School of Engineering Science, Burnaby, BC V5A 1S6

April 10th, 2015

Dr. Andrew Rawicz
School of Engineering Science
Simon Fraser University
Burnaby, British Columbia
V5A 1S6

Re: ENSC 305W/440 Post Mortem Report for Health Reporter

Dear Dr. Rawicz

Attached below is the post mortem report for "Health Reporter", outlining the process of our project from designing to implementing and system integrating. The "Health Reporter" is a health condition monitoring device. It detects six sets of human body information which reflects to the health condition of patients. It also provides website and mobile application which will allow authorized people such as doctors and nurses to access the data associated to their patients.

This document demonstrates the current stage and future plan of the "Health Reporter". In addition, we outline some problems and challenges occurred during the whole project cycle.

D-Health Solution Inc. is aiming to provide simple and convenient medical solutions to patients by developing Health Reporter system. We are formed of five engineering students: Jue(Carter) Chen, Simone Liu, Janice Mardjuki, Kai Geng, and Xing Qiao. If you have any questions or concerns regarding to our project, please contact me at 604-728-7157 or by email at carterc@sfu.ca.

Yours Sincerely,

Jue Chen

Jue Chen
CEO
D-Health Solution Inc.

Post Mortem Report for Health Reporter

Project Team: Jue(Carter) Chen
Simone Liu
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Xing Qiao

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carterc@sfu.ca

Submitted to: Dr. Andrew Rawicz
Steve Whitmore

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D-Health Solution Inc.

Introduction

The Health Reporter is an integrated body monitoring system focusing on day-to-day health report and real time body condition analysis. The system has five sensors attaching to user's body to measure six sets of data which includes sweating, air flow, body temperature, body position, heart rate and rate of oxygen in blood. At the end of each measuring period, the Health Reporter will generate a report for the user illustrating on our mobile and web application. The motivation of this project to reduce the long waiting time for booking appointments with doctors or physicians in Canada. By utilizing our system in each family, doctors can read data from their offices in order to give general suggestions to patients immediately. Also, patients can also read those data and make some quick decisions based on common sense. After all, the ultimate task and motivation for engineer is to serve the public.

Current State of the Device

System Overview

"Health Reporter" collects six sets of data from five sensors which are attached to the user's body. Then Health Reporter transfers those data to web application and mobile application through Wi-Fi connection. Therefore, patients can read data from UI integrated in web and mobile application.

Figure 1 below illustrates the high level system design of the "Health Reporter".

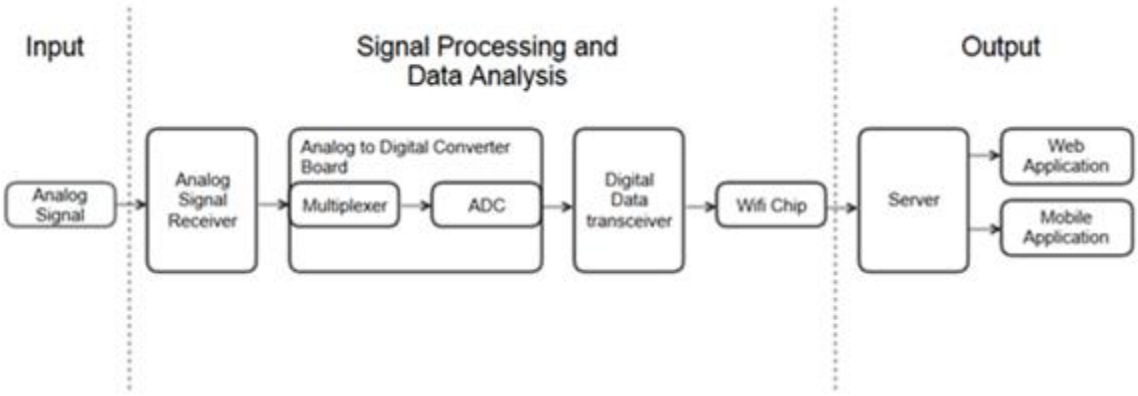

Figure 1: High Level System Overview

According to figure 1, the "Health Reporter" system includes one set of input and two output interfaces. The only input is analog signal which includes pulse signal, skin temperature, skin conductance which relates to the sweating condition, rate of oxygen in blood, air flow and body position. After we collect the analog signal, an Analog to Digital Converter is required in order

to transform analog data into digital data. In the Analog to Digital Converter Board, there are two major components which are Multiplexer and ADC.[1] Multiplexer is utilized for selecting the input signal into one data sequence. Therefore a single data sequence can be passed through Analog to Digital Converter. After the data has been converted to digital data, it can be transferred through Wi-Fi function and finally stored on the server.[2]

We use HTTP protocol to transfer digital data to the server and then the data will be picked up by Web application and Mobile application. In order to give feedback to patients, we created User Interface integrated with mobile and web application. Therefore, patients can easily access their real-time data and results from the web and mobile user interface.

Current State of the "Health Reporter"

According to the fact that this project is in proof-of-concept stage, we have already completed the initial stage of the "Health Reporter" which realizes the basic information collection, transformation and forwarding features. Details of those three features will be discussed below.

Information Collection: The "Health Reporter" collects analog data every five seconds. Now we have five sensors with six sets of data connected to the "Health Reporter". However, the current main platform can support up to ten sensors with eleven sets of data and read data from the sensors up to 120 times per minute.

Information Transformation: The "Health Reporter" is able to transform analog data into digital form without delay. "Health Reporter" can support transforming eleven sets of analog data to digital. However, the current stage of "Health Reporter" has been tested to transform six sets of analog data to digital format.

Information Forwarding: The "Health Reporter" is able to pass data from device to server which needed to be performed as a base station. After we pushed data to the server, the browser and mobile application can get data from server. We have already successfully completed the data traffic algorithm and tested on our device. The communication method between devices and server is HTTP protocol over TCP/IP.

Information Displaying: The "Health Reporter" has two main user interface, webpage and mobile application. After user login, the webpage will show real time data collected by the five sensors. At the end of collection period, the webpage will general a high level report with the analyzed statistics such as average and description of user's status. The mobile application is able to show the same analyzed results.

Project Challenges

As we went through the project cycle, we encountered some technical challenges.

