Palm Beach State College

Coding with the Doctors

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**Homeless Registration project**

The goal of this project is to register homeless people using their names and some physical features, like fingerprinting, face recognition, etc. The project will also keep information about homeless’ relatives (for eventual contact), and verify relationships between homeless individuals.

* Skills to be developed:
  + Top-down approach to development.
  + Data structures in C (struct, union, typedef).
  + Interface with devices (scan).
  + Use of files/databases.
* Step I:
  + Define the data structure of the information needed.
    - Using data structures in C (goal: introduce concepts that will lead to OO).
      * What is the best structure to use: struct, union, or typedef? Why?
  + Check/Study how to read non-standard data.
    - <https://www.dynamsoft.com/blog/imaging/fingerprint-scanner-csharp/>
    - <https://docs.scandit.com/5.0/c_api/_scandit_native_barcode_scanner_demo_8c-example.html>
    - <http://www.codeforge.com/s/0/fingerprint-matching-c>
    - <https://www.edgefx.in/fingerprint-authentication-and-controlling-system-using-microcontroller/>
    - <https://icecube.wisc.edu/~dglo/c_class/stdio.html>
    - <https://sod.pixlab.io/>
    - <https://github.com/nothings/stb>
    - Libjpeg: <https://sourceforge.net/projects/libjpeg/>
  + Define the format of storage.