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*                                     IMAGE PROCESSING (e-Yantra 2014)
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*   This software is intended to teach image processing concepts
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Camera Functions

This document lists the functions that the OpenCV library offers us to use and read the images from a camera.

1. Initializing the camera

cv2.VideoCapture(camera) → capture – This command tells python to set up an instance of a VideoCapture class and assigns it to the variable capture. In other words, we need to tell python where we are getting our images from, in this case the number assigned to the camera we need to use. For example, `cap = cv2.VideoCapture(0)` will make python use the first camera it finds (usually the laptop camera) whenever we need to read images using `cap.imread()`.

2. Reading images from the camera

<capture>.imread() → matrix - This is the command we use to retrieve images from the source we have named as capture. For example, if we have used the command `cap = cv2.VideoCapture(0)`, then our capture is named `cap` and `cap.imread()` will return a matrix that stores an image taken from the camera.

3. Releasing the camera

<capture>.release() – This command releases the camera that we had initialized when we used the *cv2.VideoCapture* command. In the absence of this command, we will get errors when we run the program again and try to initialize the same camera without first releasing it.