1. Device Driver modification: After we get the A/D converter working, the problem we encountered is that we cannot read data from our raspberry pi which performs as digital signal receiver and analyzer.[3] Finally we figure out that the problem actually happens inside the GPIO driver in Linux. Because different versions of raspberry pi and the GPIO pins are numbered differently. We have to go inside the driver and modify the GPIO handler to enable and disable some pins in order to avoid racing situation and make sure all data can be received by raspberry pi.[4]

2. Server setup: We raised several approaches for setting up server and transfer data to the server. The first option is to use both ftp server and http server, where ftp server is used to transfer the files stored on Raspberry Pi and http server is used to transfer data to browser and mobile application.[5] There was a compatibility issue because the file stored on Raspberry Pi is not readable on the server. We decided not to use ftp server because of the issue. Our second approach is to use http protocol to transfer data from device to http server and from server to browser. We decided to setup server on a PC instead of directly use Raspberry Pi as a server because the current Raspberry Pi only have 4GB storage space and is not enough to store all the data.[6]

3. Mobile Application Development: Since none of our members has experience with android mobile application development, it has been very challenging to begin with. We consulted with someone who has experience on Android development and assigned one member in our team fully focus on mobile application. We built up our application from a very basic page to server connection and finally sending request and parsing data to or from server by pressing button on touch screen.

Design Deviations

Overall System

In terms of functionality, we achieved what we planned. Due to the time constraints, there are still a large amount of work regarding to data analysis, user interface and the packaging of our device.

Currently, our “Health Reporter” contains three sets of platform which are sensor platform, Firmware Platform, Server Platform. All platforms in terms of functionality have been finished

as the proof-of-concept stage. However, improvements are necessary if the product will be put on to the market.

Sensor Platform Design

The performance of the sensor platform has not deviated very much from our original plan. There are five sensors integrated in our sensor platform which are Body Temperature Sensor, Pulse and Oxygen in Blood Sensor, Galvanic Skin Sensor, Air-Flow Sensor and Patient Position Sensor. Because of the fact that all those sensors will be attached to human body, materials utilized by our sensors is not causing allergy to human body. The only concern of the sensors would be the accuracy and reliability of the data. There is a small chance that we can see unreasonable data read from the sensors on our current device.

Firmware Design

Currently we have finished all required development, which includes GPIO device driver development, data retrieving mechanism and data pushing mechanism, apart from the data analysis section because of two reasons. The first is time constraint, the second is we decided to leave the data analysis to patients. The reason for that is because our data is actually easy to read and to understand. All data can easily be seen during our daily lives.

Server Design

We implemented major functionalities proposed by our original plan. However, the security of our website need to be further improved. Figure 2 below shows the framework of our initial plan as well as the implemented server.

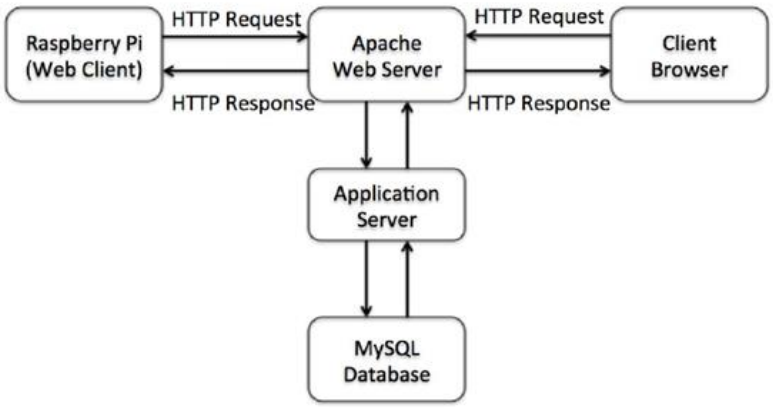

Figure 2. Client-server application framework

We achieved the data transfer from Raspberry Pi to server and from server to user. However, if the device is used in the real world, web security needs to be considered at user credential, data transfer and data storage level.

User Interface Design

The user interface design has some deviation as we described in functional specification because of time constraints. We spent large amount of time on server setup and mobile application environment setup as well as the functionality of our application. The user interface allows user to perform major actions such as login, collecting data and viewing data on webpage. However, a more user friendly graphic and workflow should be implemented if we have more time. In terms of Android APP, database is need to be implemented to archive data and allow user to view their data offline.

Schedule

Figure 3 shown below is the actual schedule of the project. We strictly followed this schedule during on documentations. We had an unexpected delay on receiving required component but we made up the time later on firmware implementation.

The major timeline shift is on software development. We spent more time on researching and development environment setup due to lack of experiences. Our initial plan is to finish the web development by March 15th and start working on Android application after. The web development took longer than we expected, so we decided to split our group to focusing on different parts.

We started our system integration at begin of April. We also performed our proposed test plan before presentation.

D-Health Solution Inc.

Task Name	Start Date	End Date
Research and Planning	**01/12/15**	**02/27/15**
Documentation	**01/30/15**	**04/10/15**
Function Specification	01/30/15	02/16/15
Design Specification	03/02/15	03/16/15
Written Progress Report	03/17/15	03/30/15
Presentation/Demo Preparation	03/31/15	04/10/15
Hardware Integration	**02/06/15**	**02/27/15**
Assembly of Modules	02/06/15	02/13/15
Platform Integration	02/13/15	02/27/15
Software Development	03/02/15	04/08/15
Web Development	03/02/15	03/30/15
Mobile Application Development	03/16/15	03/30/15
System Integration	04/01/15	04/08/15
Integration/Prototype Testing	04/01/15	04/10/15
Debugging and bug fixing	03/23/15	04/10/15

