# Individual Project No. 2 – MobiCog

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**HCI 596X:**
**Emerging Practices in HCI**
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## Summary

This project was completed for Mike Oren's 596X class: Emerging Practices in HCI, Summer, 2011. The total time spent on creating this project, including research to completion is estimated about approximately 40 hours. The project details are as follows:

*MobiCog - a mobile application to remember and synthesize details (e.g. the application needs to examine more than just storage--it needs some interaction paradigm to connect pieces of disparate types of information together/allow the information to be reconfigured by the users). Social features are optional. Must take the form of a mobile environment. Interactive prototype should use at least a visual programming tool (e.g. an Axure mockup is insufficient to gain full points in implementation).*

[ from class website: https://sites.google.com/site/hci596/individual-projects ]

The following details my process from beginning to submission. My process was dictated by concepts learned in class, UX/UI resources such as About Face 3, by Alan Cooper, and Sketching User Experiences by Bill Buxton. Additional resources can be found in Appendix D. The design products that I used throughout the project, aside from paper and pencil, were Adobe Illustrator and App Inventor.

The sub-headers of this report are from About Face 3, page 25.

## Intro / Background of Product

Over the past few months I've rediscovered my interest in running. While running, I often think about how fast I'm traveling  and how many calories I'm burning. It was because of though that developed my concept for a mobile application that tracks your GPS location and applies other variables (time, weight, age and height) to return after run results of average speed, distance and calories burnt.

## Defining the User

### Who are my users and what are my users trying to accomplish?

I created a survey to gather information about people's personal fitness routine (including biking, running and any other ground-based distance activity) and what information they are interested in while being active (stakeholders). I sent out a ten-question survey (Appendix A) to 37 people in the age range of 23 – 65, in a variety of markets across the United States. 23 people responded, 22 people completed the survey.

After reviewing the survey results, I was surprised to see that, during physical activities 'Speed' was the least important to those who took the survey, the opposite of my personal concerns. When asked the question "When being active, which of these are you most interested in (mark all that apply)", break down was:

1.    Enjoyment – 78.3%
2.    Physical Appearance – 52.2%
3.    Weight Loss – 39.1%
4.    Calories Burned – 34.8% / Duration (Time Spent) – 34.8%
5.    Route (Location) – 26.1%
6.    Distance – 21.7%
7.    Speed – 17.4%
8.    Other: "Being healthy", "Better mood", "Stress relief" and "Being productive"
One person who took the survey commented that they did not understand the survey.

When asked, "In a mobile application for the active individual, what features would you like to see included (mark all that apply)"
1.    Distance Traveled – 90.9%
2.    Route Tracking – 68.2% / Calories Burned – 68.2%
3.    Time Logs – 59.1%
4.    Average Speed – 36.4%
5.    Total Speed – 27.3%
6.    Weight Loss – 13.6%

When asked, "Do you currently have a method for charting your TIME when being active?" – 59.1% of people were NOT using a method to track time.

Methods noted:
•    EA Active
•    A watch!
•    Use a watch
•    I use a calorie counting app that allows me to log my exercise
•    Google spreadsheet & a route mapper
•    Dailymile to track workouts and mileage
•    Clock
•    Fitnessjournal.org
•    I swim, and there is a clock/timer next to the pool

When asked, "Do you currently have a method for charting your SPEED when being active?" – 81.1% of people were NOT using a method to track speed.

Methods noted:
•    Tracking with a watch, but not charting day-by-day
•    Dailymile
•    Fitnessjournal.com
•    Only that I can check my time at mile intervals to see how fast I'm been swimming. Nothing synchronous

When asked, "Do you currently have a method for charting your DISTANCE when being active?" – 68.2% of people were NOT using a method to track distance.

Methods noted:
- EA Active
- Time, do not chart
- Dailymile
- MapMyRun.com
- Fitnessjournal.org
- Number of laps

When asked, "Do you currently have a method for charting your ROUTE when being active?" – 72.7% of people were NOT using a method to track their route.

Methods noted:
- Dailymile
- MapMyRun.com
- MapMyRun.com
- Back and forth and back and forth in the pool
- Google MyTracks

## Other Product Review

Other products that have similar features were noted in the survey results. This is a brief overview of those products that MobiCog will have to compete with.

**MapMyRun.com**: A subscription-based web service. Offers an app that tracks: duration, distance, pace, speed, elevation, calories burned, and route traveled on an interactive map. Data is available through your MapyMyRun account. *This would be defined as direct competitor.* [ mapmyrun.com ]

**DailyMile.com**: DailyMile is an online community of people who use the site to log how far/how much they ran per run. They offer a supporting iPhone app, which seems to function like the website. As far as I could find out, GPS tracking is not part of the current version of the app, but there are plans to add it later. [ dailymile.com ]

**Google MyTracks**: Google MyTracks is an app for Andriod phones that "enables you to record GPS tracks and view live statistics – such as time, speed, distance, and elevation – while hiking, biking, running or participating in other outdoor activities. Once recorded, you can share your tracks, upload them to Google Spreadsheets and visualize them on Google My Maps." *This would be defined as direct competitor.* [ mytracks.appspot.com ]

**FitnessJournal.com**: The iPhone and Blackberry FitnessJournal app is available to people who are FitnessJournal.com subscribers. The app is a version of their website allowing the user to access or input activity and eating information via mobile device. [ fitnessjournal.com ]

# Personas

## Participant No. 1

"I work hard, I run hard and I play hard."
Male / 25 / Single / Renter
BS, Research Manager
Annual Income: $40,000 – $60,000

Participant No. 1 is a runner. He ran high school cross country and kept up his running in college. Now that he is out of college and has a job, he tries to get out every morning to enjoy a run before work. He is curious how far he runs these days, but doesn't currently chart his distance. He's looked at online resources, but doesn't want to sign up for another social network.

At work, Participant 1 is in front of his computer 75% of the day reviewing or creating statistics, and in meetings with colleagues and clients the other 25% of the day. He is a PC user uses an Android phone as his primary phone. He feels that he is computer-savvy. He has bought several apps on his phone since its purchase, mostly sports-related.

Key Attributes:
• Computer-savvy  • Android user  • Young and active

## Participant No. 2

"I have a passion for cycling and want to spend as much of my free time on my bicycle."
Female / 35 / Single / Homeowner
BS, Publicist
Annual Income: $70,000 – $90,000

Participant No. 2 is an avid cyclist. She rides to and from work everyday and does fun rides with her friends on weekends. She is most interested in how far and how many calories she is burning on each ride.

At work, Participant 2 is mostly on the phone, either at her desk or on her cell. Her work has supplied her with an Android phone as her work phone, which she also uses as her primary phone. She is primarily a Mac user and would have preferred an iPhone, but is thankful that "at least work didn't give her a BlackBerry". She has downloaded a lot of free apps (news, weather, etc.) but doesn't have much interest in buying apps.

When she isn't on the phone she is writing up promotional materials. Her work requires her to spend a lot of time at the office, or at home behind her computer. When sitting behind a desk, Participant 2 dreams of being out on a trail riding her bicycle.

Key Attributes:
• Android user  • Has an active lifestyle

## Issues to Address

Looking at the results of the survey, the following points need to be made about designing MobiCog:

Speed of a workout wasn't a major factor in the results of the survey. I am interested in this for my own use, so I plan to build in the feature, but it shouldn't be marked as a major feature.

There are a few competitors out there. Keep in mind - Why would someone use MobiCog over the others?

