piRover Builds with K2

piRover – User Blink Rev 1.0

Overview:

In this activity you learn to use a variable to hold a value. You will set a value for the variable using the Python input function. You'll then use an IF statement to test the value of the variable. Based on the state of the variable you will change the state of the piRover's LEDs.

The requirements for the solution are listed below.

- The user will see a welcome message indicating that this is the User Inputs and Decision activity.
- The user will be prompted for which LED to blink. Valid values will be red, green, and blue. The user will be notified if an invalid value is entered.
- The user will be prompted for the blink speed, entering either fast or slow. The user will be notified if an invalid value is entered.
- The solution will blink the LEDs using the color and relative speed specified.

Prerequisites:

Prior to beginning the instruction provided in this lesson you must have completed the following:

1. piRover Blink

Performance Outcomes:

1. Use the print() function to inform the user
2. Use the input() function to prompt the user for a value
3. Create a variable and set the value using the input() function.
4. Test the value of a variable using the IF/ELIF/ELSE structure and control which segment of code is executed.
5. Use variables as arguments in functions such as sleep()
6. Review GPIO code from Blink activity

Resources:

1. Variables in Python
2. If statements in Python
3. Input function in Python

Materials:

1. piRover

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Part 1 – Introducing Variables, input(), and decisions

1. Preview the overview of variables on Variables in Python resource.
2. Preview the concepts of decisions using if statement using this If statements in Python resource.
3. Preview the input() function using the Input function in Python resource.
4. Prepare your workspace for this activity.
    a. Connect to your piRover using VNC.
    b. Access your piRover folder
    c. Create a 02.UserBlink directory
    d.

Assessment:

Submit your final **Blink.py** file to Moodle along with other files in this week's zip file.