

The American University in Cairo

Department of Computer Science and Engineering

CSCE 4603 – Fundamentals of Computer Vision

Dr. Mohamed Moustafa	Assignment 2 [10%]	Fall 2016
----------------------	--------------------	-----------

Assignment released October 18th, and due by end of November 5th

Develop a program in your preferred programming language that can detect the rectangles and circles circumferences in an input image similar to this



- Use your phone/tablet to take photos at a **predetermined** distance of some pounds (coins and papers) on a plain background.
- The program output is the location of each detected circle or rectangle defined by the (x,y) position of its center and its radius (circle), or the (x,y) corners positions (rectangle). You need to draw your detected circles and rectangles on the image to verify you have detected the coins.
- Bonus 1% if you can calculate the amount of Egyptian pounds in the image.

You are expected to deliver:

- a) source code of your program. You are allowed to use OpenCV (or other helpful ready made libraries) but NOT the hough transform.
- b) short report describing your work including snapshots of your output.