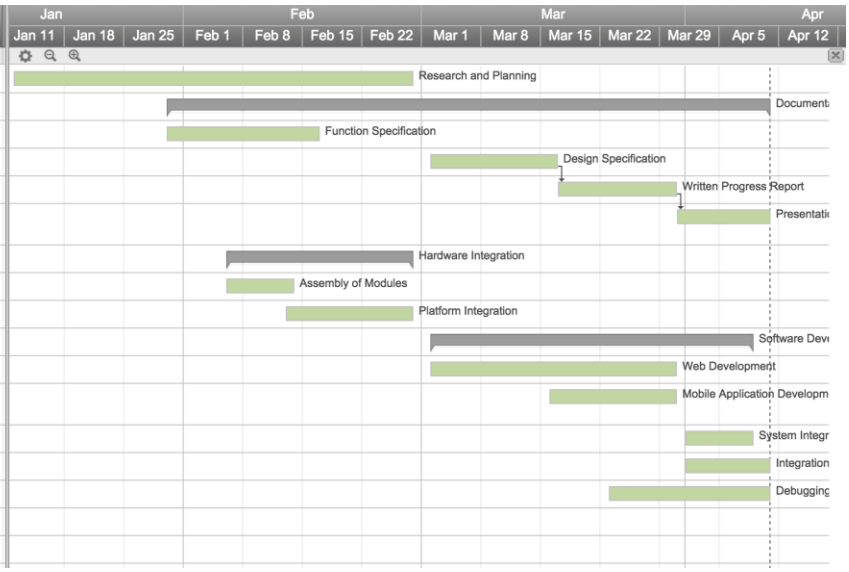

Figure 3. Gantt Chart outlining project timeline and major milestones

Budget

The table below outlines the estimated cost based on the information online. It shows our expected budget and the actual cost after the "Health Reporter" project has completed.

Required Materials	Estimated Cost	Actual Cost
raspberry pi starter kit with Wi-Fi dongle	$120	$100
Waterproof temperature sensor with digital output	$45	$35
Heart rate sensor with digital output	$120	$85
E-HEALTH SENSOR SHELD V2.0	$180	$120
RASPBERRY PI TO ARDUINO SHELDS CONNECTION BRIDGE	$105	$80
GALVANIC SKIN RESPONSE SENSOR	$85	$40
PATIENT POSITION SENSOR	$100	$75
AIRFLOW SENSOR	$75	$45
Raspberry Pi Camera Module	$55	$50
Unexpected Import Tax and Duty	$0	$70
Unexpected Monitor with HDMI port	$0	$120
Total Cost	$885	$820

Table-1: Tentative Budget

Our project is well organized in terms of budget. There are two major components in Table-1 which are unexpected during the development cycle of project. The first is the import tax and duty when our components finally reaches to Canada and the second is the monitor needed to set up the raspberry pi. Apart from those two factors, other parts are purchased within the estimated budget. Therefore the actual total cost is close to our estimated cost.

Our team got funding from the Engineering Science Student Endowment Fund of $700. Our team member contributed the additional $120. We will apply for the reimbursement from ESSEF later.

Group Dynamics and Workload Distributions

Our group is well organized and all group members have contributed to the project. This is the major factor that our main project development cycle can be finished on time and all parts are working without major failure.

The Table-2 indicates the work distribution.

Jue(Carter) Chen	Hardware integration, Firmware development and Document Writing
Shimeng(Simone) Liu	Apache Web Server, Web Application Development and Document Writing
Kai Geng	Android Mobile Application Development and Document Writing
Janice Mardjuki	Project Management, Document Writing, Research, General Testing and Development, and Document Compilation
Xing Qiao	Tester, Associating with Mobile Application Development, Document Writing

Table-2 Work Distribution

Individual Reflections

Jue(Carter) Chen

I personally learned a lot during this project. The first came to my mind is the hardware and firmware development, which are both low-level system development. These kind of development needs to deal with memory allocation and other memory related issues, which are challenging but also fun. Additionally, because of the fact that the output of sensors is actually voltage in mV scale. Therefore we need to perform analog signal amplification. Also BJTs which performs as switches need to be integrated into the analog signal receiver. Apart from firmware, I also participated into the mobile application development. I learned Java and helped with the algorithm for taking data from server. Not just the technical sections but also I learned how to work as a team. I believe the latter is more important for my future engineering career because currently, there is no such commercial-oriented project that can be finished by a single person. All group members need to stay as a tightened team in order to finish the project. How to engineer the chemistry between team members is also important for the future I want set up my own business.

Kai Geng

There are so many things I have learned from the project. First of all, my major study at SFU is Electronic Engineering and I have the work experience about software test. I don't have any experience about generating a whole new project by myself. When we started to brainstorm our project, honestly speaking I have no idea and I don't know where to start. When my team discuss and start to generate all kinds of different ideas, I was surprised. I think it is time to think and build my own product.

After we decided to build a health reporter which can detect people's body function. I found that there are so many things to do. It is not that easy to create something. Initially, we research the areas about our designing and then we think about the functions we should include. When we decided to build the product, we need to order the parts and sensor. Later, we start to build everything after we have all the parts. My main job is to develop an android phone application which can display the health condition data. The application functions includes login page and data receiving from server. I studied how to build the application through internet. Then, I need to think about the login page building and data receiving problem in the designing. After I did a lot research, i figured out the problem and successfully designed our own android application.

Finally, I have went through all the project and understood the whole process to develop our own product. This is the best chance to learn Android Studio. It gives me a great experience when looking for new jobs. Furthermore, our project involved the firmware construction and website designing. Although, I act as a software test associate when other team members working on those area.By the

way, this term we have a lot of paper work. As an international student, English is my second language. So many paperwork in the project definitely improved my writing and communication skills. I think this is the most useful course in my last graduating year.

Janice Mardjuki

This project was an amazing journey for me. For the past four months, I have learned a lot of skills that school never taught me before for the past four years studying at Simon Fraser University, ranging from technical skills to interpersonal skills. Made up of three Electronics Engineering students and two Computer Engineering students, we have divided the task according to our specialization, our experiences, and our capability.

Through this project I have gained the experience on the firmware, hardware and software, both website and the mobile app. I was helping each member with different aspect by proposing new ideas, developing, testing, integrating, and finalizing the project. I have the opportunity to work using Raspberry Pi, and gained the knowledge on how ADC works, which also can be integrated with BJTs to the receiver signal to perform an amplification of the signal. This experience also polishes my scripting ability on Linux. On the software side, I have exposed into the web and mobile application development and their life cycle. Using Jersey RESTful framework, we were able to build a website, while using MySQL, we were allowed to build a database. Combining these two, we were able to get the data from the firmware. For the mobile app, we used Eclipse, and Android Studio, and by programming using Java, we were able to fetch the data inside the database.

