CS 350 Emerging Sys Arch & Tech

Milestone 2

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1. Why do both the SerialTest-Write.py and SerialLightControl-Client.py scripts use the encode() method of the string datatype when writing data to the serial port?

Both the writing codes for the serial connection use encode() method to turn the string literals into byte arrays that the system can understand and work with.

1. Why does the SerialTest-Read.py script use the decode() method of the string datatype when reading the data from the serial port?

The SerialTest-Read.py script uses the decode() method because the system is sending byte arrays along the serial connection, and the raspberry pi needs to decode them back into string literals to be able to print them and allow the user to read the output.

1. What is the purpose of the try/except block in both the SerialLightControl-Client.py script and the SerialLightControl-Server.py script?

The purpose of the try/except block is to allow user interrupt. Without the option to interrupt, a user may be at the mercy of the timer, which may or may not work with the user’s needs.

1. Why is it necessary to make sure that the GPIO pins are always returned to their original state at the end of program run?

It is necessary to make sure that the GPIO pins are reset at the end of a program run because leaving them active could damage the hardware or cause other, unexpected behavior in the system.