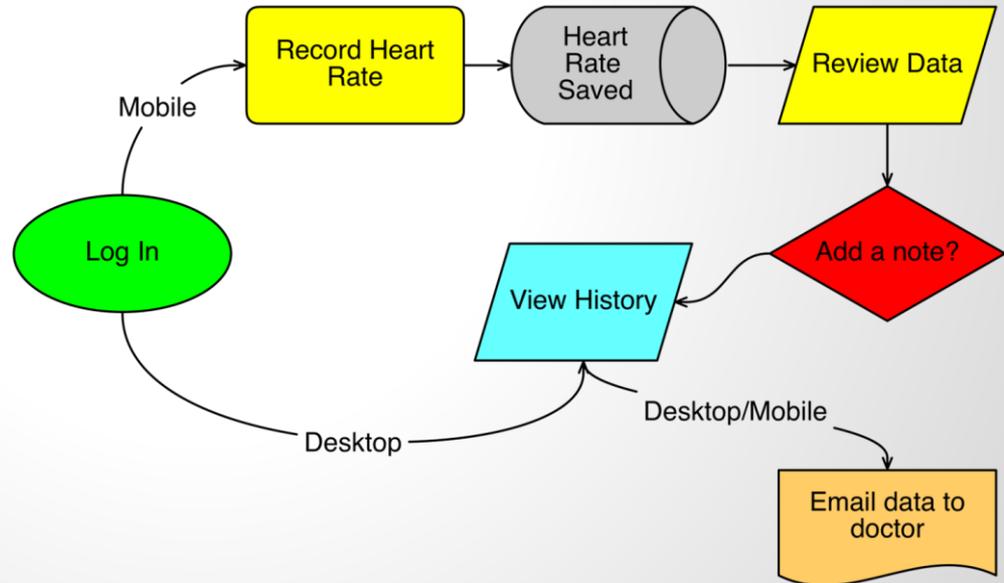
User Flow

User Stories and Flows

User Story 2

As a family member of an A-Fib patient, I want to use a web app that will document the history of my family member so I can assist in the management of his irregular heart rate condition.

User Flow

User Testing

Goals

- Gather general, qualitative feedback about the application.

- Identify any possible usability issues.

- Identify any positives.

- Check for bugs.

Participants

- 9 participants (4 male, 5 female).

- Familiar with desktop, tablet, or mobile devices.

- Belonged to one of our 3 target user groups.

Environment

- 20-30 min. sessions.

- Conducted in participant's home, or online.

- 2 scenarios, with 1-3 device specific tasks each.

- Data recorded by notes or Camtasia video capture.

Major Findings

Problem:

Stat widgets in the history were unclear and confusing.

Share functionality was unclear and straightforward.

The type of password validation was not appropriate for sign in.

The hierarchy of the desktop history did not reflect the level of information importance.

Not enough time allowed before BPM recording began.

Solution:

Added legends and context-sensitive help to explain what each widget is for.

Changed labeling from 'share' to 'email pdf'.

Change validation to only validate if password is correct.

Moved 'Weekly Summary' to the top left and organized the hierarchy based on importance.

Added a user interaction to initiate the recording of a BPM.

Prototype

Our final iteration of the ARHYM - Heart Tracker application addresses the findings we discovered from our usability study. We have incorporated our design recommendations and created a final, high fidelity prototype.

URL:
http://opd91n.axshare.com/home.html

Breakpoints:

Large Display	769 and above
Tablet (portrait)	768 x 1024 and below
iPhone (portrait)	360 x 640 and below

Brand Identity

Palette

#73BABA for buttons

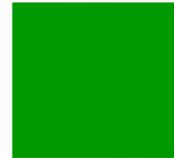#087272 for button hover states and borders

#F7EFDA for background

#666666 for menu bar

#FA2021 for errors

#009900 for success

Brainstorm Board

The team developed the user flow and story online using http://note.ly an asynchronous brainstorm board.

User Stories:

You may have one persona with a single user flow through the app - good example create an account

You may have one persona with multiple flows through the app - a good example is a user who basically wants to record his daily heart rate
- user saves
- emails

