

Exercise 6-1

Custom application – building application core

Task: Complete gaps in the QMH architecture of the application core

Use Bookmark manager to navigate through tasks in the application

6-1.1 Update code in PL Open.vi:

- a) For **Create all Message Queues.vi** update the code to link queue ref holder and to initialize UI (Fig. 1)

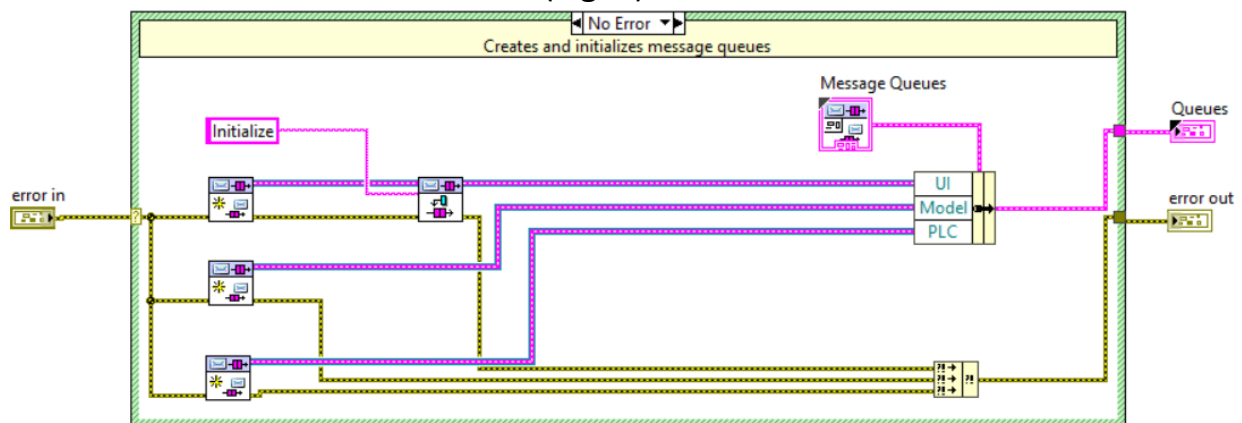


Fig. 1. Create all Message Queues block diagram

- b) For **Create Notifiers.vi** update the code to give names to notifiers, use string as the notified data and link notify refs to Notifier output (Fig. 2)

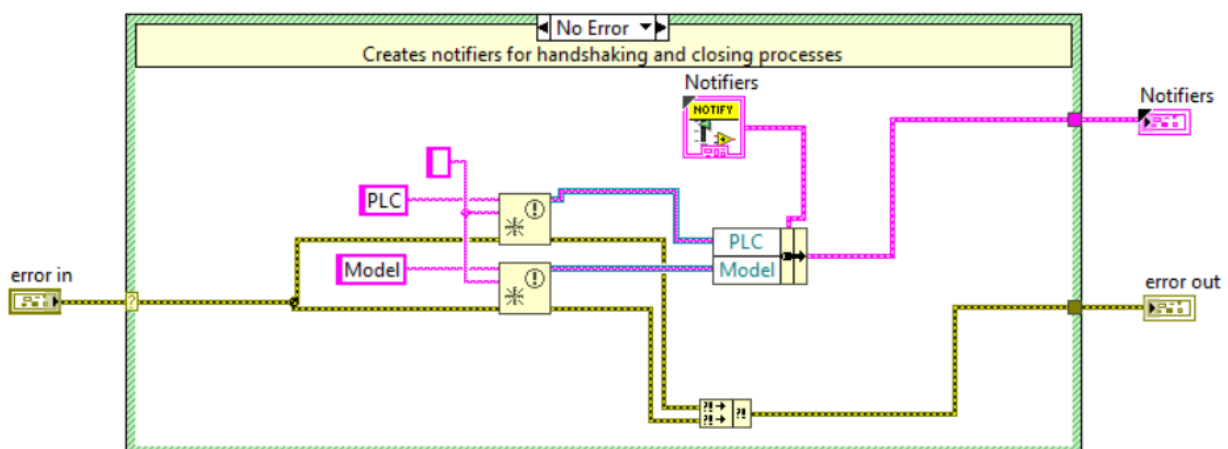


Fig. 2. Create all Message Queues block diagram

6-1.2 Update code for initialization procedure:

