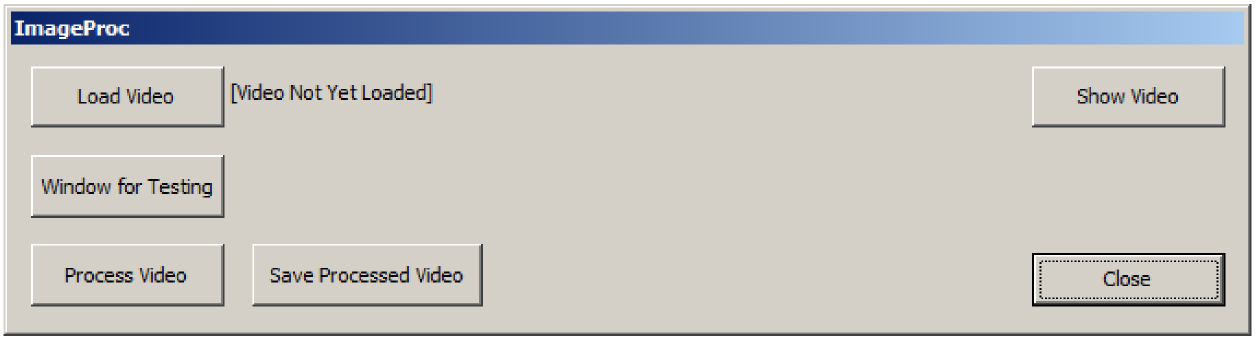
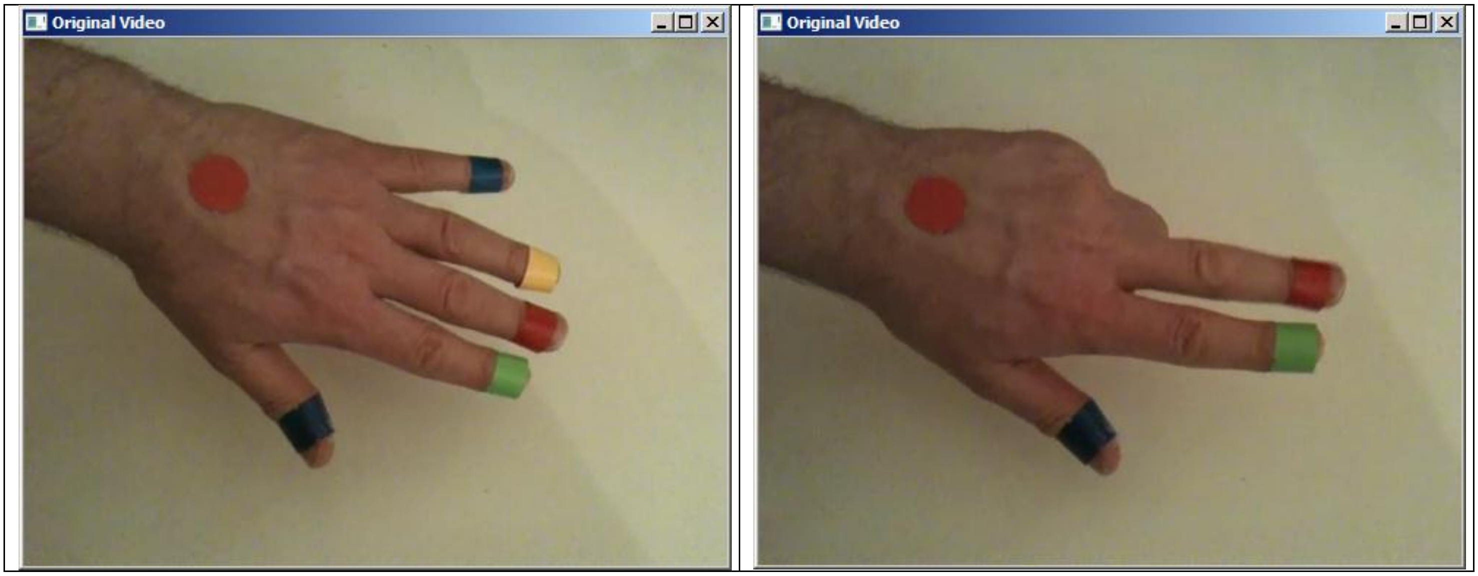
Exercise 06

