

**Introduction to Computer Vision**

**Coursework**

**Submission 1**

**Your name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Student number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Question 1(a):**

Your image

****

**Rotated images:**

θ = -50 deg

****

θ = 60 deg

****

θ = 30 deg

****

θ = 120 deg

****

**Skewed images:**

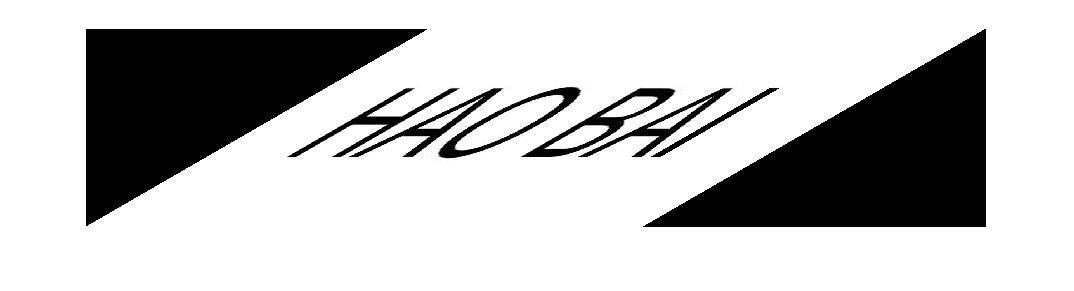
θ = 10 deg

****

θ = 40 deg

****

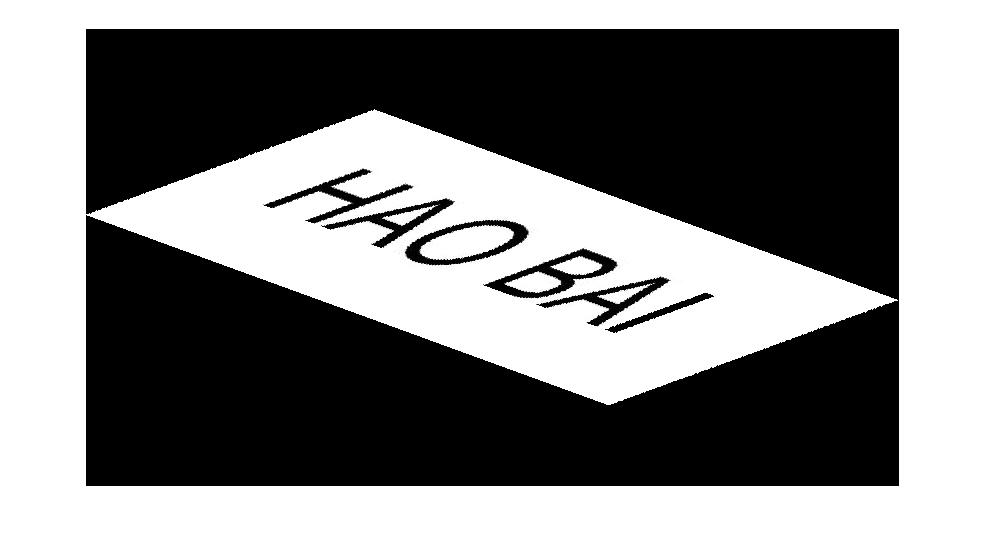
θ = 60 deg

****

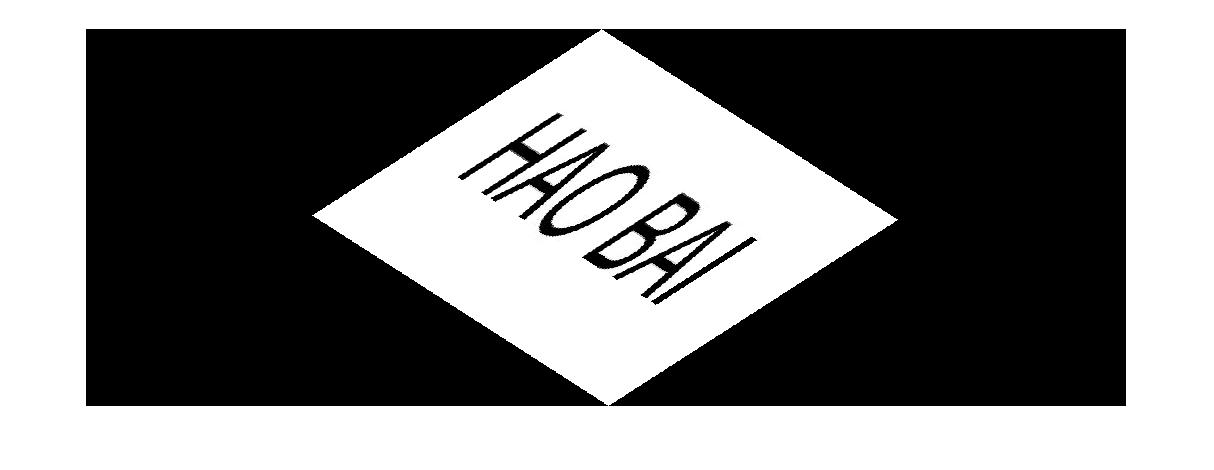
**Your comments:**

**Question 1(b):**

θ2=50 and θ1=20 clockwise



θ1=20 clockwise and θ2=50



**Your comments:**

**Question 2(a)**:

**Designed kernel:**

**1,1,1**

**1,1,1**

**1,1,1**

Averaged image



