1. Backend
   1. Dataset is saved under Cytometers folder in FCMPASS directory
   2. ‘Database’ variable is a struct containing all saved info under it’s fields
   3. Dataset is saved by FCMPASS\_SaveDataset
      1. Fields are group in the script according to the tab they correspond to
      2. Empty table templates are generated and saved, so all datasets have the same variables saved to .fcmpass file
      3. FCMPASSDatasetIndex.fcmpass file is updated anytime a change is made to a dataset
   4. Dataset is loaded by LoadGUIVars()—function inside FCMPASS\_Master.mlapp
      1. Script is grouped according to software tab
      2. This function is a holdover from the original FCMPASS and doesn’t match current paradigm of backend/frontend separation. **This script should not be expanded upon as a result**
2. Frontend
   1. Advancing through software tabs
      1. Users can either click on the ‘Next’ button in the lower right-hand portion of the UI, or click on the desired tab
         1. Clicking on tabs avoids the check for valid inputs—thus all valid input checks are redone upon clicking ‘Calibrate’ button
         2. Dataset tab
            1. The dataset listbox must not be empty and a dataset must be selected to advance
         3. Import Files tab
            1. The .fcs file listbox must not be empty to advance
         4. Fluorescence tab
            1. Each calibrated FL parameter has it’s inputs checked to ensure no NaNs or zeros
         5. Scatter tab
            1. The calibrated scatter parameter must have non-zero valid inputs
         6. Calibration tab
            1. Same checks as previous tabs and additional checks to ensure valid calibration
            2. Need calibrated parameters to write to .fcs file
            3. Advanced scatter modelling parameters checked to ensure non-empty/non-numeric inputs
            4. AcqStats > AcqCVs for scatter calibration—ensures users don’t mix up the two columns
   2. Loading backend variables
      1. Cytometers loaded in IndexDefaults()
      2. Scatter catalogue loaded in getScatterCatalogueNames()
      3. FL bead catalogue loaded in getFluorescenceCatalogueNames()