Competing apps are connected to subscription-based sites. While these subscriptions are free, what other options can we offer our users besides a subscription?

Primary features: Distance Tracking, Route Tracking, Time Tracking

## Primary Considerations

### What kind of experiences do my users find appealing and rewarding?

The highest rated category in the survey about what people are concerned most about when being active was Enjoyment. Ultimately, the app should be fun and easy to use – able to start using in a few clicks. The results need to be easy to read and easy to access. Other apps have a subscription base to view results remotely. I'm considering the ability to email results to a user-entered email address for them to review at a later date as well as on-screen.

**What Form Should My Product Take?**

The form in this case is given – a mobile application. I have included a flow chart (below) for how I see the application working.
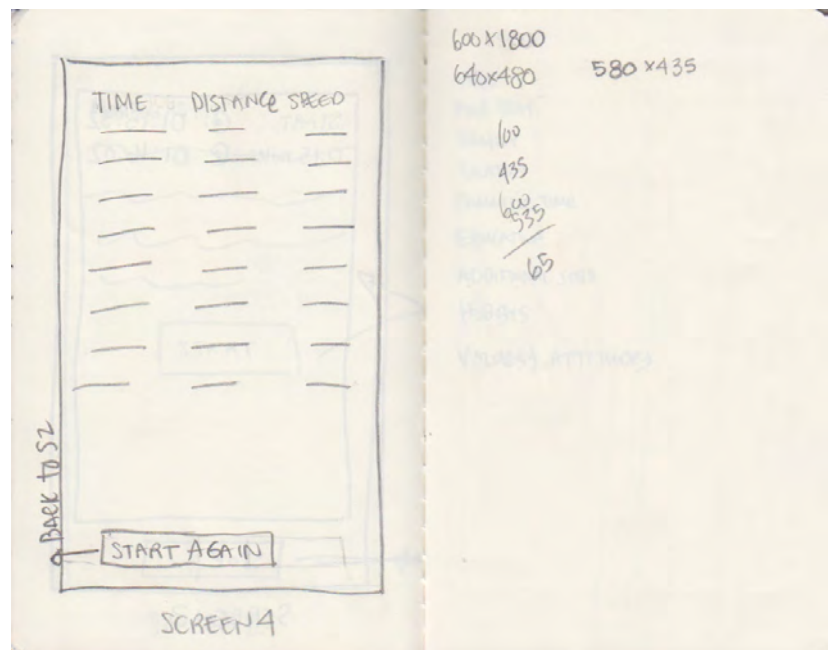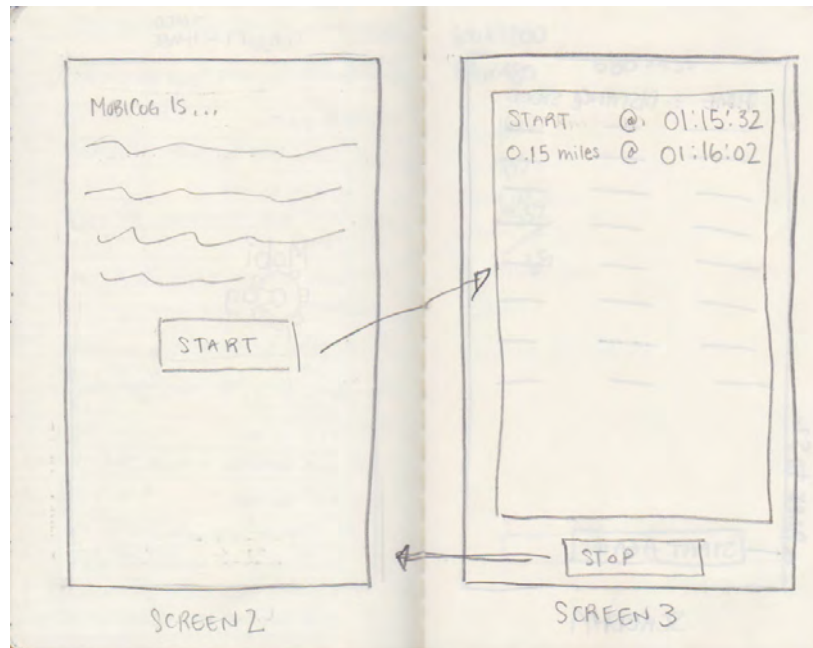
Mobi
Cog
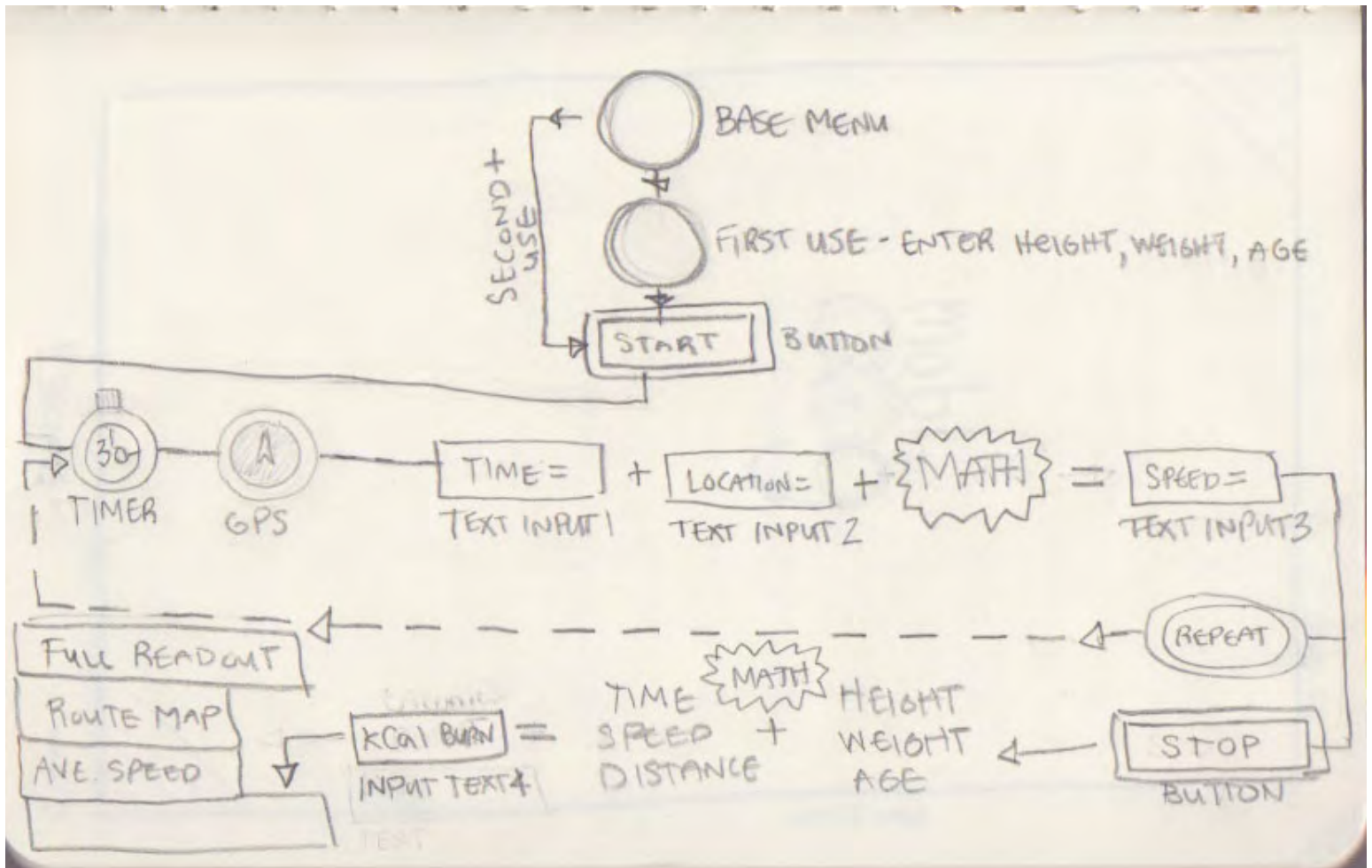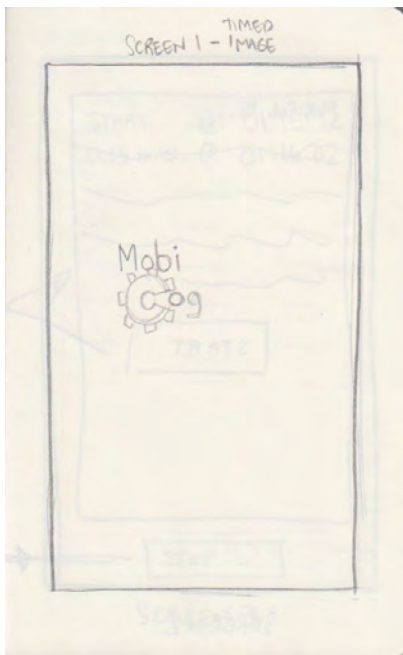
## Starting Design / Wire Frames