There are a lot obstacles while working on this project. Not knowing other members ability is one of the greatest obstacle while working in a project, and this team has successfully figuring out each of the member abilities and assign their job accordingly. Before the semester began, we formed a group without knowing each of the member. Although we have just met, as the semester begin, we have started to open up and talk casually. Getting to know them as the semester started, we have successfully encountered many problems occurred while working for this project. There are ups and downs between us but there we were able to work it out. There were a lot of conflict going on while working in this team, but whomever wins the argument we would accept and compromise with the final decision. Whenever we have a problem, everyone would be able to settle down by sitting down, and either talking with that particular person or set an emergency skype meeting.

In conclusion, I am really glad that I joined this group because of the group dynamics. I feel very honored that I was able to join this team since this team can balance each other's weaknesses, and we complete each other very well. Through this project, I was able to witness from the very beginning of the planning to the very end product. From proposing, conceptualizing, designing, building, and demonstrating an engineering project. By the end of this semester, I have been benefited by this project because I had an opportunity to integrate the technical, project management, communication, and people skills while working on this project. On the other hand, it was a very good experience on Biomedical product development, which is useful for my career.

Simone Liu

This is an awesome opportunity to work as a team, build product from sketch, learn technologies on the go as well as think about the business world. We have a very nice organization not only on meetings, work distributions but also on team bounding, knowledge transferring. I believe after this project, each of the team member will learn the technology, business components as well as soft skills from each other.

Throughout this project, there was a lot of decision makings. I try my best to make better decisions based on the knowledge I have and the information I collected. We formed our team and chose our topic based on the experiences and interests of each team member. We have people working on hardware part, people working on software part and also people focusing on documentation part. I personally think we successfully utilized our best resources.

We encountered a lot of problems. Once a problem comes, all of our team member did research on their own and explaining their ideas. We learn, we listen and we communicate. As professional engineers, we don't put our personal emotions on any of the conflicts we had. We did our best to accomplish our goad even if it might be somewhat different from each member's original thought.

There was a time period when process was going very slow on our project. We did not give up trying and testing. We kept our weekly meeting throughout the semester. We brought up every concerns and possible solutions we came across. I saw our team are making effort so that I kept myself motivated.

On the technical side, I learned setup web server from the very beginning. I learned firmware configurations and Android development from other team members. On the soft skill side, I learned to consider other people's personalities when communicate with others as well as when distributing the work.

At the end of this project, I learned business models and the considerations to put our product concept into market. I became more interested in entrepreneurship. I would like to thank to this course to give me the opportunity to experience the lifecycle of a project. I would like to thank to my team members for finishing our project.

Xing Qiao

I am glad to join the group for this project because all members in it are responsible, patient and competent. Personally, I was benefited a lot from this project. A four-month project let me experience the procedure of real-world commercially product. Many aspects such as standards, rules will limit the development of product so that we cannot only focus on the functionality of product. In terms of technical skills, I have learned hardware integration and firmware development for the Raspberry Pi, also gained great experience on the android application development such as basic java programming. In addition to the technical skills, I have improved my interpersonal and communication skills,

organization and prioritization skills, as well as efficient collaboration in a team. In order to keep the work of high quality, all members communicate and discuss frequently through chatting application besides three weekly meetings. In short, I really enjoy working on this project, and I believe this experience will benefit for my future career.

Conclusion and Future Work

Future Work

We have already finished the proof-of-concept level development of “Health Reporter”. We have discussed and proposed the following suggestions for future development.

1. Package the device

For a commercial product, we need to put the whole device into a pre-designed box in order to go into the market. Also, it will protect the device from being damaged by water or other hazards to electronics.

2. Development of wireless sensors

Since sensors need to be attached to human body, then it is important to make wireless sensors in order to make sure patients free from problematic wires. It gives the possibility for those patients who need to walk around while having sensors keep working for medical purposes.

3. Improvement of UI for both web and mobile application

As the proof-of-concept stage, we finished main functionalities of web and mobile application for “Health Reporter”. However, due to the time constraints, we have not put enough time on UI development. Therefore, UI need to be refined in order to push the “Health Reporter” into market.

4. Need to have our own server

Because of the fact that our device need to transfer data to server, we need actual server in order to store large amount of data for patients’ personal information and medical data. This is important if we want to push the “Health Reporter” into market.

Conclusion

In terms of a four-month project course, all our group members have contributed to the project without doubt. We have learned the procedure of starting a real commercial-oriented project. Additionally, we also learned how to work as a team in order to finish the project according to the schedule. All those aspects are really priceless treasure for the rest of our engineering career.

References

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[5]*Apache Software Foundation*, “Tomcat Architecture,” [Online]. Available: http://tomcat.apache.org/tomcat-5.5-doc/architecture/. [Accessed 11st Apr 2015].

[6]Jason Brittain, Ian F. Darwin, "*Tomcat The Definitive Guide*", 2nd eds, OReilly, 2007.

Appendix: Meeting Agenda

D-Health Solution Inc.
AGENDA
January 09, 2015
18:30-19:30
Library 2nd floor common study area

Purpose of Meeting: To greet team members, brainstorm, discuss the existing project ideas
Items for Discussion:

- Greeting team members
- Brainstorming for the project ideas
- Overview of the project

D-Health Solution Inc.
MINUTES
January 09, 2015
18:30-19:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Greetings, meet team members, and brainstorming
Minutes:

A. Brainstorming for the project ideas
Discussion: Carter: The automobile self-diagnose system. We connect the ODB2 port on automobile with cellphone. Then take several information like RPM of engine, speed, fuel amount, liquid temperature, fuel injection rate and so on. We analyze those data and give feedback on the real-time condition of automobile.
Janice: We can make a biomedical device. Janice just read an article about the problems arise on the regular health check ups in Canada, and she found out we might be able to do something about it. Since a check up only consists of the measurement of each important component in our body, such as temperature, blood pressure, and blood pulse. We could integrate a new system that measure these components using sensors.
Simone: Self-diagnose, remote access, biomedical combined.
Kai: 3D-scanner system, or health care detection system. Any of the system need to come with a web site or phone application.
Xing: Auto parking system. We can build a simple car with a camera, and deal with image processing from camera to find a parking space. Then let car move into space automatically.
Action: Carter: None. Janice: None. Kai : none.