Original image



**Your comments:**

**Question 2(b):**

**Filtered image with kernel A**



**Filtered image with kernel B**



**Your comments:**

**Question 2(c):**

A followed by A



**A followed by B**



**B followed by A:**



**Your comments:**

**Question 2(d):**

**Extended kernels of A and B (5x5):**

**Results obtained by applying 5x5 kernel:**

**B followed by A**

**A followed by B**

**A followed by A**

**Extended kernels of A and B (7x7):**

**Results obtained by applying 7x7 kernel:**

**A followed by A**

**B followed by A**

**A followed by B**

**Your comments:**

**Question 3(a):**

**Two non-consecutive frames:**

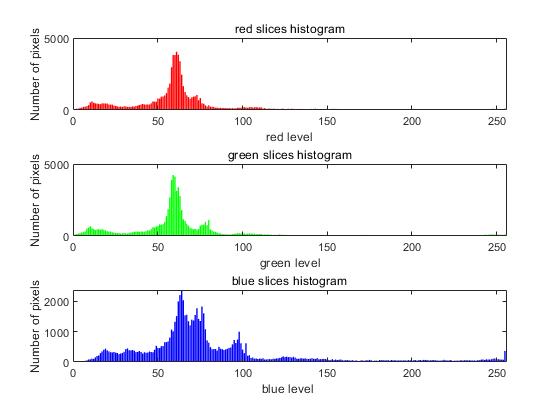
Image 1

Image 2