### What Form Should My Product Take?

Graphically, I want the app to have a smooth look, and be easy to use. Larger buttons and less interaction will be most important – considering the audience will be sweaty, hot and possible exhausted when interacting with the product after working out.

This is my first round of sketches for the graphic interface.



MOBICOG IS...

START

SCREEN 2

START    @  01:15:32
0.15 miles  @  01:16:02

STOP

SCREEN 3



TIME   DISTANCE SPEED

BACK TO S2

START AGAIN

SCREEN 4

600 X 1800
640x480    580 x435

100
435
600
535
65

BLACK BG

WHITE LAND

mobi cog

5 SECONDS  ⟶

This is the second round of sketches for my user interface.

Ideally, I'd like toe final product to include a map with GPS locations in the results.



FIRST TIME SCREEN ONLY

Mobi Cog

PLEASE ENTER YOUR AGE:

PLEASE ENTER YOUR HEIGHT:

PLEASE ENTER YOUR WEIGHT:

MAIN SCREEN

Mobi Cog    PRESS START TO BEGIN

START

START BEGINS TIMER & GPS



MOBI Cog    PRESS STOP WHEN COMPLETE

STOP

DISTANCE    TIME    SPEED

MOBI COG

You TRAVELED X MILES
YOUR AVERAGE SPEED WAS X MPH
YOUR DURATION WAS X
YOU BURNED APPROX X kCAL

CLEAR RESULTS & START

## Low-Fidelity Design

The next page is the low-fidelity mock-up for the MobiCog app.

**1**

mobiCog

---

**2**

mobiCog

In order to give you accurate feedback on your workout, mobiCog needs to collect some information about you.

Please will out the following information before you begin.

**Please enter your age:**

[                    ]

**Please enter your height:**

[                    ]

**Please enter your weight:**

[                    ]

**Are you the primary user of this app?**
*(If 'No', this screen will come up every time you start the app)*

| YES | NO |

**Save Info**

---

**3**

mobiCog

Press 'Start' to begin tracking your distance, location and speed.

**Start**

Time          Distance          Speed

---

**4**

mobiCog

Press 'Stop' when you are done with your route.

**Stop**

| Time | Distance | Speed |
|------|----------|-------|
| 00:00 | 0.00 miles | 0 mph |
| 00:30 | 0.10 miles | 4 mph |
| 01:00 | 0.20 miles | 5 mph |
| 01:30 | 0.30 miles | 3 mph |
| 02:00 | 0.45 miles | 5 mph |
| 02:30 | 0.6  miles | 8 mph |
| 03:00 | 0.75 miles | 6 mph |
| 03:30 | 0.85 miles | 5 mph |
| 04:00 | 0.95 miles | 5 mph |
| 04:30 | 1.05 miles | 4 mph |
| ... | ... | ... |

---

**5**

mobiCog

**Route Summary**          Data Overview

**Total Time: 4 minutes 30 seconds**

**Traveled: 1.05 miles**

**Average Speed: 5 mph**

**Fastest Speed: 8 mph**

**Slowest Speed: 3 mph**

**Calories Burned: XXX kCal**

**Clear Results & Start**

---

**6**

mobiCog

Route Summary          **Data Overview**

| Time | Distance | Speed |
|------|----------|-------|
| 00:00 | 0.00 miles | 0 mph |
| 00:30 | 0.10 miles | 4 mph |
| 01:00 | 0.20 miles | 5 mph |
| 01:30 | 0.30 miles | 3 mph |
| 02:00 | 0.45 miles | 5 mph |
| 02:30 | 0.6  miles | 8 mph |
| 03:00 | 0.75 miles | 6 mph |
| 03:30 | 0.85 miles | 5 mph |
| 04:00 | 0.95 miles | 5 mph |
| 04:30 | 1.05 miles | 4 mph |

**Clear Results & Start**

# High-Fidelity Design

As I stated before, users will interact with MobiCog before and after working out, so the interface will have to be simple and easy to use. Using Nielsen's Heuristics, the following should be included in the final design:

**Visibility of System Status** – the application should visibly be functioning (e.g., results propagating the main text area when the 'Start' button is pressed, on a set time frequency and when the 'Stop' button is pressed. 'Start' and 'Stop' buttons should not exist on the screen at the same time.

**Match Between System And The Real World** – The data shown should be in everyday language/concepts, not GPS coordinates.

