Logbook

Weekly Report

1st Week Report

We did different team building exercises and had an introduction classes to Energy and Sustainability, Project Management, Marketing and Communication and we finished with inter-cultural communication. We had a team meeting where we discussed on the project topics and chose the UV meter.

2nd Week Report

This week we have started three new courses, one in Ethics & Deontology, one in Portuguese and one in Marketing. We got our project confirmed, and started brainstorming about it. On Thursday morning we had our first project based meeting with all the teachers. We have completed the tasks for the first deadline: the Gantt chart. In project management we learned and used a program called Microsoft Project.

3rd Week Report

During the 3rd week, we determined our target, did research on our competitors and wrote the marketing brief. We also developed a questionnaire that we shared in several countries in view to guide us in what people really need. We also thought about the shape of the wearable UV meter (clip-on, bracelet,…) and started designing structural drafts. Finally we had two lessons of Technological Crash Course from Paulo Ferreira.

4th Week Report

On Monday we had a deadline “black box”, we have uploaded our system diagram and our structural drafts to the wiki. For the communication class we also made a leaflet about our wearable UV meter. Further we thought more about our design and did more technical research (on UV sensors, Arduinos, etc.).

5th Week Report

This week we worked on our 3D model and the electrical schematics of our device. We also made a scale model out of fino with all the components. Furthermore, we had a meeting with Paulo Ferreira on Wednesday (22-03-2017) to talk about the electrical components, energy sufficient and the technical questions we had.

6th Week Report

On the sixth week did we upload the detailed System Schematics & Structural Drawings. We filled the wiki page with more text in every chapter. We started thinking about what should be on the material list. The power supply table was also calculated and uploaded on the wiki.

7th Week Report

Week 7, the last week before Easter holidays! The team have panicked and stressed to fill the wiki page so the interim report would be ready to be handed in before holidays. The list of materials were uploaded on the wiki page, and every chapter is now filled with the first outcast. Tables have been fixed to get the right units and layout, comments from teachers have been read and changed in the report.

8th Week Report

We had our Interim presentation on Thursday, afterwards we've got comments and feedback from all the supervisors and two external teachers.

9th Week Report

This week we worked through the comments and feedback of the supervisors and the teachers on our Interim Report. We also handed in the final material list and made a new and improved 3D model.

10th Week Report

We uploaded our refined Interim Report on Tuesday. We got a template of the paper that we need to hand in 17th of May, this paper will be submitted to the Interactive Conference on Computer Aided Learning conference in Budapest. The supervisors explained how the template worked during the meeting and we made a start on the paper afterwards.

11th Week Report

We enjoyed the week traveling around the country (and islands) and Queima das Fitas.

12th Week Report

We finished the first concept for the paper (the deadline was 17 May). During the meeting on Thursday we got already several components.

13th Week Report

We worked on the poster, webpage and started programming.

14th Week Report

We have programmed more and started testing. In the end of the week the programming and components worked properly, but still we have to program a button and use everything on the Bluno Beetle and on the PCB board. The webpage, poster and leaflet are under development. Some short films to the movie have been made.

15th Week Report

We finished the last things on our prototype and uploaded all the deliverables. On Thursday we had our final presentation and the individual assessments.

16th Week Report

We applied the suggestions of the teachers and supervisors and uploaded our refined deliverables, we also put all the deliverables on a CD and handed it in. The closing session was on Thursday, we got our certificate and had lunch with everybody!

Meetings

1st Meeting (2017-02-23)

Agenda:

1. Presentation
2. Modus operandi
3. Project proposals
4. Electronic Logbook

Minute:

Introduction to all the different project proposals.

2nd Meeting (2017-02-03)

Agenda:

1. Introduction.
2. Planning. (Define the tasks, Gantt chart)
3. Materials.(Arduino Uno single-board microcontroller, UV light sensor, display, breadboard, wires, case material)
4. Questions.
5. End meeting.

Minute:

On the 2nd meeting we went through the deadlines and got answers on our questions, mostly questions about the tasks and general information about the project. The teachers informed us about what to put where on the wikipage. Also they advised us to brainstorm further about the materials and look at all the different options we have.

3rd Meeting (2017-09-03)

Agenda:

1. Introduction & Activities
2. Market research:

- Questionnaire, https://docs.google.com/forms/d/e/1FAIpQLSdAbUzSI0KLWw1WYWMZO02DeVhYYorxcKnIpEaFWw88rPb0rw/viewform

1. Competitor analysis
2. Questions - wiki page: state of the art
3. End meeting

We want to connect our computer with the projector.

Minute:

In the 3rd meeting we have gone through the questionnaire and the answers that were given, the questionnaire gave us some general information about people's view. We also discussed the different competitors and about the important features they have/don't have.

4th Meeting (2017-16-03)

Agenda:

1. Target group issues (Wide or focused)

2. Designs:

- System diagrams
- Structural drafts
- Clip-on/bracelet
- Leaflet
- How to make a cardboard scale model of the structure

3. Technical issues:

- Solar panels/cells battery
- Which Arduino platform? (Arduino mini, nano or lilypad) Are there any available from previous projects?
- Bluetooth compatibility
- UV sensor measures UV light/wavelength (in nm) how do we get the UV index? Does the UV sensor measures it itself, and which UV sensor?

