Open-Source Library Justification

Alexander Neidert, Hunter VanDyke, Aniyah Harber, and Cole Cagle

The Python module "os" was chosen because it will allow for functionality with directories and their contents. Directories will be made to house various file types throughout the process of creating this project and will need to be interacted with so that the Raspberry Pi can operate with the database and program.

The Python module "picamera" was chosen because it will allow for the camera on the Raspberry Pi to take images that are captured for biometric fingerprint templates. The camera will obtain this data from the prism and will need to be accessed within the program.

The Python module "subprocess" was chosen because it will allow for multiple processes to take place at a time. It will also allow for information or errors to be returned from execution of code.

The Python module "mariadb" was chosen because a database is needed to house the biometrics and other data. MariaDB is a fork from MySQL and the functionality is quicker and able to handle larger data types.

The Python module "time" was chosen because it will allow for time functionality within the program. It allows for the program to execute in an efficient and timely-manner or time-out when threads continue to run for long periods of time.

The Python module "fernet" was chosen because it will allow for the data in the database to be encrypted with the AES encryption algorithm. This is needed to secure the data that is housed in the database, since it is sensitive data that could be misused.