CA Client Programming Exercises

1 Install and build EPICS Base

Download and unpack the tar-file for Base 3.14.12.3:

```
cd ~/Software/epics
wget http://www.aps.anl.gov/epics/download/base/baseR3.14.12.3.tar.gz
tar xfz baseR3.14.12.3.tar.gz
cd base-3.14.12.3
```

Edit the file `configure/os/CONFIG_SITE.Common.darwin-x86`

Read the file comments and adjust to use your desired compiler.

Set the environment variable `EPICS_HOST_ARCH` to `darwin-x86`

[You might want to put that setting in a start-up file such as your `~/.profile`]

In the top-level directory, run `make`

Optional: Run `make -s runtests`

2 Build the caClient and example templates

Create a new directory somewhere, e.g.

```
cd ~/Software/epics
mkdir first
cd first
```

Run `makeBaseApp.pl` from Base to instantiate the client template:

```
../base-3.14.12.3/bin/darwin-x86/makeBaseApp.pl -t caClient client
```

Examine the two C source files and the `Makefile` created in the `clientApp` directory.

Run `makeBaseApp.pl` again (from the `first` directory) to create an IOC to test against. Accept the defaults by just pressing *Enter* when prompted:

```
../base-3.14.12.3/bin/darwin-x86/makeBaseApp.pl -t example example
../base-3.14.12.3/bin/darwin-x86/makeBaseApp.pl -i -t example example
```

In the top-level (`first`) directory run `make`

Examine the new directories created at the top level and also inside `clientApp`

Make the IOC's start-up script executable:

```
chmod +x iocBoot/iocexample/st.cmd
```

Start the IOC (you might want to use a different terminal window for this):

```
cd iocBoot/iocexample
./st.cmd
```

Run the `dbl` command at the IOC's `epics>` prompt to get a list of all the PVs it provides.

Now test the two client example programs. Don't forget that the caMonitor program takes the name of a file as its argument, not a PV name.