Benha University **Faculty of Computers & Informatics**

2nd Term (May 2013) Lab Exam **Date**: 21/5/2011
Class: 4th Year Students **Time:** 1 hours
Subject: Computer Vision **Version: A**

Answer the following questions:

A- We learn how to detect corners using Moravec Interest Operator. Using Matlab do the following steps:

1- Read Image.
2- Compute mean of local window at each point in all directions.
3- Compute mean of square at each point in all direction.
4- Compute all local variance in vertical, horizontal, and diagonal directions.
5- Compute Interest value

B- Using Matlab:

Image "eight.tif"

Segment coins from the background, by generate a binary image
where white (1) are coins, and black (0) elsewhere.
-No gaps in the coins. -No extraneous white pixels in the background.

C- The following is a binary image.

	1	1			1			1	
1	1				1			1	
1		1	1	1	1	1	1		1
1						1	1		
1		1	1	1					
1		1		1		1		1	
1		1		1		1	1	1	
1		1	1	1		1	1	1	
1							1		
1	1	1	1	1	1	1	1		

(a) Label the connected components using Matlab assuming 4-neighbor connectivity.
(b) Label the connected components using Matlab assuming 8-neighbor connectivity.

Good Luck