4. End meeting

We want to connect our computer with the projector.

Minute:

On the 4th meeting we discussed about our target group if it should be wide or focused, we came to the conclusion that it should be more focused for marketing purpose but that it shouldn't affect the design and the characteristics that we think it should need. We went through the diagrams and drafts we made (blackbox) and talked about the technical issues we had.

5th Meeting (2017-23-03)

Agenda:

1. Cardboard scale model
2. Requirements
3. Technical components

Minute:

On the fifth meeting, we showed both our 3D model, and our real life model made in fimo. We showed our system-, sensor-, controller- and case material requirements. And showed which technical components we need. The teachers told us to make a worst case scenario table with information about the components total power use, so we know how large batteries we need. We also got information about the difference between the prototype and the real model. The last thing we did on our meeting was looking at the report, and got feedback on how to write according to the international system of units, and how the reference system works.

6th Meeting (2017-30-03)

Agenda:

1. Power supply table
2. System schematics
3. 3D model
4. List of materials > Where to we get the materials of the case (cork/wood) ?

Minute:

On the 6th meeting we showed our power supply table, our system schematics, a quick view on the 3D model, on talked about the material list that is our next deadline. We got really useful tips and feedback from the supervisors according sensors, batteries and how to change the things we have calculated wrong in the table. We got green light on our system schematics, only a few small changes, e.g. change the resistors. We got tips about using a digital UV sensor instead of the one we had chosen.

We were thinking of having the prototype made of cork, and then we got to hear were we can buy cork and also one of the disadvantages with cork. We have to put everything in the material list, even screws and sandpaper. We also got clear what the interim presentation should include.

7th Meeting (2017-06-04)

Agenda:

1. List of materials
2. Interim layout:

- The wiki does not appear normal in Word file and PDF file
- Can we use print screens of tables?

Minute:

On the 7th meeting were there two agendas: to show the material list and ask some questions about how the interim report layout should look like. The materials were okay but we had to put transportation cost from the different companies there. The supervisors gave us a new idea that we should use a PCB instead of the breadboard after we have tested the components of the device with the breadboard.

On the interim report we are allowed to use print screens so the tables will be readable.

8th Meeting (2017-27-04)

Agenda:

1. Latest project changes: **1.** 3D model. **2.** Based on the report comments we changed the buzzer from https://www.ptrobotics.com/som/607-buzzer-5v.html?search_query=buzzer&results=35 into http://pt.mouser.com/ProductDetail/Kobitone/254-EMB73-RO/?qs=atoztE%2fFlD7acFkqsC39PQ%3d%3d, because it is smaller is this buzzer okay?
2. Further activities: webpage, are we aloud to use WIX? And are there any essentials that the webpage should have?
3. Questions: Should we already prepare planning where we are going to build the prototype and make some arrangements with the laboratories in ISEP?

Minute:

During this meeting we showed our latest changes in the project and the list of materials were approved. The question about the webpage got answered: we are allowed to use WIX and the supervisors gave inspiration from previous years webpages. The next activities for the Team were also presented during this meeting.

9th Meeting (2017-04-05)

Agenda:

1. Questions about the paper:
    1. What does it need to contain, just the project development part or also the different studies (marketing, ethics, ...)?
    2. What else needs to be in the paper and is there a specific order?
    3. The abstract, what is it about exactly? The Team? The EPS program? Only the UV meter?
    4. How do the references work in the template?
    5. We already tried editing it (the authors part), is this the right way?
2. First packaging model

Minute:

The agenda on the 9th meeting were mostly about the paper, for the competition, we have to hand in on the 17th of May. First we showed a first version of the packaging for our device, and talked quickly about what we have been working on this week. The questions for the paper got answered, and more information what it should include. The supervisors showed us how to us the template for the paper, so now we are ready to start. The meeting ended with a quick lesson about Jeroen Dijsselbloem from the Netherlands.

10th Meeting (2017-18-05)

Agenda:

1. Feedback on the Paper
2. When do we get the components?

Minute:

The 10th meeting had only two points on the agenda. The meeting started with the components, some of them arrived, and the rest will arrive in a couple of days. Now the Team can start to build, program and test the device. Regarding the paper, the supervisors had some comments about references, and that a couple of things are missing in the paper. More comments will we made today, and the next deadline for the paper is on Monday at 22.59.

11th Meeting (2017-24-05)

Agenda:

1. Case materials: cork etc - when arriving, where we can work with them.
2. Functional Tests'- what exactly has to be there?

Minute:

The cork will be given by Manuel, and a schedule for when we can work in the working room will be mailed, probably after the meeting. The tests should be the test we have listed on the report.

12th Meeting (2017-01-06)

Agenda:

1. Discussion about problem with the material for the device, what is the new solution?
2. Update on how the programming part is going

Minute:

We saw the piece of cork, but have to send the size we want before we recieve it. We showed the programming and got help with it after the meeting. We also got some information about what the final presentation should include.

