Module A

Create an iOS application using the CoreImage template that:

- Reads and displays images from the camera in real time
- Highlights multiple faces in the scene using CoreImage filters
- Highlights eye and mouth position using CoreImage filters
  - hint: could use another filter for highlights
- an idea for exceptional work (**required for 7000 level students**): display if the user is smiling or blinking (and with which eye)

Verify the functionality of the application to the instructor during lab time or office hours (or scheduled via email).

Module B

Create an iOS application using the OpenCV template that:

- Uses video of the user's finger (with flash on) to sense a single dimension stream indicating the "redness" of the finger
- Uses the redness to measure the heart rate of the individual (coarse estimate)
- An idea for exceptional work (**required for 7000 level students**): Display an estimate of the PPG signal
- An idea for exceptional work (**can replace other 7000 level requirements**): Use face detection to look at changes in color of a user's face to get heart rate (i.e., Poh's **method**   )

Verify the functionality of the application to the instructor during lab time or office hours (or scheduled via email).