D-Health Solution Inc.
AGENDA
January 11, 2015
13:00-15:00
Skype

Purpose of Meeting: Collect the ideas of product design. Hardwares we need for the product.
Items for Discussion:

- Generate the ideas for our design
- The hardwares we need to have for each ideas
- General technique we need for ideas

D-Health Solution Inc.
MINUTES
January 11, 2015
13:00-15:00
Skype

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Collect the best ideas from each teammate. Optimize the hardwares we need for each idea.
Minutes: 2 hours

A. Generating the ideas for our design
Discussion:
Carter: Because sensors only output analog signal. Therefore we need A/D converter plugged to raspberry pi.
Janice:Create a device that is portable and easy to use.
Simone: remote access. Access from browser and app.
Kai: design a box that contain all the elements
Action: Carter: None. Janice: None.Kai : None.
B. The hardwares we need to have for each ideas
Discussion:
Carter: A/D converter.
Janice: A small enough sized box to place all the sensors
Xing: wire extension if necessary
Simone: Wi-Fi
Kai: we need build a box

Action: Carter: None.Janice: None.Kai : None.

C. General technique we need for ideas

Discussion: Carter: Digital signal processing. Linux Driver implementation.
Janice: 3D printer?
Simone: web server.
Kai: embedded system.

Action: Carter: None. Janice: None.Kai : None.

D-Health Solution Inc.
AGENDA
January 14, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Finalizing parts, brainstorming the functions and divide our systems

Items for Discussion:

- Finalize parts we need to order
- Brainstorming the functions for "Health Reporter"
- Divide Our system to several sub-systems

D-Health Solution Inc.
MINUTES
January 14, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Finalizing parts, brainstorming the functions and divide our systems

Minutes:

A. Finalizing parts we need to order

Discussion: Carter: Sensors with proper output pins.
Janice: a microcontroller.
Kai: we may need some board.
Simone: host.

Action: Carter: None. Janice: None.Kai : None.

B. Brainstorming the functions

Discussion: Carter: Body temperature sensing.

Janice: Blood Glucose Level
Xing: patient position sensor
Simone: Notifications to doctors and relatives.
Action: Carter: None. Janice: None.Kai : None.

C. Dividing our systems
Discussion: Carter: We need Analog data receiver.
Janice: We need a server and the APIs.
Simone: implement server and app.
Action: Carter: None.Kai : None.

D-Health Solution Inc.
AGENDA
January 16, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Finalizing the parts associated with functions we discussed and discussing the preparation of the funding presentation.
Items for Discussion:

- Finalize the functions we need for "Health Reporter"
- Discussion on the functionalities of the parts we ordered
- How do we prepare the funding presentation

D-Health Solution Inc.
MINUTES
January 16, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Finalizing the parts associated with functions we discussed and discussing the preparation of the funding presentation.

Minutes:
A. Finalizing the functions we need for "Health Reporter"

Discussion:Carter: Body temperature sensing
Janice: Blood pulse.
Xing: patient position
Kai: oxygen in blood
Simone: wireless?
Action: Carter: None. Janice: None.Kai : None.

B. Discussion on the functionalities of the parts we ordered
Discussion:Carter: Body temperature sensor with output voltage in mV level.
Janice: Blood pulse sensor with rpm as an output unit.
Xing: patient position sensor
Action: Carter: None.Kai : None.

C. How do we prepare the funding presentation
Discussion:Carter: Introduction and conclusion sections are my responsibilities.
Janice: Research on the parts.
Simone: add shipping.
Action: Carter: None. Janice: None.Kai : None.

D-Health Solution Inc.
AGENDA
January 18, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Finalizing funding application and preparing the funding presentation
Items for Discussion:

- Finalizing funding application
- Preparing the funding presentation

D-Health Solution Inc.
MINUTES
January 18, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Finalizing funding application and preparing the funding presentation

Minutes:

A. Finalizing funding application

Discussion:Carter: Including shipping and import tax in the components cost table.
Janice: Finalize the objective and make enough argument why this product will be profitable.
Action: Carter: Calculating the tax and shipping fee. Janice: Do some research.

B. Preparing the funding presentation

Discussion:Carter: Prepare introduction and conclusion section of presentation PPT.
Janice: Research on the parts.
Kai: research the economy
Action: Carter: Wrote powerpoint file. Janice: Collect the pictures.Kai : provide reference.

D-Health Solution Inc.
AGENDA

January 20, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Practicing the funding presentation and distributing work for proposal
Items for Discussion:

- Practicing the funding presentation

D-Health Solution Inc.
MINUTES

January 20, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Practicing the funding presentation and distributing work for proposal

Minutes:
A. Practicing the funding presentation
Discussion: Carter: Check the grammar error.
Janice: Finalize the position of the pictures where appropriate.
Kai: Check missing infor.
Action: Carter: Practicing by standing in front of the mirror. Janice: Changing some position of the picture where needed.Kai: research more info we should add on.

D-Health Solution Inc.
AGENDA
January 23, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Discussing the progress of proposal
Items for Discussion:

- Discussing the progress of proposal

D-Health Solution Inc.
MINUTES
January 23, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Discussing the progress of proposal

Minutes:

A. Discussing the progress of proposal

Discussion: Carter: Just need to perform grammar and vocabulary check before delivering my sections.
Janice: Need to write the conclusion.
Xing: budget and market research
Simone: resources of knowledge
Action: Carter: Performed grammar and vocabulary check. Janice: Write the conclusion.

D-Health Solution Inc.
AGENDA

January 25, 2015
10:30-12:30
Skype and Google Doc.

Purpose of Meeting: Compiling and performing final check of proposal
Items for Discussion:

- Compiling and performing final check of proposal

D-Health Solution Inc.
MINUTES

January 25, 2015
10:30-12:30
Skype and Google Doc.

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Compiling and performing final check of proposal

Minutes:

A. Compiling and performing final check of proposal

Discussion: Carter: Proposing the possible format and deliver the final paper.
Janice: Need Proofreading the Proposal.
Action: Carter: Creating format and deliver the final paper.Janice: proofreading the proposal.

D-Health Solution Inc.
AGENDA
January 26, 2015
10:30-12:30
Skype

Purpose of Meeting: Check the proposal grammar mistakes, format, and missing information.

Items for Discussion:

- Review the whole proposal for each section
- Checking missing information, grammar, format, and small mistakes
- Edit on google doc at the same time

D-Health Solution Inc.
MINUTES
January 26, 2015
10:30-12:30
Skype

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Check the proposal grammar mistakes, format, and missing information.