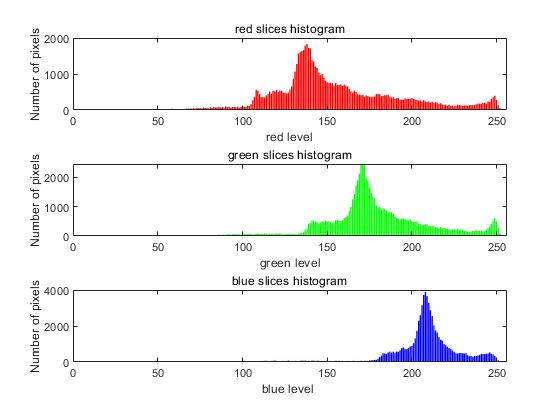


**Corresponding colour histograms:**

Histogram 2



Histogram 1



**Your comments:**

**Question 3(b):**

**Example 1:**

It



Frame3

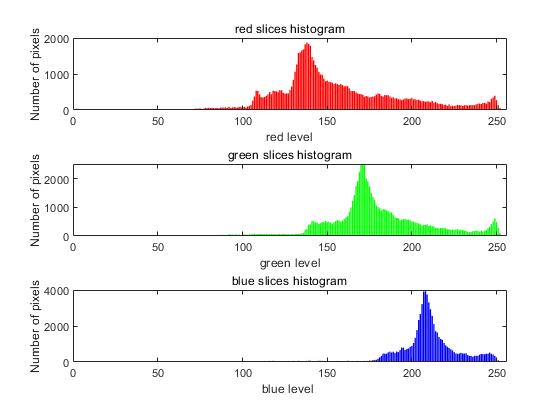
It+1



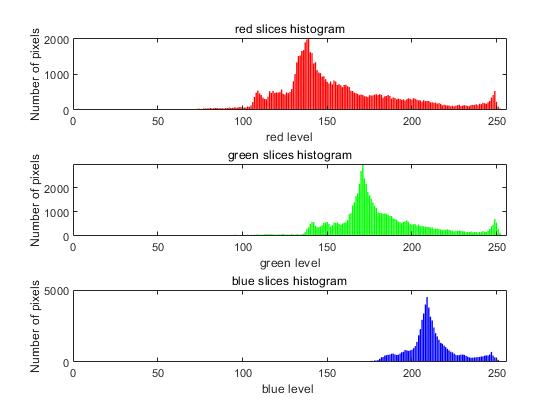
Frame4

**Histograms:**

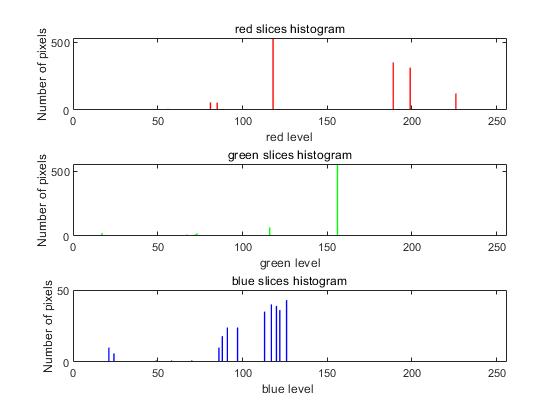
Histogram of It



Histogram of It+1



Intersection result



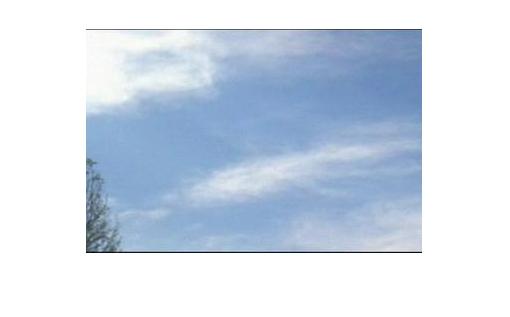
**Example 2:**

It+1



Frame10

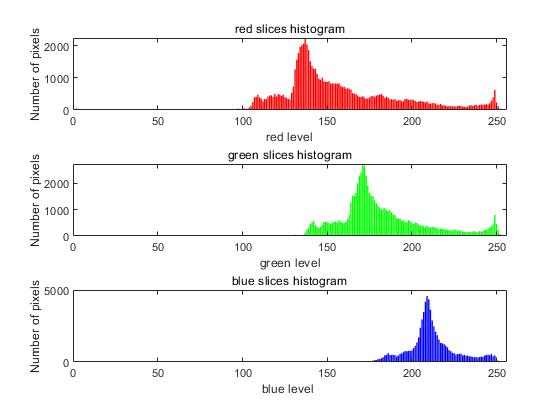
It



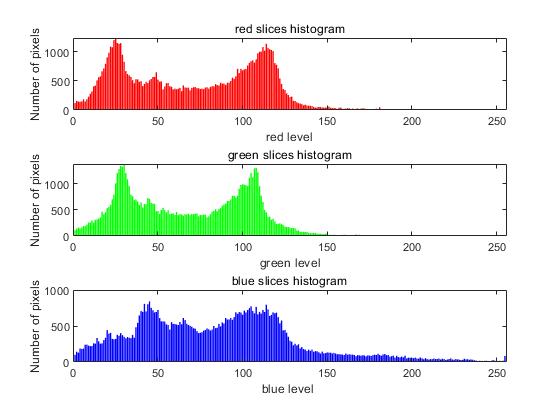
Frame9

**Histograms:**

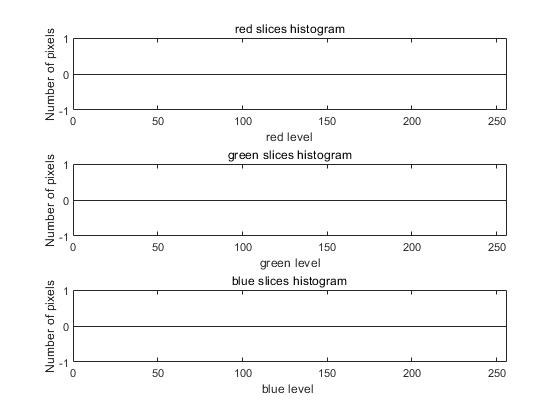
Histogram of It



Histogram of It+1



Intersection result



**Your Comments:**

**Question 3(c):**

**Comments:**