

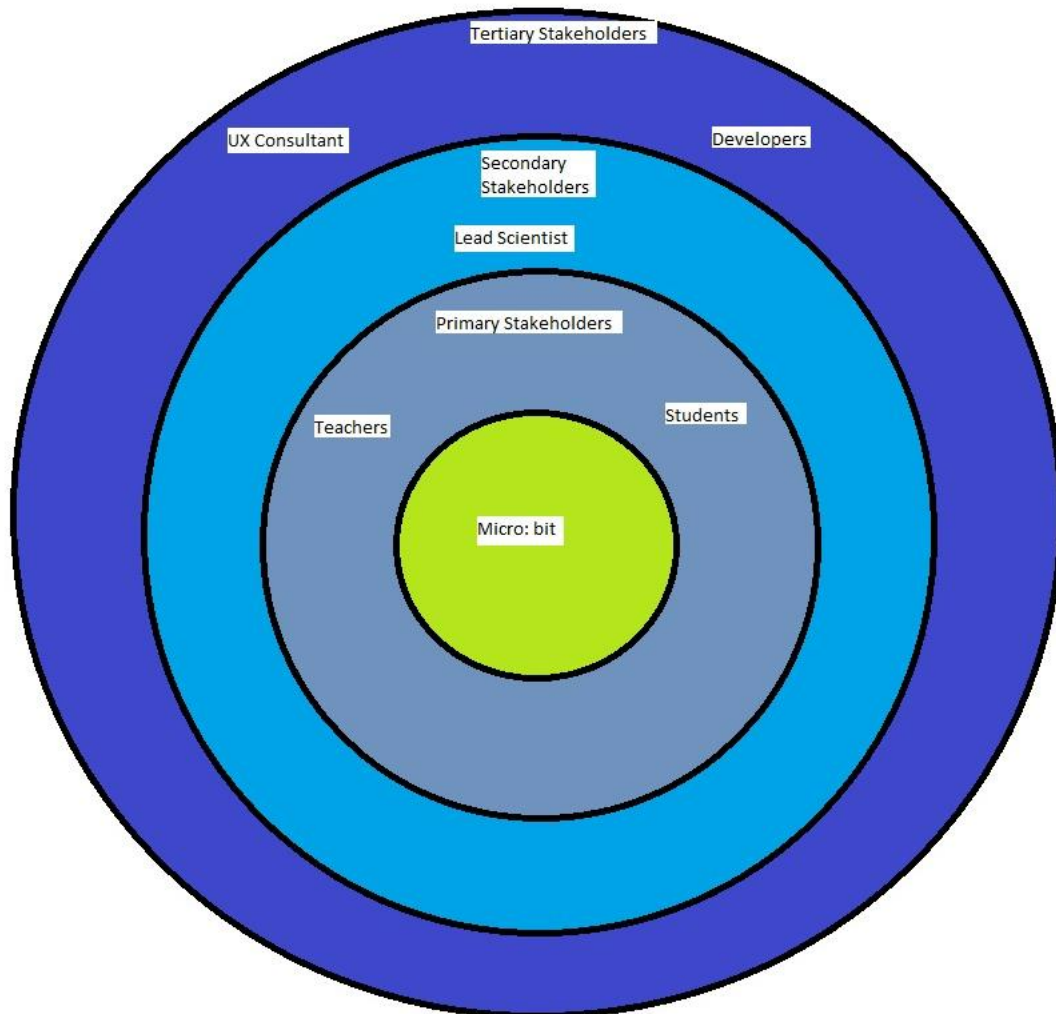
Evaluation Assignment 4
Design Support Documentation

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Team 6: Micro: bit
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System:

Team 6 is responsible for developing an application of micro: bit. e Micro: bit Bluetooth app is to take a Micro: bit and have it stream data from an attached sensor to a desktop web application. Once the data reaches the web app a dynamic graph will display the live data to the user. When looking at the graph a user will be able to zoom in, or out, to closely inspect data points.

Stakeholder Analysis:



Students:

Regarding the people that will be using this application, physically using this application are mainly Middle and High School students. The students collect the data in the micro: bit and stores in the bit.

Teachers:

Teachers use the web application to display the results using micro: bit Bluetooth connectivity that displays values in graph format.

Lead Scientist:

Scientists Bill Siever is the lead scientists on this project. He is the ones giving the developers all the specifications for the application being made.

Developers:

This is the group of CS4760 Team-6 students who are responsible for the development of the application. Their goal is to provide a functional app that meets all the specifications given by the lead scientists.

UX Consultant:

Usability Advisor that will be responsible for testing and ensuring the usability of the application throughout the development life cycle. Will also serve as an advisor to the team members if problems arise.

Stakeholder Goal Influence Table:

| Stakeholder | Goal | Contribution influence |
|-------------|--|--------------------------------------|
| Student | Collects data using Micro: bit | Suppling experimented data |
| Teacher | Displays the results of collected data | Using experimented data |
| Scientist | Give developers specification for the development of the application | Supplying application specifications |
| Developers | Develops the application based on the scientist's requirements. | Writing and testing the code. |

| | | |
|---------------|--|-------------------|
| UX Consultant | Advice the development team, mainly when it comes to the usability testing of the application. | Usability testing |
|---------------|--|-------------------|

Personas

Persona 1: Student

Edward, 17 years old from Texas.

Edward is from Texas a High School student. He enjoys everything to do with science and chemistry experiment. His personality is he is always eager to learn new things and likes using devices to collect, get and store data easily. As one of his professors told him about this project, so he signed up to be a student data collector for this project because he figured it would give him an extra knowledge on the new things.

Persona 2: Student

Emley, 11 years old from Milwaukee, Wisconsin

Emley is a middle school student. She is very introvert person. Some of her strengths are problem solving, reading books while some of her weaknesses are impatience and being overcritical of others. One of her friends asked her to come help with this project with her and she agreed to do it. She knows a few of the people working on the project but does not know any of the professors/scientists in charge.

Persona 3: Teacher

David, 36 years old from Ohio.

David is teacher in a high school who teaches science. He is very smart and has good people skills but is quite resistant to change and obstinate. He is very good at physics and mathematics. He always like teach his students by doing the experiment practically. He believes by learning though practically helps students to remember the concept.

Persona 4: Teacher

Andrea, 26 years old from Florida.

Andrea is a professional teacher who teaches middle school students. After completing her classes, she likes to spend time in lab to do work. She is very confident in her work and

strong willed. One of her biggest weaknesses is overlooking the smaller details in the projects. She knows everyone in the lab as well as some of the data collectors.

Hierarchical Task Analysis:

- 1 General view
 - a. List of experiments.
- 2 Connect to Bluetooth
 - a. Select to connect
 - b. Connect to Micro: bit
3. Open experiments
 - a. Select one experiment
 - b. View data
4. Display values in a graph
 - a. Displays
5. Download
 - a. Download CSV files