Minutes:

A. Check the proposal grammar mistakes, format, and missing information.
Discussion: Carter: Proposed the proper format for the report. Kai : There is no "and" allowed at any beginning of the sentence. Janice: Numerical value in the middle of the sentence is not allowed..
Action: Carter: Checked format mistakes. Kai: Checked "and" through whole proposal.
Janice: change the numerical value to words where appropriate.

D-Health Solution Inc.
AGENDA
January 30, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Overview each teammates research. Discuss and combine all the results. Begin to order parts for our project.

Items for Discussion:
- Present the research from each teammates
- Discuss the questions for each parts
- Order the hardware of the product we will design

D-Health Solution Inc.
MINUTES
January 30, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Overview each teammates research. Discuss and combine all the results. Begin to order parts for our project.

Minutes:

A. Overview each teammates research. Discuss and combine all the results. Begin to order parts for our project.
Discussion: Carter: Finalized the parts we need to order. Kai: Responsible for all the parts receiving. Janice: Someone need to cover all the expenses before receive the funding instead of splitting the expenses and the funding after.
Action: Carter: Ordered all the parts we need. Janice: None. Kai: Received or picked up all the parks. Checked the absent parts situations.

D-Health Solution Inc.
AGENDA
February 03, 2015
18:30-20:30
Library 2nd floor common study area

Purpose of Meeting: Discuss the project standard and start to think about the overview of web page.

Items for Discussion:

- List all standard from all teammates' discussion
- Overview the web server
- Discuss the web page building work

D-Health Solution Inc.
MINUTES
February 03, 2015
18:30-20:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Discuss the project standard and start to think about the overview of web page.
Minutes:

A. Discuss the project standard and start to think about the overview of web page.
Discussion: Carter: Our product needs to conform with IEC 61010-1:2001-Ed.2.0.
Janice: The website has to be secure and easy to use. It should have a secure page for login and the data acquired from the sensor.
Simone: template for report for both on browser and app.
Action: Carter: Read through IEC standards. Janice: Read through about HTTP and FTP.

D-Health Solution Inc.
AGENDA
February 06, 2015
16:30-18:30
Library 2nd floor common study area

Purpose of Meeting: Received and show the ordered parts we got. Discuss the general overview of the functional specification.

Items for Discussion:
- Show what we received from ordering
- The absent parts we still need to get
- Overview the function specification

D-Health Solution Inc.
MINUTES
February 06, 2015
16:30-18:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Received and show the ordered parts we got. Discuss the general overview of the functional specification.

Minutes:

A. Received and show the ordered parts we got. Discuss the general overview of the functional specification.
Discussion: Carter: Discussed the hardware requirements of sensors.
Janice: Try them on our experimental "subject"
Kai: Discussed the software we need to prepare.
Simone: need to install software for server.
Action: Carter: Researched all sensors' hardware requirements. Janice: Place all of the sensors in our "subject" body.

AGENDA

February 10, 2015
18:30-20:30
Metrotown Starbucks

Purpose of Meeting: Discuss the detail of the functional specification and the process in the following days

Items for Discussion:

- Discuss what we have done on the function specification
- The questions we have discovered on the function
- Prepare for the next steps on the following days

D-Health Solution Inc.
MINUTES

February 10, 2015
18:30-20:30
Metrotown Starbucks

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Discuss the detail of the functional specification and the process in the following days

Minutes:

A. Discuss the detail of the functional specification and the process in the following days

Discussion: Carter: Discussed the format and labels we need to use in functional specification.
Janice: Discussed what will be in the user manual.
Xing: Discussed more functions want to add into user application
Kai: functions check and research
Simone: transferring data, data format issue

Action: Carter: Proposed the format and labels for functional specification**.** Proposed the user manual.

D-Health Solution Inc.
AGENDA
February 13, 2015
19:00-20:00
Skype

Purpose of Meeting: To discuss further work required for Functional Specification
Items for Discussion:

- Integrate Functional Specification
- Other work need to be done

D-Health Solution Inc.
MINUTES
February 13, 2015
19:00-20:00
Skype

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: To discuss further work needed for Functional Specification

Minutes:

A. The progress of Functional Specification
Discussion: Carter: Only format need to be done with assigned sections.
Janice: Need to write the parts assigned.
Action: Carter: Finalized the format. Janice: Wrote the part.

B. Further work needed
Discussion: Janice: Proofreading after everyone is done with their parts.
Action: Janice: Proofread.

D-Health Solution Inc.
AGENDA
February 16, 2015
19:00-21:00
Skype

Purpose of Meeting: To finalize Functional Specification
Items for Discussion:

- Grammar and spelling
- Other further editing required

D-Health Solution Inc.
MINUTES
February 16, 2015
19:00-21:00
Skype

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: To finalize Functional Specification

Minutes:
A. Problems with Functional Specification
Discussion: Carter: Performed final grammar check. Janice: examine the grammar further.
Action: Carter: Performed final grammar check. Janice: examine and correct the grammar.

D-Health Solution Inc.
AGENDA
February 20, 2015
16:30-20:30
Library 2nd floor common study area

Purpose of Meeting: To integrate the parts and discuss the next step
Items for Discussion:

- Parts Integration
- Further development ideas
- Next steps

D-Health Solution Inc.
MINUTES
February 20, 2015
16:30-20:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: To integrate the parts and discuss the next step

Minutes:
A. Parts Integrating
Discussion: Carter: Proposed the approach to integrate sensors with sensor platform. Janice: Research more on the development of the sensor with sensor platform.
Action: Carter: Integrated sensors with sensor platform. Janice: Read some articles and papers on web.
B. Further Development Ideas
Discussion: Carter: Proposed the wireless sensor concept. Janice: monitor and monitor is missing try to boot up the raspberry pi.
Simone: data transfer, ssh
Action: Carter: None
C. Next steps required
Discussion: Carter: start researching firmware staff. Janice: find an alternative instead of buying a new monitor.Kai: find a monitor.
Action: Carter: Start writing firmware. Janice: try to look for another alternative.