**User Control And Freedom** – Stopping the application and starting again are just a few button clicks.

**Consistency And Standards** – Button placement and coloring will be standardized.

**Error Prevention** – There will be limited room for error. The only potential for error would cause the app to crash and restart.
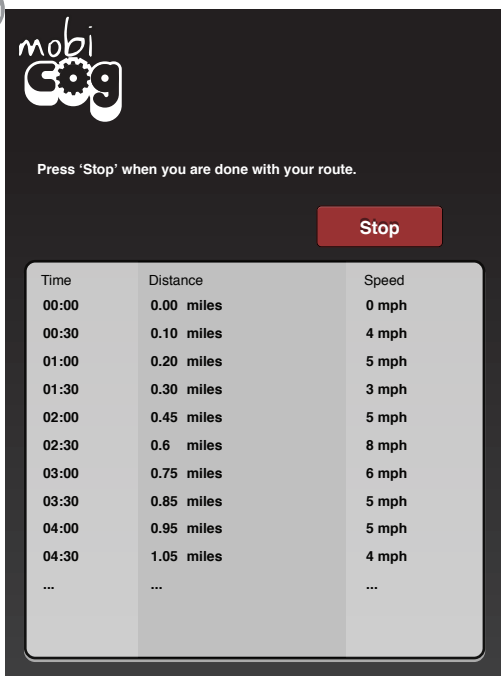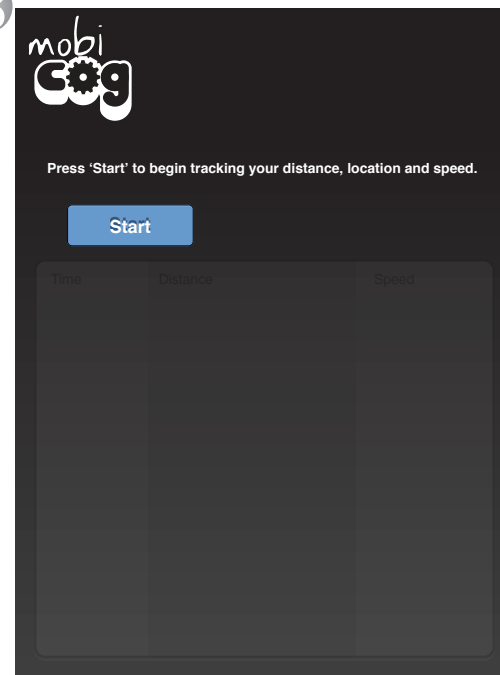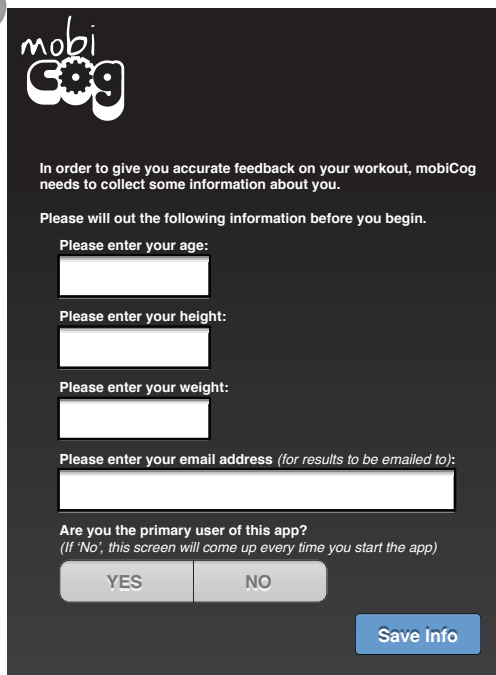
**Recognition Rather Than Recall** – All interaction will take place visibly. The user will understand the feedback because it will be in a common language.

**Accelerators** – The final design will incorporate a First-Time-Use Screen, so the user won't have to enter the same information for each use, leaving the simple 'Start/Stop' interaction.

**Aesthetic And Minimalist Design** – Screen interaction will be simplistic, based on one or two buttons. Data given will be clean and easy to read and formatted for the layman to understand.

The next page is the high-fidelity design for the final graphical look of the application.

NOTE: The prototype in App Builder will NOT look like this for testing.

**1**

# mobi
# Cog

---

**2**

## mobi
## Cog

In order to give you accurate feedback on your workout, mobiCog needs to collect some information about you.

Please will out the following information before you begin.

**Please enter your age:**

**Please enter your height:**

**Please enter your weight:**

**Please enter your email address** *(for results to be emailed to)*:

**Are you the primary user of this app?**
*(If 'No', this screen will come up every time you start the app)*

| YES | NO |

**Save Info**

---

**3**

## mobi
## Cog

Press 'Start' to begin tracking your distance, location and speed.

**Start**

| Time | Distance | Speed |
|------|----------|-------|

---

**4**

## mobi
## Cog

Press 'Stop' when you are done with your route.

**Stop**

| Time | Distance | Speed |
|------|----------|-------|
| 00:00 | 0.00 miles | 0 mph |
| 00:30 | 0.10 miles | 4 mph |
| 01:00 | 0.20 miles | 5 mph |
| 01:30 | 0.30 miles | 3 mph |
| 02:00 | 0.45 miles | 5 mph |
| 02:30 | 0.6 miles | 8 mph |
| 03:00 | 0.75 miles | 6 mph |
| 03:30 | 0.85 miles | 5 mph |
| 04:00 | 0.95 miles | 5 mph |
| 04:30 | 1.05 miles | 4 mph |
| ... | ... | ... |

---

**5**

## mobi
## Cog

| Route Summary | Data Overview |

**Total Time: 4 minutes 30 seconds**

**Traveled: 1.05 miles**

**Average Speed: 5 mph**

**Fastest Speed: 8 mph**

**Slowest Speed: 3 mph**

**Calories Burned: XXX kCal**

**Clear Results & Start**

---

**6**

## mobi
## Cog

| Route Summary | Data Overview |

| Time | Distance | Speed |
|------|----------|-------|
| 00:00 | 0.00 miles | 0 mph |
| 00:30 | 0.10 miles | 4 mph |
| 01:00 | 0.20 miles | 5 mph |
| 01:30 | 0.30 miles | 3 mph |
| 02:00 | 0.45 miles | 5 mph |
| 02:30 | 0.6 miles | 8 mph |
| 03:00 | 0.75 miles | 6 mph |
| 03:30 | 0.85 miles | 5 mph |
| 04:00 | 0.95 miles | 5 mph |
| 04:30 | 1.05 miles | 4 mph |

**Clear Results & Start**

## Prototype

**How will my product introduce itself to first-time users and**
**how can my product put an understandable, appealing, and controllable face on technology and**
**how will my product help infrequent & inexperienced users understand how to accomplish their goals and**
**how can my product provide sufficient depth and power for expert users?**

The final MobiCog product will offer a first-time-use screen to collect the information of the primary user of the application. This will collect the user's height, weight, age and email address. The final design will also include a 'Settings' button if this information ever needs to be altered.

After the first-use screen, the app is pretty basic: a 'Start', 'Stop' and 'Clear Results & Start' button. Inexperienced, novice and expert users will have the same experience, seeing as the application is so straightforward. The control of the application is simple and easy to use, yet not so simple as to be child-like or condescending.

## Building

The prototype was built using Google's App Inventor. I found the process to be extremely cumbersome and frustrating. I used a handful of online tutorials (androidandme.com, appinventor.googlelabs.com). At various points I had to get assistance from a friend to troubleshoot code block issues, get help with math and logic and to simply direct me on what steps I should take next. I ran in to a wall when trying to add route tracking. I found that it was too difficult and too time consuming to add the App Inventor.

My commented code blocks can be found in Appendix C.

The MobiApp application is packaged as a .apk file and is available for download at:
http://www.goodarts.net/596X/mobicog.apk

To test you will need access to a GPS enabled SmartPhone running the Android OS. Using the Android phone, download the .apk and install. Go through the install screens – you will be prompted to allow 'Installing from unknown sources'. Check this box – finish install and launch.

The phone may (almost 95% certain) need an active SIM for the application to work properly (GPS).

## Prototype Look

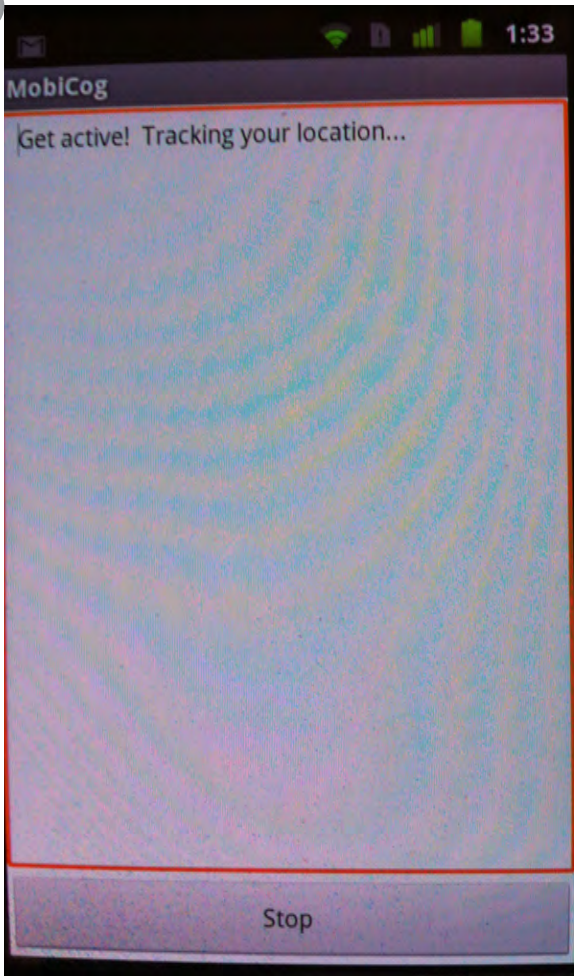The following pages contain screen shots of the prototype design.

