Problem Solving with the Internet of Things and Python

Unit 3 - CircuitPython

CASE WESTERN RESERVE UNIVERSITY | INSTITUTE FOR SMART, SECURE CONNECTED

Lab 4

Introduction to CircuitPython

What is CircuitPython?

Python 3 →→→→→→ MicroPython →→→→→→ CircuitPython
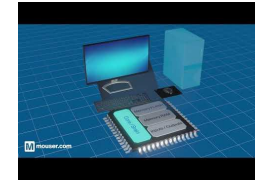

We know Python, so what is MicroPython?

Python 3 →→→→→→ MicroPython →→→→→→ CircuitPython

MicroPython

Kickstarter

MicroPython.org

What is a microcontroller?

What is a microcontroller?

- **A microcontroller is small computer**
- **A microcontroller is the brains of our IoT device**
- **Sometimes called an embedded system**
- **A microcontroller is programmed to perform a specific task**

Common microcontrollers

- **Intel MCS51 (8051) - 8051 Photo**
- **Microchip PIC - PIC Photo**
- **Arduino - Arduino Photo**
- **Adafruit Feather - Feather Photo**

MicroPython

MicroPython was developed to program microcontrollers with a version of Python.

Developers wanted to harness the many benefits of the Python programming language.

What about CircuitPython?

Python 3 →→→→→ **MicroPython** →→→→→ **CircuitPython**

What about CircuitPython?

CircuitPython

Which microcontroller are we using?

Adafruit Feather Bluefruit Sense

More resources

https://www.theengineeringprojects.com/2018/03/introduction-to-microcontrollers.html

https://www.youtube.com/watch?v=W9jigKaE1_k (about the Adafruit Feather family)

https://learn.adafruit.com/adafruit-feather-sense

https://learn.adafruit.com/todbot-circuitpython-tricks/overview