Add sequence of states in the Initialize case of UI MHL (Fig. 3)

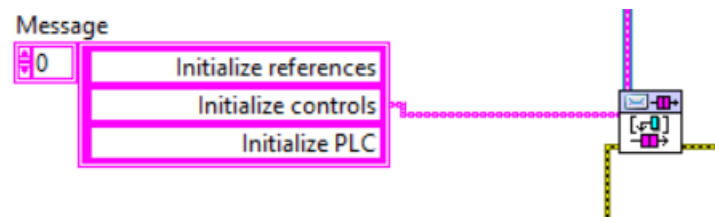


Fig. 3. Sequence of initialization steps in UI MHL

6-1.3 Update Initialize case of PLC.vi block diagram (Fig. 4):

- Add additional **Update Display.vi** from Project >> Support >> API
- Insert **Global names** global variables (Project >> Support >> SubVIs) and link proper names to Update Display VIs

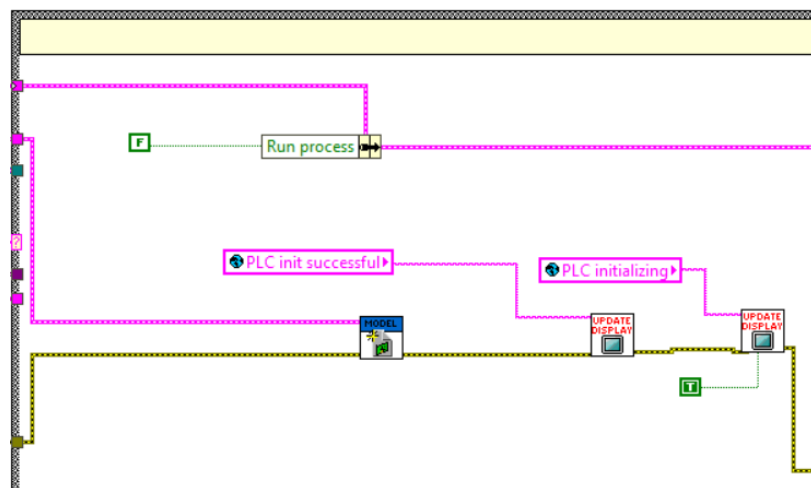


Fig. 4. Initialize case of PLC module

6-1.4 Update handshaking protocol for Model:

- Open **Model Init.vi** in PLC >> Initialize
- Update the code to send *Initialize* message to Model and await **5000 ms** for confirmation (Fig. 5)

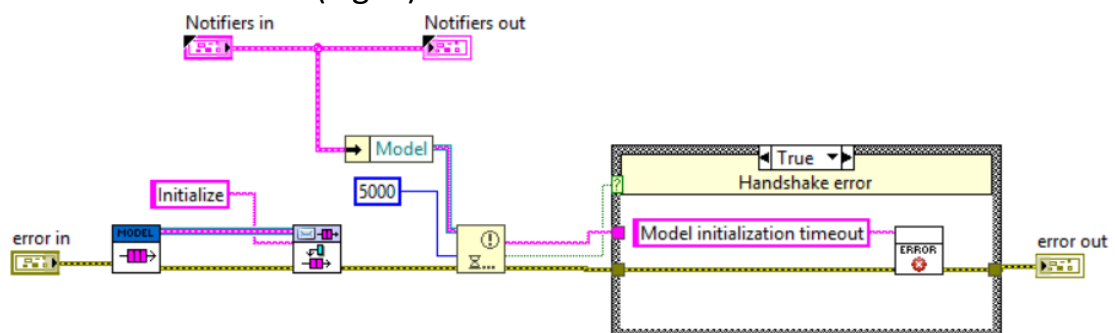


Fig. 5. Handshaking protocol for Model