13th Meeting (2017-01-07)

Agenda:

1. The sensor needs to be turned straight towards the Sun to get the right readings, if it lays horizontal, it shows a lower UV radiation. Is there here in school a correctly working UV intensity meter for testing so we can compare our result with that. Or do we have to compare our readings with the weather forecast?
2. Another thing is that it seems like ML8511 sensor is calibrated to give correct readings only with 3.3 V. Our 3.7 V battery output is right now 4.17 V and with that it gives false readings. Right now we take the power from arduino uno 3.3 V pin. But if we want to use our battery then we need voltage regulator. Is it possible to get that?
3. Do we have any money left of the budget? And are we allowed to buy with those money from a shop here in Porto?

Minute:

There were not a specific UV intensity meter, so a comparison with the weather forecast works best. We don't need a voltage regulator and some tips on how to change programming were given also. For example so the buzzer don't buzz constantly, and that measurements don't have to be taken every second. We can't buy anything more with the money from school.

14th Meeting (2017-14-06)

Agenda:

1. The deliverables need to be on a USB/CD, do we get the USB stick from school?
2. Flow chart/diagram explaining the code:

   Flow chart
3. Pin problem- We are in need of one extra pin for the button.
   - One option is to put two LEDS together into one pin. We tried this http://www.electroschematics.com/10875/arduino-charlieplexing/ and this https://forum.pjrc.com/threads/37070-Two-LEDs-from-a-Single-Pin?p=115578&viewfull=1#post115578 but could not get it to work.
   - Second option is just to reduce the quantity of LED lights to four on our prototype.
   - Cork piece.

Minute:

The supervisors will check if they have a DVD to put the deliverables on. The flowchart needs to be remade, because it was not a flowchart. The supervisors will come and help with the pin problem, after the meeting. We got information about next thursday when we have the presentation, examples on how to act and not act when presenting. Things that have to be printed out: report, flyer and the poster.

Activities

Start	End	Task	Description	Who
27.02.2017	28.02.2017	Project proposal	We have chosen 'Wearable UV meter' and our proposal got excepted	Elin, Marion, Simone, Mikk & Miguel
02.03.2017	03.03.2017	Gantt chart	What to do, who does it, and when?	Marion (Simone, Elin, Mikk & Miguel)
10.03.2017	13.03.2017	System diagram	The essential functions of the device	Simone (Marion, Elin, Mikk & Miguel)
10.03.2017	13.03.2017	Structural draft	The first drawings of our concept	Miguel (Simone, Marion, Elin & Mikk)
20.03.2017	27.03.2017	System Schematics & Structural Drawings	We made the 3D model, electrical schematics and fimo scale model of our device	Mikk, Miguel (Simone, Marion & Elin)
28.02.2017	03.04.2017	List of materials	We made the first list of materials and components we need	Mikk (Marion, Elin, Simone & Miguel)
28.02.2017	09.04.2017	Interim Report	Introduction	Simone (Marion, Elin, Mikk & Miguel)
28.02.2017	09.04.2017	Interim Report	State of the Art	Simone, Marion (Elin, Mikk & Miguel)
28.02.2017	09.04.2017	Interim Report	Project management	Marion (Simone, Elin, Mikk & Miguel)
28.02.2017	09.04.2017	Interim Report	Marketing Plan	Elin (Simone, Marion, Mikk & Migue)
28.02.2017	09.04.2017	Interim Report	Sustainability	Simone (Elin, Marion, Mikk & Miguel)
28.02.2017	09.04.2017	Interim Report	Ethics	Elin (Simone, Marion, Mikk & Miguel)
28.02.2017	09.04.2017	Interim Report	Project Development	Mikk, Miguel (Simone, Elin & Marion)
28.02.2017	09.04.2017	Interim Report	Packaging	Marion (Simone, Elin, Mikk & Miguel)
09.04.2017	16.04.2017	Upload deliverables	Uploaded the Interim Report and Presentation to the wiki	Elin, Simone, Marion, Mikk & Miguel
20.04.2017	20.04.2017	Interim Presentation	We presented our project to all the supervisors and two external teachers	Elin, Simone, Marion, Mikk & Miguel
03.04.2017	24.04.2017	Final list of materials	Completed the final list of the materials	Mikk, Elin, Simone, Marion & Miguel
20.04.2017	02.05.2017	Refined Interim Report	Uploaded our Interim Report with all the corrections and feedback	Elin, Simone, Marion, Mikk & Miguel
27.04.2017	17.05.2017	Upload deliverable	Paper	Simone, Marion (Elin, Mikk & Miguel)
18.05.2017	01.05.2017	Upload deliverable	Poster	Miguel (Elin, Mikk, Marion & Simone)
18.05.2017	01.06.2017	Upload deliverable	Website	Miguel, Marion (Elin, Mikk & Simone)

Start	End	Task	Description	Who
22.05.2017	01.06.2017	Upload deliverable	Arduino code	Elin, Mikk
18.05.2017	20.05.2017	Upload deliverable	Leaflet	Marion (Elin, Simone, Miguel & Mikk