Coding Microbits using Python — Reflections

Module 7: Innovation & Mini-Project

The mini-project will give you an opportunity to plan, design, and create a microbit program that serves a purpose by solving a problem or filling a need. It is an opportunity to show what you have learned and to learn something new. It should also use maker elements as part of the design and construction.

Brainstorm Ideas _____

_____

_____

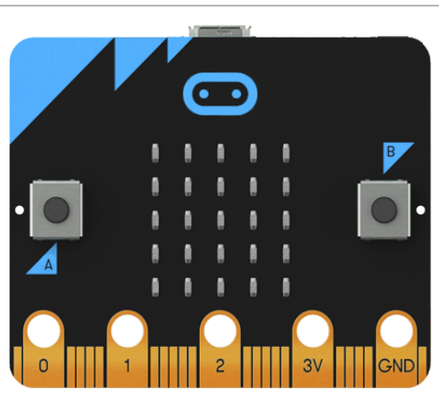
_____

Project: _____

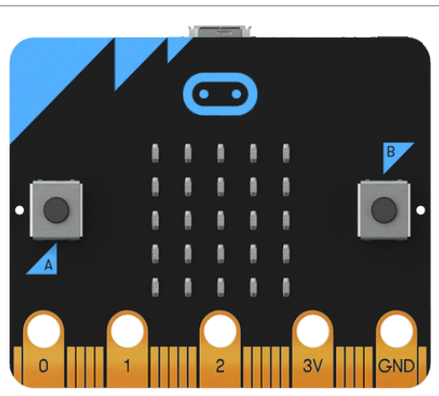
Description: _____

_____

Microbit Project Sketch 1:



Microbit Project Sketch 2:



Mini-project Sketches

Mini-project Algorithm & Pseudocode:

Materials Needed:

Coding Plan:

Mini-Project Daily Work Log:

Date: _____ Project Goal: _____

Date: _____ Project Goal: _____

Date: _____ Project Goal: _____

Date: _____ Project Goal: _____

Date: _____ Project Goal: _____

Date: _____ Project Goal: _____

Photos:

Notes & Reflections

Talk about one challenge you faced in creating this project? How did you overcome it?

How did you demonstrate what you already knew?

What was a new thing you learned? How did you learn it?

Who in the class provided help for you along the way? How?

Describe one specific thing you are proud of in this project.

If you had more days, what would you do to improve your project?

What did you do to publicly show the project?

Assessment Rubric

Competency scores

Competency	4	3	2	1
Code - Show what you know	Code very effectively demonstrates the use of previous concept(s). Variable names are unique and clearly describe what information values the variables hold. Code is highly efficient. Code is commented.	Code only partially demonstrates previous concepts, and/or is not efficient.	Code only partially demonstrates previous concepts, and/or is not efficient, variable names not clear.	Code does not demonstrate previous concepts, is not efficient, variable names not clear.
Code - Show something new	Code very effectively demonstrates the use of new concept(s). Variable names are unique and clearly describe what information values the variables hold. Code is highly efficient. Code is commented.	Code only minimally demonstrates new concepts, and/or is not efficient.	Code only minimally demonstrates new concepts, and/or is not efficient, variable names not clear.	Code does not demonstrate new concepts, is not efficient, variable names not clear.
Maker Component	Tangible component is tightly integrated with the micro:bit and each relies heavily on the other to make the project complete.	Tangible component is somewhat integrated with the micro:bit but is not essential.	Tangible component does not add to the functionality of the program.	No tangible component.
Work Logs	All work logs submitted on time, and accurate.	One late or missing work log and/or work logs not accurate nor sufficiently detailed.	Two late or missing work logs and/or work logs not accurate nor sufficiently detailed.	More than two late or missing work logs and/or not accurate nor sufficiently detailed.
Reflection	Reflection piece describes: 1) Development Process 2) Something new 3) Something proud of 4) Future modifications	Reflection piece lacks 1 of the required elements.	Reflection piece lacks 2 of the required elements.	Reflection piece lacks 3 of the required elements.

Notes & Sketches

Notes