You may have multiple personas with different flows through the app - a good example would be to respond thru email;
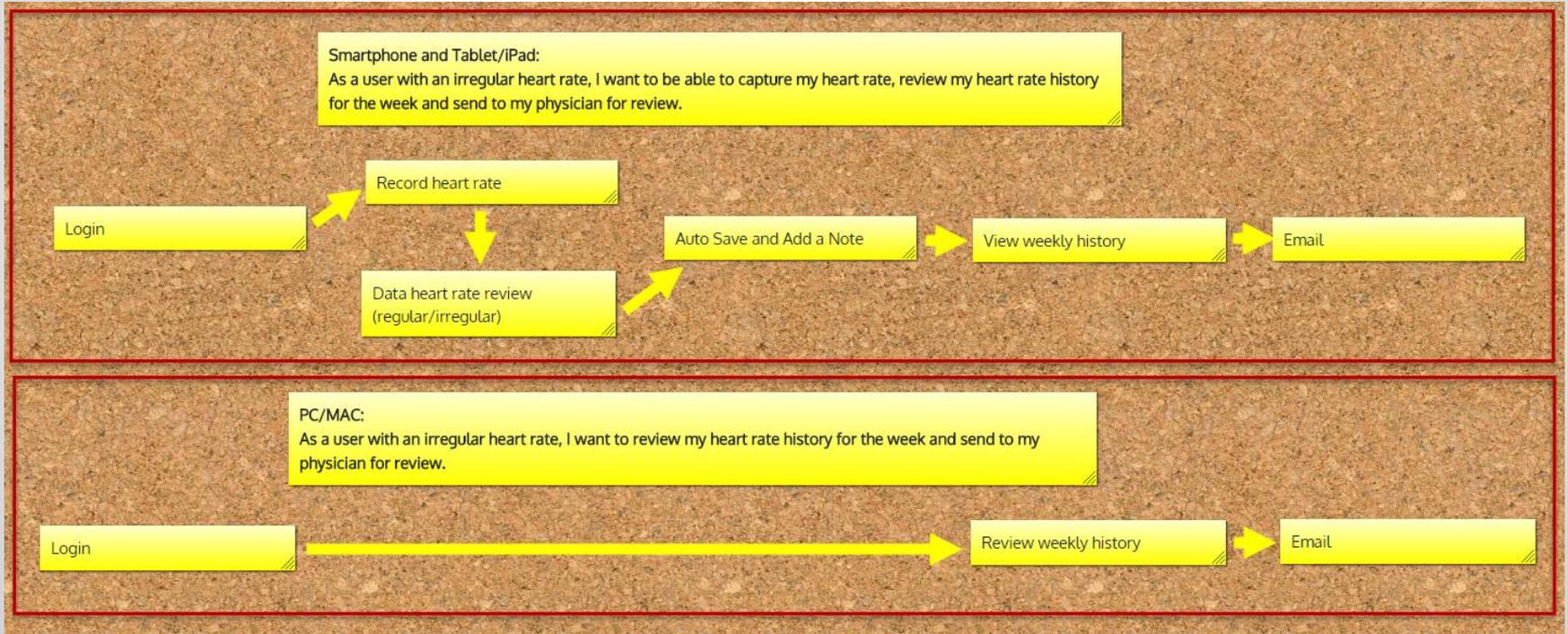
As a new user, I want to create a new account, so that i can start recording the heart rates and archive my progress appropriately.

As a user, I would like to access my heart rate archive from the previous week and email them to my physician for his review and medical recommendations.

As a user, I want to be able to capture my heart rate, so that I would be able to save it, and review my heart rate history for the week.

Brainstorm Board

User Flows:

User Stories

Smartphone and Tablet:

As a user with an irregular heart rate, I want to be able to capture my heart rate wherever I am, review a snapshot of my BPM history, and quickly send the results to my cardiologist for review.

Desktop and Laptop:

As a user with an irregular heart rate, I want to be able to thoroughly review the details of my BPM history and send them to my cardiologist in a well composed email for review .

Typography

Noto Sans

The Font used for header, subhead, and paragraph is Noto Sans.

This is an example of a Header

This is an example of a Subheader

This is an example of a paragraph.

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Paragraph & Header #555555

Subheader #666666

Links #067bb5

Hover state #304e88

High Level Features

- Record a heart rate from a mobile device using the camera and a user's fingertip.
- Record the time, date, and location.
- Create and add a note to a record.
- Offers course of action for irregular heart rate.
- Provides a history (daily, weekly, monthly) of irregular heart rate.
- Allows a user to save and share records with a physician.

Target Audience

Primary Audience
  People diagnosed with irregular heart rate (arrhythmia) and display symptoms of Atrial-Fibrillation (A-Fib) who are required by their physicians to record both regular and irregular heart rates.

Secondary Audience
  Medical practitioners who monitor and treat their A-Fib patients.
  Family and friends living with or in constant contact with people diagnosed with irregular heart rate.

Tertiary Audience
  People who are considered "at risk" for heart problems and may have been asked by their doctor to monitor their heart rate.
  People who are generally interested with heart health and fitness.

Overview

A-RHYM Heart Tracker is a multi-device application that provides users with the ability to log and track their heart rate.

Arrhythmia:

Improper beating of the heart, whether irregular, too fast, or too slow.

Atrial Fibrillation (AFib or AF):

A quivering or irregular heartbeat (arrhythmia) that can lead to blood clots, stroke, heart failure and other heart-related complications.

Problem

People with abnormal heart rhythms are often required to record their heart rate multiple times throughout the day.

This can be difficult to track while on the go or at work. It also can cause an organizational nightmare of scraps of paper and forgotten details.

Designed For Multiple Devices

Why a user may log on with a...

Desktop or Laptop:
   To flush out entry notes, profile and medical
      history in the comfort of their home.
   To export metric and log pdfs to store on a
      local hard drive.

Tablet or Smartphone Device:
   To record easily on the go from any location.
   To use the device's camera to record heart rate
      with the touch of a fingertip.

