# Assignment 1 DCM Implementation Ideas

**NOTE**: For this assignment, you are not required to implement the communications between the DCM and Pacemaker (see Information regarding future assignments below). The scope of the DCM portion of this assignment is to implement the presentation layer (the “front-end”) of the DCM user application.

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| **Requirement** | **Sub-Sections** | **Implementation** |
| Develop an interface that includes a welcome screen, including the ability to register a new user (name and password), and to login as an existing user. A maximum of 10 users should be allowed to be stored locally. | 1. Welcome Screen  2. Register / Login users  3. Store 10 users locally | 1. Design welcome screen with pyqt5  2. Create a user class to create instances of  3. Store registrations locally somehow (database ?), and check logins through this |
| Develop essential aspects of the user interface –  With respect to 3.2.2 in PACEMAKER; The user interface shall be capable of:  1. Utilizing and managing windows for display of text and graphics.  2. Processing user positioning and input buttons.  3. Displaying all programmable parameters for review and modification.  4. Visually indicating when the DCM and the device are communicating.  7. visually indicating when a different PACEMAKER device is approached than was previously interrogated. | Sub-sections are same as 1. 2. 3. 4. 7. | 1 & 2. This is just a GUI, use pyqt5.  3. Show all programmable parameters on the screen and allow modification of them  4. Do something to check if they are communicating (They won’t be right now). Return Boolean, display this somewhere.  7. Have someway to check if the Pacemaker is the same one as normal, if not make the user aware of this |
| Develop interfaces to present all of the pacing modes mentioned in Part 1 to the user:  AOO, VOO, AAI, and VVI | 1. |  |
| Make provision for storing programmable parameter data for checking inputs – for the purposes of this assignment the parameters we want to see specifically on the DCM are: Lower Rate Limit, Upper Rate Limit, Atrial Ampli- tude, Atrial Pules Width, Ventricular Amplitude, and Ventricular Pulse Width, VRP, ARP. The complete set is in PACEMAKER document on page 28. | 1. The complete set is in PACEMAKER document on page 28. |  |
| Develop and document appropriate date structures for egram data required in future assignments. | 1. Make a data structure to receive egram data | 1. Figure out the best way to store / represent the egram data that we will be receiving from the pacemaker and use to make decisions |
| Implement any other requirements you elicit from the documentation that is not explicitly stated in this assignment document. | 1. Nothing as of now |  |