

## Database Exercise

1. In your home directory, create a new directory called **vdb** and change directories into it.
2. Run **vdct \$EPICS\_BASE/dbd/softIoc.dbd &**
3. Create a new database with:
  1. A calc record which generates a saw-tooth function. Scan this record at 10 Hz. The saw-tooth waveform should range from 0 to 99.
  2. A calc record which decides if the value of the previous calc record is > 50
  3. A binary output record that has the Desired Output Location (DOL) pointing to the value field of the 2<sup>nd</sup> calc record. Set the OMSL field of this record to **closed\_loop**
  4. All the records should have unique names incorporating your user name **TRnn** or the macro **\$(user)** which will expand to it when the database is loaded. Save the database as **test.db**
  5. Make sure that all of the records will process.
4. Start the IOC application using this command:  
**softIoc -s -m user=TRnn -d test.db**
5. Test the database
  1. Use edm to create a display that shows the values of the 3 records.
  2. Add to the display a menu object that connects to the OMSL field of the binary record.
  3. Create a text update object and a text entry object that connect to the VAL field of the binary record.
  4. Using your new objects, try to change the value of the binary record.
  5. Set the OMSL field to **supervisory**.
  6. Try again to change it.