**1**

1:31

g

MobiCog

**2**

1:32

MobiCog

mobi
cog

**3**

1:32

MobiCog

Please enter your age:

Please enter your height

Please enter your weight:

Please enter your email address:

Save

**4**

1:33

MobiCog

Start

**5**

MobiCog

Get active!  Tracking your location...

Stop

**6**

Compose

rgwilson@iastate.edu

<goggles@VHF. com>,

MobiCog

Total time:  0 minutes 8 seconds
Total distance:  0.0 miles
Calories burned:  0.0 cal

Detailed results:
Time / Distance / Speed
Jul 14, 2011 1:33:08 PM / 0.0
 mi / 0.0 mph
Jul 14, 2011 1:33:17 PM / 0.0
 mi / 0.0 mph

**7**

MobiCog

Start

Total time: 0 minutes 8 seconds
Total distance: 0.0 miles
Calories burned: 0.0 cal

Detailed results:
Time / Distance / Speed
Jul 14, 2011 1:33:08 PM / 0.0
 mi / 0.0 mph
Jul 14, 2011 1:33:17 PM / 0.0
 mi / 0.0 mph

## How to Use the Prototype

To use the mobiCog app, find the mobiCog icon in your app menu and click on it. MobiCog will launch to the splash screen. The splash screen will stay up for 5 seconds, then it will transition to the user data collection screen. In the final application this screen will only be visible for the first time use of the app, but will be accessible through the settings button within the app if information ever needs to be updated.

After the information is entered, press the "Save" button and is taken to the next screen. To start the app simply press the "Start" button. Text feedback is given that the app is running, as well as removing the "Start" button and moving the location of the "Stop" button (to avoid accidental double-taps, thus stopping the application from running).

To stop, press the "Stop" button. This will open a screen to send an email (from the active email account on the phone) to the user (email input on the first screen). Press the send icon. Sending an email takes you back to the overview screen with the results populated in the main text area.

Press "Start" again to clear the information and start the app running again.

## Prototype Scenario

At work today you heard about MobiCog, and app for your Android phone that allows you to track your route, distance and speed as well as gives you feedback after your run on your averages and how many calories you burnt. Interested, you downloaded it to your phone. You are dressed in your running gear and are about to go on your daily run. You pull out your phone and open the MobiCog app.

# User Testing

User testing for this app was a unique scenario. Since it is just in its testing phase and I can only load it onto local Android phones to test with, I had to test with local users. I was able to watch three people who took the original survey use the test version of the application.

Using a test phone (Nexis 1) that I was able to borrow from a friend, I asked four users to try out the application while being active. I gave them the choice of running, biking or walking. The duration of time spent being active was up to the user. User testing notes are included in Appendix B.

### User 1: Male, 32 – Running
User 1 was unfamiliar with Andriod phones and needed instruction on how to turn-on and unlock the phone. After their run the user reported that they liked the application, it was easy to use, but noted that they probably wouldn't use it regularly because they prefer to be more focused on their run. They also commented that the app was "a cool concept", but the design "looked stripped down".

### User 2: Female, 30 – Walking
User 2 was not a SmartPhone user and instruction on how to turn-on and unlock the phone. Once the phone was active, she was able to start mobiCog, entered her information and start her walk. After her walk, she was able to turn on the phone, unlock it and stop the app herself. She said she thought it was easy to use and would like something like this app to track her calories burnt while walking.

### User 3: Female, 32 – Walking
User 3 is familiar with the iPhone, not Android. She required a basic tutorial of how to turn on and unlock the phone. After that User 3 opened the app and filled in her information and pressed start. User 3 ran errands while testing. User 3 stopped mobiCog by herself before returning to testing, but her results were captured. She said the app was easy to use but she didn't see herself using it regularly.

### User 4: Male, 35 – Biking
User 4 is an Android user. He opened the app, filled in the information and went on a quick bike ride. When he returned he stopped the application and loved getting the immediate feedback from his ride. He said the app was "cool" because he never knew how fast he rode on his bicycle. He said he would use the app regularly if it was available.

# User Testing Note

The original test phone was not properly collecting the GPS data during each test. I'm assuming that this was because the test device did not have a SIM card, thus having limited GPS functionality. User 4 had their own Android phone, a Nexus S. We installed mobiCog on their phone for testing and it the app worked fine, with the exclusion of the last speed data, when it recorded the user riding his bicycle at 97.45mph. I am unsure why this data was logged incorrectly.

# Final Thoughts / Next Version

Looking back on the issues I intended to address with this product, I think that with some additional work, additions (see below) and promotion, MobiCog could be a potential competitor with MapMyRun.com, by offering users the freedom from a inter-connected tracking website and providing an email (or other delivery options) or possibly integrating somehow in to GoogleDocs to allow for personal tracking.

As for Google MyTracks, the only way to compete would be to make MobiCog available for all SmartPhone users, not just for Android, after the addition of the route tracking.

I feel that I achieved most of my primary features: Distance Tracking, Time Tracking and added in my personal interest that wasn't as popular in the survey, Speed Tracking. Route Tracking was too difficult to add to the App Inventor prototype.

From a prototype standpoint, App Inventor was ok to use. In the next version I would want to program the app using a different method that would allow more freedom to integrate other options (maps, route tracking and such). The next version (mobiCog2.0) has to have route tracking without question, seeing as it was one an interest in the survey and from the user testing.

I would also like to be able to layout and skin the next version of the application to match the proposed graphics before the next round of user testing. I think that the users who commented that they wouldn't use the application regularly might have felt differently if the application looked like it was ready for distribution rather than the wire-frame look it currently has.

# Appendix A — Survey & Results

**1. When being active, which of these are you most interested in (mark all that apply):**

| | | Response Percent | Response Count |
|---|---|---|---|
| Duration (Time spent) | ▬▬ | 34.8% | 8 |
| Distance | ▬ | 21.7% | 5 |
| Route (Location) | ▬ | 26.1% | 6 |
| Speed | ▬ | 17.4% | 4 |
| Calories burned | ▬▬ | 34.8% | 8 |
| Enjoyment | ▬▬▬▬▬ | **78.3%** | **18** |
| Weight loss | ▬▬ | 39.1% | 9 |
| Physical Appearance | ▬▬▬ | 52.2% | 12 |
| Other (please specify) Show Responses | | | 5 |
| answered question | | | 23 |
| skipped question | | | 0 |

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**Responses (5)** | Text Analysis | My Categories (0)

Showing 5 text responses                              No responses selected

Being healthy
6/20/11 12:40AM    View Responses

I find this question really unclear
6/20/11 10:43AM    View Responses

Better mood
6/20/11 10:33AM    View Responses

Stress relief
6/20/11 10:23AM    View Responses

being productive
6/20/11 10:09AM    View Responses

**2. In a mobile application for the active individual, what features would you like to see included (mark all that apply):**

| | | Response Percent | Response Count |
|---|---|---|---|
| Route Tracking | | 68.2% | 15 |
| Time Logs | | 59.1% | 13 |
| Total Speed | | 27.3% | 6 |
| Average Speed | | 36.4% | 8 |
| Distance Traveled | | 90.9% | 20 |
| Calories Burned | | 68.2% | 15 |
| Weight Loss | | 13.6% | 3 |
| | Other (please specify) Show Responses | | 1 |
| | answered question | | 22 |
| | skipped question | | 1 |

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| Responses (1) | Text Analysis | My Categories (0) |

**GOLD FEATURE:** Text Analysis allows you to view frequently used words and phrases, categorize responses and turn open-ended text into data you can really use. To use Text Analysis, upgrade to a GOLD or PLATINUM plan.