D-Health Solution Inc.
AGENDA
February 23, 2015
19:00-20:00
Skype

Purpose of Meeting: To make an agreement for the monitor problem and preparing for the presentation

Items for Discussion:

- Monitor problem
- Presentation preparation

D-Health Solution Inc.
MINUTES
February 23, 2015
19:00-20:00
Skype

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: To make an agreement for the monitor problem and preparing for the presentation

Minutes:

A. Monitor problem

Discussion: Carter: Raised up the monitor problem. Janice: Prof. Andrew Rawicz helped me to find a monitor with a DVI input,which we will need an HDMI converter.Kai: ask friend to check whether have it in office.
Action: Carter: None.

B. Jobs distribution for the presentation

Discussion: Carter: Be responsible for the introduction section of presentation. Janice: Responsible for the progress of the project. Xing: backup plan for the project
Action: Carter: None. Janice: None.

D-Health Solution Inc.
AGENDA
February 26, 2015
18:30-20:30
Library 2nd floor common study area

Purpose of Meeting: To integrate the parts
Items for Discussion:

- Integration
- Booting up raspberry pi
- Problem arise

D-Health Solution Inc.
MINUTES
February 26, 2015
18:30-20:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: To integrate the parts

Minutes:

A. Parts Integration
Discussion: Carter: Proposed the approach to integrate parts. Janice: decided to buy a new monitor instead of getting the monitor from Prof. Rawicz, because there might be a some defect while they are converting.
Action: Carter: None. Janice: each of us pay to Carter $25.

B. Raspberry Pi
Discussion: Carter: Proposed the approach to boot up raspberry pi. Janice: Raspberry pi booted up, and able to read data properly.
Action: Carter: None. Janice: None.

C. Problem arise
Discussion: Carter: Proposed the problem which is the possibility of memory shortage on raspberry pi. Janice: What is the output of raspberry pi and the integrated sensor?
Simone: set PC as server, send data from Raspberry Pi.
Action: Carter: None. Janice: do some research.

D-Health Solution Inc.
AGENDA
February 27, 2015
10:00-15:30
Library 2nd floor common study area

Purpose of Meeting: practice presentation, discuss system integration
Items for Discussion:

- Estimate the presentation time
- Discussion on Raspberry Pi system
- How to get data from Raspberry Pi

D-Health Solution Inc.
MINUTES
February 27, 2015
10:00-15:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: practice presentation, discussion system integration

Minutes:
A. Estimate the presentation time
Discussion: Carter: Proposed the time for introduction. Janice: give a rough estimation of the project progress part. Xing: practice my own part and time it
Action: Carter: Read my parts and measure the real time. Janice: read and measure the timing.

B. Discussion Raspberry Pi system
Discussion: Carter: Bring up the wifi function. Janice: Proposed the idea of the GUI.
Action: Carter: Set up the wifi feature of raspberry pi. Janice: None.

C. How to get data from Raspberry Pi
Discussion: Carter: Proposed the approach to get the data. Janice: proposed to send the data using protocol.
Action: Carter: None.

D-Health Solution Inc.
AGENDA
March 03, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: To integrate connection board, Raspberry Pi and E-health sensor platform, build the development environment for Health Reporter

Items for Discussion:

- Integrate three boards into a unit
- Discussion on how to build the development environment for Health Reporter

D-Health Solution Inc.
MINUTES
March 03, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: integrate connection board, Raspberry Pi and E-health sensor platform, build the development environment for Health Reporter

Minutes:

A. integrate Raspberry Pi with other two boards
Discussion: Carter: Proposed the approach for integrating two boards with raspberry pi. Janice: proposed the approach of A/D converter.
Action: Carter: None. Janice: research.

B. how to build to development environment
Discussion: Carter: Proposed the driver we need for the development. Janice: proposed of the idea of developing the mobile app. Kai : research the ways to build application.
Action: Carter: None. Janice: None.

D-Health Solution Inc.
AGENDA
March 06, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: To connect wifi dongle into Raspberry Pi, test wifi function
Items for Discussion:

- Connect wifi dongle to Raspberry Pi
- Set up wifi function
- Perform manual test for wifi function

D-Health Solution Inc.
MINUTES
March 06, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: connect wifi dongle into Raspberry Pi, test wifi function

Minutes:
A. Connect wifi dongle to Raspberry Pi
Discussion: Janice:None.

Action: Janice: attach the wifi dongle.

B. Set up wifi function
Discussion: Janice: enable the DHCP and reboot the raspberry pi.

Action: Janice:None.

C. Perform manual test for wifi function
Discussion: Janice: Proposed several test on the wifi function.

Action: Janice: Performed the most basic test.

D-Health Solution Inc.
AGENDA
March 10, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Read and display data from all sensors, distribute the work for design specification documentation

Items for Discussion:

- Check the output data from all sensors
- Separate work for design specification

D-Health Solution Inc.
MINUTES
March 10, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Read and display data from all sensors, distribute the work for design specification documentation

Minutes:

A. Check the output data from all sensors
Discussion: Carter: None. Janice: None.
Action: Carter: Checked all the data from sensors. Janice: investigate the output of the sensor.

B. Separate work for design specification documentation
Discussion: Carter: Proposed the proper format for design specification. Janice: offer to write the user interface verification. Xing: write the part for user application design
Simone: server integration design
Action: Carter: None. Janice:None.

D-Health Solution Inc.
AGENDA
March 13, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: combine works from each member, complete a initial version for design specification

Items for Discussion:

- Combine the works from all members for design specification
- Discussion on modification and improvement for design specification

D-Health Solution Inc.
MINUTES
March 13, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: combine works from each member, complete a initial version for design specification

Minutes:

A. combine works from each member, complete a initial version for design specification
Discussion: Carter: Proposed the way to compile all the parts. Janice: proposed view ideas.
Action: Carter: None. Janice: research.

D-Health Solution Inc.
AGENDA
March 16, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: final grammar check and correction for Design Specification
Items for Discussion:

- revise design specification documentation

D-Health Solution Inc.
MINUTES
March 16, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: final grammar check and correction for Design Specification

Minutes:
A. revise design specification documentation
Discussion: Carter: None. Janice: None.
Action: Carter: Checked the format of design specification. Janice: Proofread and correct the grammar.