Set Up

1. Get OpenCV dependencies
    a. Go to http://www.site.uottawa.ca/~gtell036/CSI4133/
    b. Download 'OpenCV-2.1.0-win32-vs2010.zip'
    c. Unpack contents in 'C:\'
2. Download Exercise Code
    a. Go to http://www.site.uottawa.ca/~gtell036/CSI4133/lab06/
    b. Download exercise06.zip
    c. Download videos06.zip
3. Unpack code
4. Unpack videos
5. Open Project (ImageProc.sln)
6. Run Application [F5]
7. Test Application with the videos from videos06.zip

(*Note: The videos contained within videos06.zip have had their file-size reduced using H.264 video compression. If OpenCV returns errors when trying to open these on your laboratory computers, uncompressed video can also be made available.*)





Tracking Objects in Video

Goal: Track multiple objects in a video by using their colour, shape and movement information

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Details:

1) Load video
2) Isolate the markers of one or more colours
3) Highlight the markers being tracked in the videos by encasing them with rectangles
4) Try to also accompany each tracking rectangle with the marker's colour, shape and motion information
5) Visualize the result

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Hints:

- A combination of previous exercises & your own independent research will likely be necessary to complete this project
- Look up the solution to laboratory exercise #3 if a refresher on manipulating video data in OpenCV is needed
- External source code can be used to complete this project (so long as it is properly referenced)
- Tracking information can be displayed by drawing text next to tracking rectangle
- Your solution does not need to track in real-time
- Watch all videos before formulating your solution

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Procedure:

1) Open "CSI4133.cpp"
2) Find "`CSI4133::processVideo()`" method
3) Insert the appropriate code
4) Test solution
   a) Press 'F5' to compile and run your code
   b) Load any video from videos06.zip
   c) Press the "Process Video" button to view results

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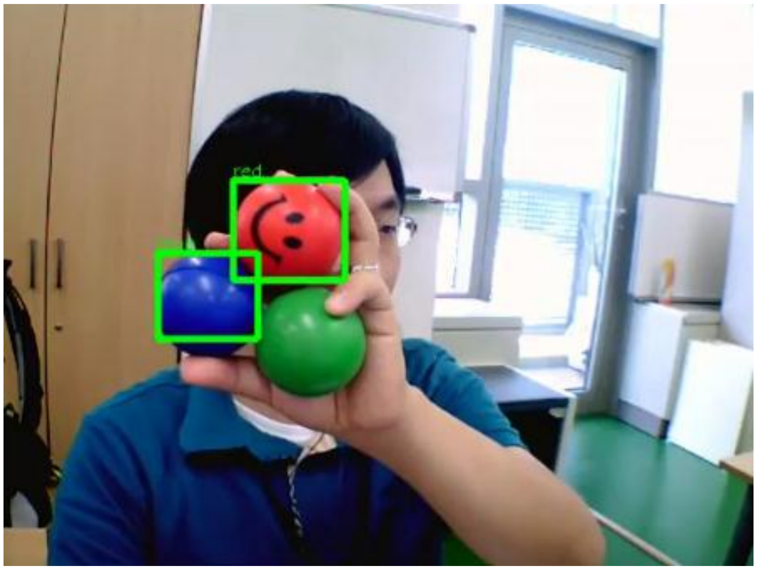
Similar video: http://www.youtube.com/watch?v=H-okPVfoqe0



Helpful Structures & Methods	**Links**

class ImgArr{
     int fps;
     int frmWidth;
     int frmHeight;
     int frmDepth;
     int nFrames;
     int fourCC;
     IplImage ** frames;
};	

[ImgArr].addFrame(IplImage * _img)	
[ImgArr].ClearFrames()	
void cvPutText(CvArr* img, const char* text, CvPoint org, const CvFont* font, CvScalar color)	?