Learn More    Upgrade »

Showing 1 text responses                                     No responses selected

I would not be interested in such a mobile application.
6/20/11 11:08PM    View Responses

**3. Do you currently have a method for charting your TIME when being active?**

| | | Response Percent | Response Count |
|---|---|---|---|
| Yes | | 40.9% | 9 |
| No | | 59.1% | 13 |
| | | answered question | 22 |
| | | skipped question | 1 |

**4. If 'yes', please list the product or method...**

| | Response Count |
|---|---|
| Hide Responses | 9 |

**Responses (9)** | **Text Analysis** | **My Categories (0)**

**GOLD FEATURE:** Text Analysis allows you to view frequently used words and phrases, categorize responses and turn open-ended text into data you can really use. To use Text Analysis, upgrade to a GOLD or PLATINUM plan.

Learn More    Upgrade »

Showing 9 text responses                                    No responses selected

AE Active
6/20/11 11:09PM    View Responses

A watch!
6/20/11 7:37PM    View Responses

Use a watch
6/20/11 6:09PM    View Responses

I use a calorie counting app that allows me to log my exercise
6/20/11 10:45AM    View Responses

Google spreadsheet & a route mapper.
6/20/11 10:31AM    View Responses

Dailymile to track workouts and mileage

| | answered question | 9 |
|---|---|---|
| | skipped question | 14 |

## 4. If 'yes', please list the product or method...

| | Response Count |
|---|---|
| Show Responses | 9 |
| answered question | 9 |
| skipped question | 14 |

Dailymile to track workouts and mileage
6/20/11 10:30AM    View Responses

clock
6/20/11 10:19AM    View Responses

fitnessjournal.org
6/20/11 10:17AM    View Responses

i swim, and there is a clock/timer next to the pool
6/20/11 10:14AM    View Responses

| | |
|---|---|
| answered question | 9 |
| skipped question | 14 |

**5. Do you currently have a method for charting your SPEED when being active?**

| | | Response Percent | Response Count |
|---|---|---|---|
| Yes | | 18.2% | 4 |
| No | | 81.8% | 18 |
| | | answered question | 22 |
| | | skipped question | 1 |

**6. If 'yes', please list the product or method…**

| | Response Count |
|---|---|
| Hide Responses | 4 |

Responses (4) | Text Analysis | My Categories (0)

**GOLD FEATURE:** Text Analysis allows you to view frequently used words and phrases, categorize responses and turn open-ended text into data you can really use. To use Text Analysis, upgrade to a GOLD or PLATINUM plan.

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Showing 4 text responses                                    No responses selected

tracking with a watch, but not charting day to day
6/20/11 7:38PM    View Responses

Dailymile
6/20/11 10:30AM    View Responses

fitnessjournal.org
6/20/11 10:18AM    View Responses

only that i can check my time at mile intervals to see how fast i've been swimming. nothing synchronous.
6/20/11 10:14AM    View Responses

| | answered question | 4 |
|---|---|---|
| | skipped question | 19 |

**7. Do you currently have a method for charting your DISTANCE when being active?**

| | | Response Percent | Response Count |
|---|---|---|---|
| Yes | | 31.8% | 7 |
| No | | 68.2% | 15 |
| | | answered question | 22 |
| | | skipped question | 1 |

**8. If 'yes', please list the product or method...**

| | Response Count |
|---|---|
| Hide Responses | 6 |

Responses (6) | Text Analysis | My Categories (0)

**GOLD FEATURE:** Text Analysis allows you to view frequently used words and phrases, categorize responses and turn open-ended text into data you can really use. To use Text Analysis, upgrade to a GOLD or PLATINUM plan.

Learn More    Upgrade »

Showing 6 text responses                                              No responses selected

EA Active
6/20/11 11:09PM    View Responses

Time, do not chart
6/20/11 7:38PM    View Responses

Dailymile
6/20/11 10:30AM    View Responses

MapMyRun.com
6/20/11 10:24AM    View Responses

fitnessjournal.org
6/20/11 10:18AM    View Responses

number of laps

| | |
|---|---|
| answered question | 6 |
| skipped question | 17 |

**9. Do you currently have a method for charting your ROUTE when being active?**  🌐 Create Chart  ⬇ Download

|  | | Response Percent | Response Count |
|---|---|---|---|
| Yes | ▬ | 27.3% | 6 |
| No | ▬▬▬ | 72.7% | 16 |
|  | | answered question | 22 |
|  | | skipped question | 1 |

**10. If 'yes', please list the product or method...**  ⬇ Download

|  | Response Count |
|---|---|
| Hide Responses | 5 |

**Responses (5)** | Text Analysis | My Categories (0)

**GOLD FEATURE:** Text Analysis allows you to view frequently used words and phrases, categorize responses and turn open-ended text into data you can really use. To use Text Analysis, upgrade to a GOLD or PLATINUM plan.  [ Learn More ]  [ Upgrade » ]

Showing **5** text responses                                    No responses selected

Dailymile
6/20/11 10:30AM    View Responses

MapMyRun.com
6/20/11 10:24AM    View Responses

mapmyrun.com
6/20/11 10:18AM    View Responses

back and forth and back and forth in the pool.
6/20/11 10:15AM    View Responses

Google MyTracks
6/20/11 10:07AM    View Responses

|  | |
|---|---|
| answered question | 5 |
| skipped question | 18 |

# Appendix B — User Testing Notes

# MOBICOG USER TESTING #1

JULY 13 — USER CHOSE TO RUN
WHILE TESTING APPLICATION.
A BRIEF TUTORIAL WAS GIVEN
ON THE ANDROID OS BECAUSE
USER WAS UNFAMILIAR.

ONCE THE USER LAUNCHED THE
APP, THE FILLED OUT THEIR
PERSONAL INFORMATION
(AGE, HEIGHT, WEIGHT, EMAIL)
PRESSED THE "START" BUTTON
AND STARTED THEIR RUN.

USER WAS GONE FOR ABOUT
15 MINUTES. UPON RETURNING
THEY PULLED OUT THE PHONE,
TURNED IT ON AND HIT THE
"STOP" BUTTON. WHEN THE EMAIL

SCREEN CAME UP, THE USER
ACCIDENTALLY HIT THE BACK
BUTTON ON THE PHONE AND
BACKED INTO THE RESULTS —
THE EMAIL WAS NOT SENT,
SO I TOOK A PHOTO OF THE
RESULTS SCREEN.