D-Health Solution Inc.
AGENDA
March 18, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Web page database setup and Web page data collecting from server
Items for Discussion:

- The home page design for our product
- The right data collecting from server
- The problem of the feedback

D-Health Solution Inc.
MINUTES
March 18, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Web page database setup and Web page data collecting from server

Minutes:
A. what kind of information we need to add on the main page
Discussion: Kai: The main function is that there is a button to go to the data collection page. Furthermore, we can add our company info, team member, product overview and introduction on it.
Janice: add explanation on normal range for each category, give a warning if the result is not.
Carter: Database should use MySQL
Simone: login, check user credentials, real time data.

Action: Kai: Help with simone for testing the page function.Janice: None.

D-Health Solution Inc.
AGENDA
March 20, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Integrate with web page with the data collecting. Report generating
Items for Discussion:

- The regression checking combining the web page and data downloading from server

D-Health Solution Inc.
MINUTES
March 20, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Integrate with web page with the data collecting. Report generating

Minutes:
A. what's the problem when we integrating web page and data
Discussion: Kai: After collecting 24 data displaying on the the web page, checking the report generating. At the same time, we need to exam all the data is reasonable.
Carter: 5 sec data collection period
Simone: parse JSON or String
Janice: MySQL uses JDBC driver to establish connection to web server.
Action: Kai:None.Janice: None.

D-Health Solution Inc.
AGENDA
March 24, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Test the firmware and checking the data sending to the server

Items for Discussion:
- After the sensor collected the data, check the data is reasonable
- The errors generating during the collecting or after collecting

D-Health Solution Inc.
MINUTES
March 24, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Test the firmware and checking the data sending to the server

Minutes:
A. Is there any update we can do about the data collecting?
Discussion: Kai: we need to take multiple measurements and get the mean value
Carter: Only thing we can rely on is the analog signal input.
Janice: Generate more data per sec and get the mean value per sec and finally mean of a minute or hour.
Simone: refresh page to display the recent data.
Action: Kai:None.Janice: None.

B. What is the best way to take the accurate values?
Discussion: Kai: set up more if else condition. then, when we are collecting the data, we can filter the unreasonable data and take the right values.
Carter: Get the average
Janice: Average and take out the outliers.
Simone: to make sure the data is reliable.

Action: Kai: Help carter to examine the system.Janice: None.

D-Health Solution Inc.
AGENDA
March 27, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Phone application Designing

Items for Discussion:
- The issues when developing an android phone app
- The method that getting the data from server

D-Health Solution Inc.
MINUTES
March 27, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Phone application Designing

Minutes:
A. what is the way that get the data from web page?
Discussion: Carter: use the test server and try to download the data from that. Janice: automatically downloading

Action: Kai:None.Janice: None.

B. Is there any other ways that we can generate the report when the data is collected?
Discussion: Kai: we need to make a database for the phone application. Then, every time we can get the updated data directly from the database. Janice: fetch the data from the database using HTTP. Simone: SQLite is the database for Android app.

Action: Kai: working on building the database.Janice: None.

D-Health Solution Inc.
AGENDA
March 30, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Continue with phone application Designing

Items for Discussion:
- The optimizing of the android app
- The other functions we can add on the mobile phone app

D-Health Solution Inc.
MINUTES
March 30, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Continue with phone application Designing

Minutes:
A. How to optimize the android application?
Discussion: Kai: The best way to optimize is to make a comparison with the published phone application. Janice: same.
Carter: No comments. Need to study on what format of data we need to get from server.

Action: Kai: working on optimizing the phone application. Janice: start comparing.

B. What else functions we need to add on the phone application?
Discussion: Kai: we can add the feedback system and e-mail notification system to our android application. Janice: alert and sending the info to doctor.
Simone: possible push notifications.
Action: Kai: working with carter on the application designing.Janice: None.

AGENDA

April 2nd, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Postmortem Analysis for our project

Items for Discussion:

- The advantage and disadvantage for our current designing
- Summarize what we have done so far

D-Health Solution Inc.
MINUTES

April 2nd, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Postmortem Analysis for our project

Minutes:

A. After the project, what do you think of our design as a user?
Discussion: Kai: I think our product already have the basic function to display the expected results. However, we need to build it looks better, and make is more professional.
Carter: Same as Kai, basic functions have already finished.
Janice: need some improvement of UX.
Simone: front end design
Action: Kai: None.Janice: None. Simone: design web page.
B. What have we done during this term?
Discussion: Kai:we have build a hardware to detect the body condition to test temperature, pulse, oxygen in blood and so on. we successful get the data from raspberry. Then, we can upload the data to server and view the report by our own web site and android application.
Carter:The most important thing is to know how to work as a team.
Janice: Communication between members is very important, and we have successfully work as a team since we are able to communicate effectively.
Action: Kai: None.Janice: None.

D-Health Solution Inc.
AGENDA
April 6th, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Making a test plan and Demo presentation powerpoint

Items for Discussion:
- Test Plan content
- Demo presentation show on the ppt

D-Health Solution Inc.
MINUTES
April 6th, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Making a test plan and Demo presentation powerpoint

Minutes:

A. How to make a test plan for our design?

Discussion: Kai: safe test is the first important to do. Then check the functionality. lastly, check the core regression
Carter: We need to make tables for test plans.
Janice: need to consider restriction of medical devices.
Action: Kai: Working on test following the test plan.Janice: None.

B. How do we present in the demo?

Discussion: Kai: generally, we need to talk about what we did and show them the functions. Then, each team member should present what they did and explain to the people.
Carter: Based on PPT, we need to separate our work.
Janice: One topic each person.
Action: Kai: None.Janice: None.

D-Health Solution Inc.
AGENDA
April 8th, 2015
10:30-12:30
Library 2nd floor common study area

Purpose of Meeting: Retest all the phone apps, web page and hardware

Items for Discussion:

- Checking the final version of our design

D-Health Solution Inc.
MINUTES
April 8th, 2015
10:30-12:30
Library 2nd floor common study area

Present: Carter Chen, Kai Geng, Janice Mardjuki, Simone Liu, Xing Qiao
Absent: None

Purpose of Meeting: Retest all the phone apps, web page and hardware

Minutes:
A. Is there any big bugs we still missing to check?
Discussion: Kai: I think need to build everything together and test all of them in one time. Then, try to find some missing bugs which may cause our demo fail.
Carter: None.
Janice: Test each of them according to the test plan we have created, and none is detected.
Action: Kai: None.Janice: None.