A-Rhym is designed responsively to accommodate desktop, laptop, tablet and mobile devices.

Persona

Name: Paul Baker
Title: Assistant VP of Product Management,, Apple
Paul has worked as a product analyst with Apple for more than 20 years and has risen through the ranks to become the Assistant VP of Product Management. His job is fast paced and often stressful.
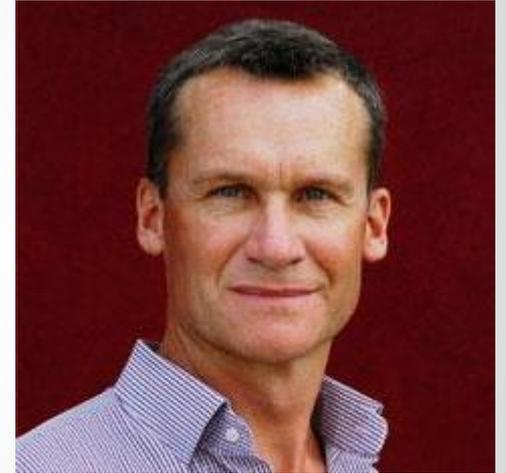
Previous to his stint in the private sector, Paul served in the military and did a couple tours of duty with the United States Marine Corps. While in the military, he got into the bad habit of heavy smoking and drinking as a way to ease out of the high pressures of active military service.

Persona: Paul Baker (Continued)

Paul was diagnosed about a year ago with an irregular heart rate (A-Fib). He has noticed that one of the triggers of his A-Fib is mental and physical stress. His medications include an antiarrhythmic drug, a beta blocker, and a calcium blocker all designed to reduce heart rate.

Recently he noticed that his episodes of A-Fib have been occurring more frequently. Paul went to his cardiologist and was advised to record his heart rate regularly and take notes on what activities he was participating in when his heart rate was irregular. The physician asked Paul to bring his documentation to each appointment from now on.

Prototype

Tablet and Smartphone Path:

1. **Click** the 'Sign In' button.
2. **Wait**, this simulates the time where the user would place a finger over the device's camera.
3. **Processing**, the app is recording the user's BPM.
4. **Click** the 'View History' Button.
5. **Click** the 'Share' Button.
6. **Click** anywhere on the screen

Prototype

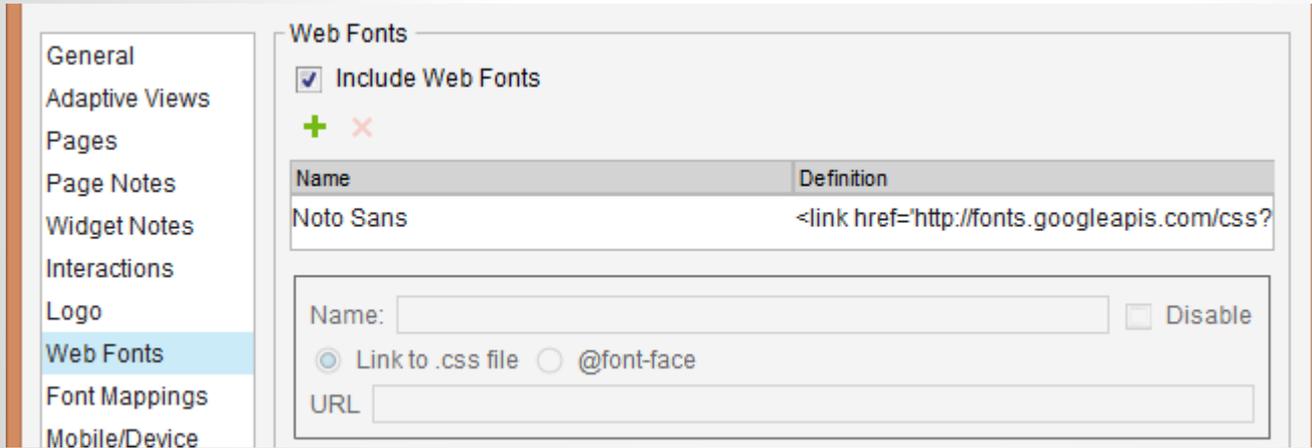**(note: The desktop path appears in the tablet/phone path.)**

Desktop and Laptop Path:
1. **Click** the 'Sign In' button.
2. **Click** the 'Share' button (this would open the user's native email app when live).

Prototype

Fonts

Noto Sans was imported to Axure.

Prototype

New Functionality

- Verification that email password includes a number and a letter.
- Password recovery assistance with validation on email field that it should not be empty
- Ability to record your BPM again

Prototype

Intended Scenarios for Usability Testing

Smartphone and Tablet:
As a diagnosed A-Fib individual, you started feeling that your heart rate is skipping a few beats. You opened the A-Rhym app in your iPhone to capture your heart rate and possibly send it to your cardiologist for review.

Desktop and Laptop:
You are the spouse of and A-Fib patient. You have been assisting your husband manage his irregular heart rate condition. Every end of the week, you take the responsibility to send to his physician a summary of his weekly record using A-Rhym.

Major Findings

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