THE USER REPORTED THAT THE
APP WAS EASY TO USE AND
"A VERY COOL CONCEPT", THEY
MENTIONED THAT THE APP
LOOKED "STRIPPED DOWN" AND
WAS INFORMED THAT THIS
WAS A PROTOTYPE TO TEST
WITH AND A FINAL DESIGN
WOULD LAUNCH WITH THE

FINAL APP PACKAGE.
THE USER DID NOT HAVE TIME
TO REVIEW THE DATA ON THEIR
RUN.

NOTE: USER 1 CONTACTED ME LATER AND
SAID THE LIKED THE APP, BUT WASN'T
SURE THEY WOULD USE IT REGULARLY

AFTER I REVIEWED THEIR DATA
IT SEEMS THAT EITHER THE
GPS ISN'T AS ACCURATE AS
NEEDED OR THE FREQUENCY
NEEDS TO BE TUNED TO BE
MORE FREQUENT.
THE USER TOLD ME THEY RAN
ABOUT A MILE — HEADING
STRAIGHT DOWN ONE STREET AND
STRAIGHT BACK THE SAME,
RESULTS DON'T CAPTURE THE DISTANCE
THUS NOT BEING ABLE TO FIND SPEED.
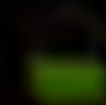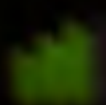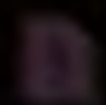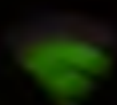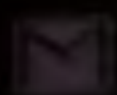
Start

Total time:  13 minutes 14 seconds
Total distance:  0.03285 miles
Calories burned:  3.96844 cal

Detailed results:
Time / Distance / Speed
Jul 13, 2011 2:03:08 PM / 0.0
 mi / 0.0 mph
Jul 13, 2011 2:07:09 PM / 0.03285
 mi / 0.00394 mph
Jul 13, 2011 2:12:09 PM / 0.0
 mi / 0.0 mph
Jul 13, 2011 2:16:19 PM / 0.0
 mi / 0.0 mph
Jul 13, 2011 2:16:22 PM / 0.0
 mi / 0.0 mph

# MOBICOG USER TEST #2

JULY 13 - USER TEST 2 - USER (30 FEMALE) CHOSE TO WALK FOR HER ACTIVITY. THE USER WAS NOT A SMARTPHONE USER AND REQUIRED A TUTORIAL ON HOW TO TURN ON AND UNLOCK THE PHONE. ONCE RUNNING SHE WAS ABLE TO START MOBICOG, ENTER HER INFORMATION AND START HER WALK.

AFTER HER WALK, SHE GOT OUT THE PHONE AND PRESSED "STOP", AND EMAILED HERSELF THE RESULTS. SHE SAID THAT SHE THOUGHT THE APP WAS EASY TO USE AND WOULD LIKE TO USE SOMETHING LIKE THIS TO TRACK HER DISTANCE BECAUSE SHE WALKS A LOT (2 DOGS).

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OBSERVER FEEDBACK - THE APP FUNCTIONED WELL FROM A USABILITY STANDPOINT, BUT SOMETHING IS WRONG WITH THE DATA COLLECTION. THE TEST PHONE IS A BORROWED DEVICE WITHOUT A SIM CARD, I'VE TESTED TO SEE IF THE GPS WORKS IN THE MAPS APPLICATION WITHOUT A SIM AND IT WORKS FINE. I'M WONDERING IF MOBICOG ISN'T GETTING GPS INFORMATION WITHOUT THE SIM THOUGH.

Total time:  24 minutes 13 seconds
Total distance:  0.0 miles
Calories burned:  0.0 cal
Detailed results:
Time / Distance / Speed
Jul 13, 2011 9:40:54 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:43:59 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:46:01 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:48:04 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:50:04 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:52:07 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:54:55 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:56:57 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:59:00 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 10:01:02 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 10:03:03 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 10:05:05 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 10:05:08 PM / 0.0
mi / 0.0 mph

# MOBICOG USER TESTING #3

GPS ISSUE IS STILL A PROBLEM.

USER #3 IS 32, FEMALE. SHE IS GOING TO TEST THE APP WHILE WALKING AROUND THE NEIGHBORHOOD.

SHE IS FAMILIAR WITH iPHONES, NOT ANDROID - I GAVE HER A BASIC TUTORIAL OF HOW TO TURN ON THE PHONE & UNLOCK IT. USER #3 STARTED THE APP, FILLED IN HER INFORMATION, HIT START AND LEFT TO RUN HER ERRANDS.

- - - - - - - - - -

WHEN USER RETURNED SHE HAD STOPPED MOBICOG MINUTES BEFORE WALKING IN. SHE SAID IT WAS EASY TO USE, BUT DIDN'T SEE HERSELF USING IT REGULARLY.

USER #3 CANCELED (BACKED OUT) OF THE EMAIL AND THE APP WAS RESTARTED BEFORE DATA COULD BE CAPTURED.

NOTE!

USER 3 CONTACTED ME LATER AND FORWARDED THE RESULTS OF HER WALK. APPARENTLY SHE DID SEND HERSELF THE EMAIL AFTER ALL.

Total time: 47 minutes 2 seconds
Total distance: 0.03159 miles
Calories burned: 3.87811 cal

Detailed results:
Time / Distance / Speed
Jul 13, 2011 8:50:05 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 8:54:11 PM / 0.01825
mi / 0.26778 mph
Jul 13, 2011 8:59:11 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:04:09 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:06:19 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:09:07 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:11:08 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:13:11 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:15:13 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:17:16 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:19:18 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:21:20 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:24:07 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:26:10 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:28:12 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:30:15 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:32:17 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:34:19 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:36:21 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 9:37:08 PM / 0.01334
mi / 1.03571 mph

# User Testing #4

July 13 - USING A NEWER ANDROID PHONE w/ SIM CARD to test

USER IS 35, MALE - FAMILIAR WITH THE ANDROID OS, USER WAS ASKED TO OPEN MOBICOG AND FILL IN THEIR INFORMATION. USER WAS BIKING - PRESSED "START" AND RODE AWAY. AFTER A SHORT RIDE (6 MINUTES) THE USER CAME BACK, HIT START AND EMAILED THEIR RESULTS.

USER THOUGHT THE APP WAS "COOL" BECAUSE THEY NEVER KNEW HOW FAST THEY RODE ON THEIR BICYCLE. SAID THAT, IF AVAILABLE WOULD BE SOMETHING THEY WOULD USE REGULARILY.

EASY TO USE

Total time: 5 minutes 7 seconds
Total distance: 0.96317 miles
Calories burned: 116.35575 cal

Detailed results:
Time / Distance / Speed
Jul 13, 2011 11:15:14 PM / 0.0
mi / 0.0 mph
Jul 13, 2011 11:17:30 PM / 0.40084
mi / 10.56944 mph
Jul 13, 2011 11:18:40 PM / 0.09116
mi / 4.65901 mph
Jul 13, 2011 11:20:16 PM / 0.32951
mi / 12.41001 mph
Jul 13, 2011 11:20:21 PM / 0.14166
mi / 97.45385 mph

# Appendix C – App Inventor Code Blocks

— This block brings up the mobiCog logo image (splash screen) for 5 seconds

— This block stores the user input variables (age, height, weight & email)

This block sets up global variable 'snapshotCnt' —

This block sets up global variable 'results' —

— This block sets up global variable 'totalTime'

— This block sets up global variable 'totalDistance'

— This block creates the user input fields (age, height, weight & email)

— This block creates 'takeSnapshot' call which stores time and location in the database, then stores the data as 'previousSnapshot'.

