



Benha University

Class: 4<sup>th</sup> Year Students

Subject: Computer Vision



Faculty of Computers & Informatics

Date: 7/3/2012

---

## Task 2 (Individual):

### I. Due

March 14, 2012, at the beginning of class.

### II. Objectives

1. Arithmetic operations on grayscale images
2. Color Images Operations

### III. References

1. Slides and handouts posted on the course Web site.
2. Lab handouts.

### IV. Software Required

1. Matlab
2. Microsoft Word

### V. Assignment

- a) Read "rice.png" image
  1. Generate the histogram from the grayscaled image
  2. Make arithmetic operations
    - a. Add 128 to "rice.png"
    - b. Subtract 128 from "rice.png"
    - c. Multiplay "rice.png" with 2
    - d. Divide "rice.png" by 2
    - e. Divide "rice.png" by 2 then add 128
    - f. Complement of "rice.png"
- b) Read "peppers.png" image
  1. Show red channel only
  2. Show green channel only
  3. Show blue channel only
  4. Make image reddish
  5. Make image greenish
  6. Make image bluish
  7. Make image yellowish

8. Swap between R,G
9. Swap between G,B
10. Swap between R,B
11. Eliminate R channel
12. Eliminate G channel
13. Eliminate B channel
14. Eliminate G,B channels
15. Eliminate B,R channels

c) Fig1,2 is the outputs

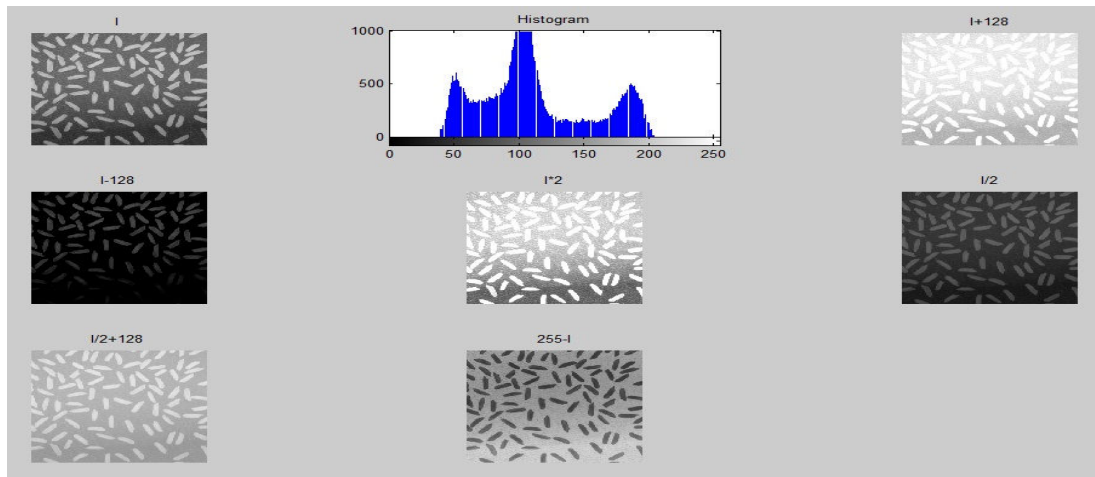


Fig.1

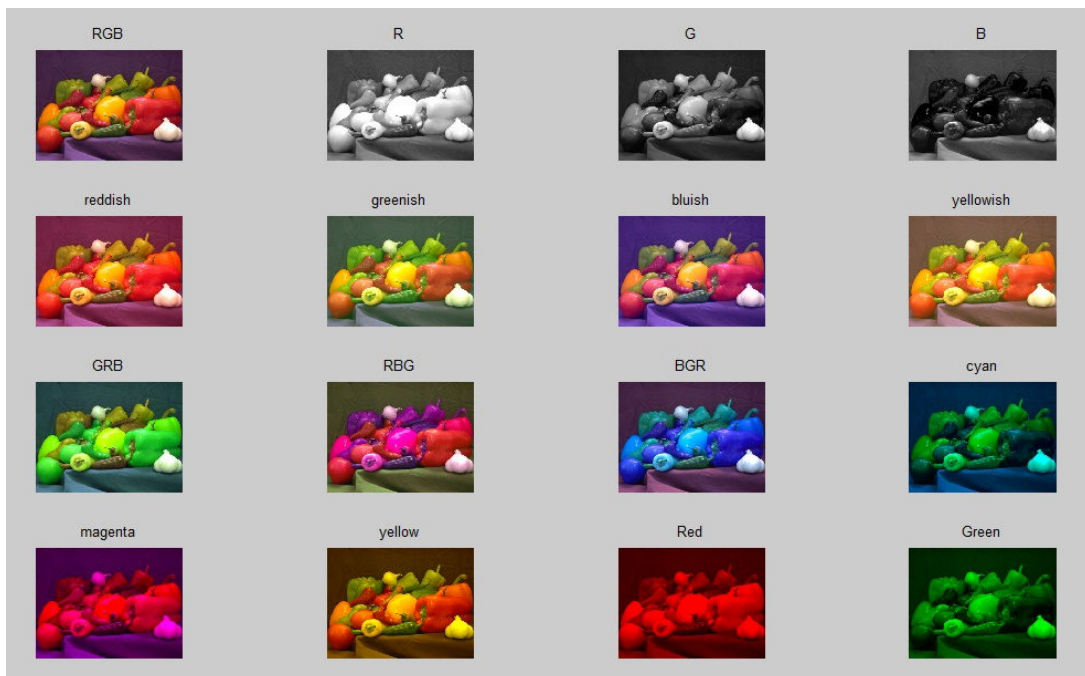


Fig.2