— This block represents the "Start" button. It resets the snapshot count to 0, enables GPS and starts the clock running. It also makes the "Start" button invisible, the "Stop" button visible and adds in the "Get active..." cue that something is happening.

— This block sets up the "Stop" button. When clicked, it turns off the GPS, Clock2 (the activity timer), and does math on the results of all the snapshots to display "Total Time", "Total Distance", "Speed", "Calories Burned", displays that information in the text area and composes an email to the user (using the email entered in the input field) with all of the formatted data.

— This block calculates the distance from the lat/lon readings and converts them to milage.

This block sets up global 'speed' —

— This block sets up global 'lastTime'

^ This block sets up global 'tab'

— This block sets up global variable 'elapsedTime'

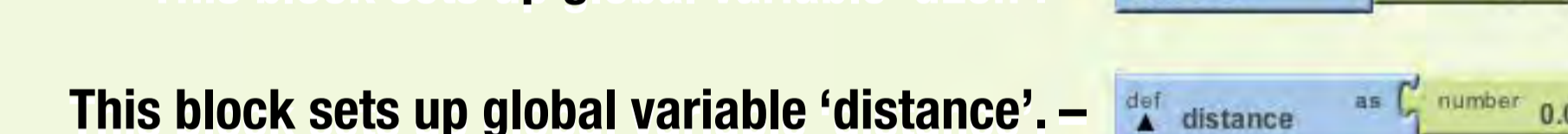This block sets up global variable 'lat1'. —

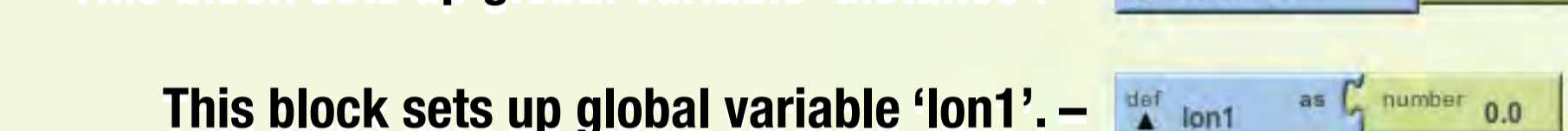This block sets up global variable 'dLat'. —
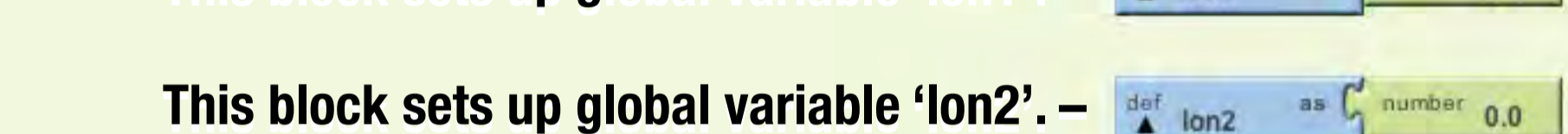
This block sets up global variable 'lat2'. —

This block sets up global variable 'dLon'. —

This block sets up global variable 'distance'. —

This block sets up global variable 'lon1'. —

This block sets up global variable 'lon2'. —

This block sets up global variable 'recordSep'. —

This block sets up global variable 'previosSnapshot'. —

This block sets up global variable 'currentSnapshot'. —

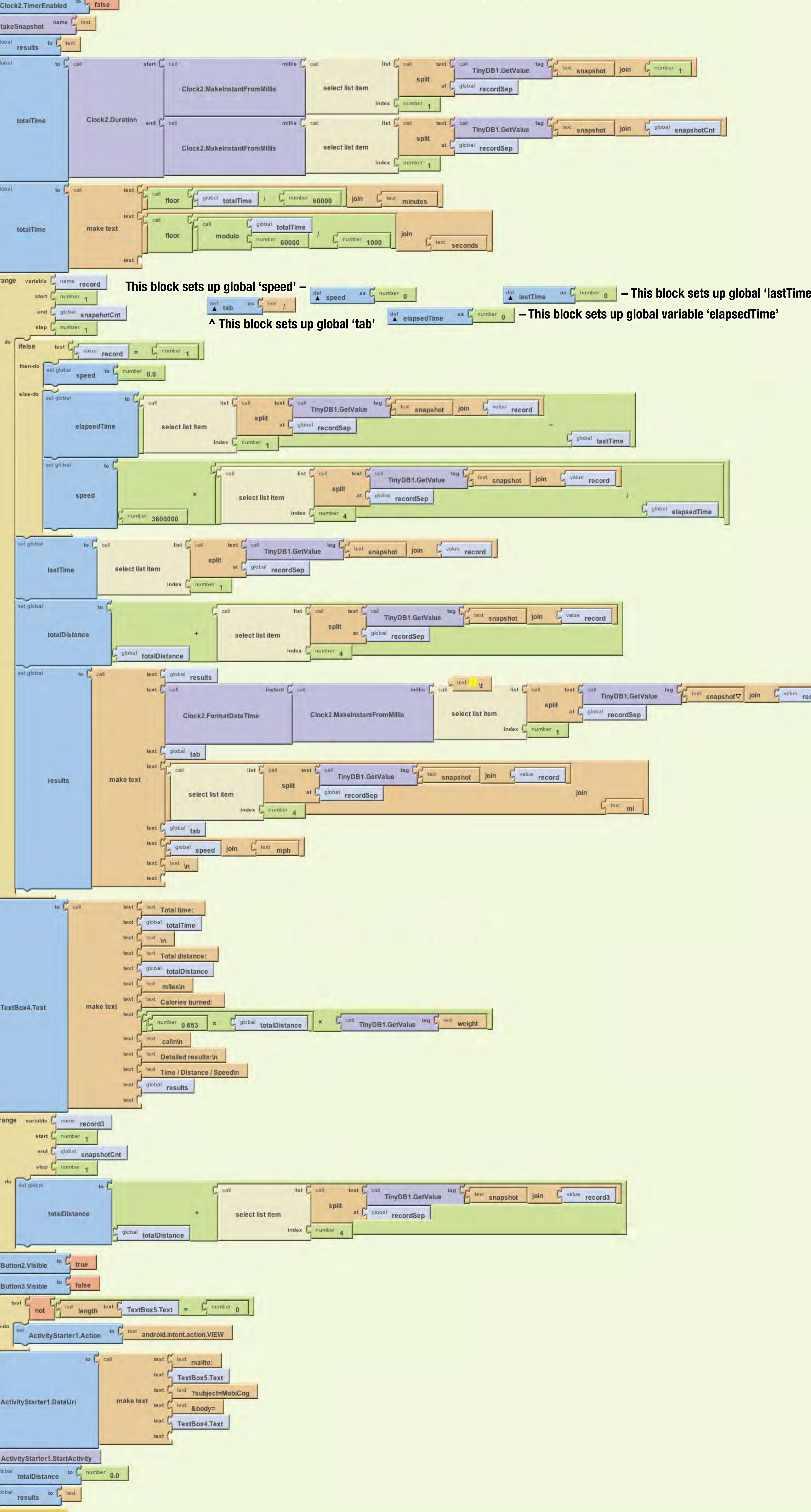This block sets up global variable 'readInterval' and sets it to 30 seconds. —

— This block turns the visibility off for Clock1 and Image1 (for the logo splash screen)

— This block saves the user input (age, height, weight & email) and makes the "Stop" button invisible

— This block is Clock2 - takes a snapshot everytime a clockTimer goes off.

# Appendix D – Sources

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