

	COURSE: IMAGE PROCESSING		MARKS: /100
	TOPIC: Image Processing Applications	CODE: BCM2063	
	Mini Project	NO: 1	

[CO1/C4/40%] [CO2/C3/40%] [CO3/C4/20%]

Mini Project (100 marks - 25% from Overall)

Guidelines for Mini Project

- i. This mini project must be developed in group (**maximum 3 students per group**).
- ii. Each group must develop an image processing application that relate to required industry / community.
- iii. Please refer to titles (table below) for booking purposes. (**First come first serve and discuss to lecturer**). Each group is allowed to book only **one (1) title**. You may change the title if the title hasn't been booked by other group. You may propose **your own title**.
- iv. Please discuss with your lecturer if you have any problems.
- v. **Source code** and **report** shall be copied by the lecturer.
- vi. Please refer to **the rubrics** for the assessment criteria(s).
- vii. Softcopy of your source code and report must be **submitted** and **presented** to your lecturer before **20th Dec 2017**.

Project Requirement

1. Must have at least one (1) of the following techniques/elements:
 - a. Intensity Transformation
 - b. Frequency Domain Processing
 - c. Colour Image Processing
 - d. Image Compression
 - e. Image Segmentation
 - f. Image Watermarking
 - g. Recognition and Classification
2. Nice Graphical User Interface
3. A Selection Menu (if any)
4. Utilize a webcam as input data (if any)
5. Any extra functions that you can do to impress your lecturer

Assignment Submission

1. You need to print the hardcopy.
2. Send out your Project Report in .DOCX and source code project embedded in .ZIP or .RAR file formats to kalam@ump.edu.my
3. Late submission will be given penalty (marks deduction).
4. Incomplete submission (report and source code) will be given penalty as well.

No	Topics	No	Topics
1	Handwriting Recognition	21	Classification System
2	Image denoising application	22	Image Descriptor Features
3	Brain tumour segmentation	23	Image Restoration
4	Face Recognition	24	Morphological Recognition
5	Video Compression	25	Pseudo colour application
6	Image Compression	26	Shape Recognition
7	Image Watermarking	27	Image Steganography
8	Optical Character Recognition	28	Video Steganography
9	Plate Recognition	29	Template Matching
10	Object Tracking	30	Key point Extraction
11	Colour Segmentation	31	Crack Inspection System
12	Currency Recognition	32	Binary pixel information extraction
13	Iris Recognition	33	Face detection
14	Fingerprint system	34	Iris measurement
15	Image segmentation	35	Font recognition
16	Image dithering	36	Fruit Detection
17	Chilli Grading System		
18	Morphological Recognition		
19	Image Restoration		
20	Visual Inspection System		

Rubric

Lecturer :	Dr. Ferda Ernawan		
Course Code & Name :	BCM2063 Image Processing		
Program :	Graphic & Multimedia	Section :	1
Faculty :	Faculty of Computer Systems & Software Engineering		
Semester :	I	Session :	2016 / 2017

Total Mark 0 %

Student Name	1	-	-	-
	2	-	-	-
	3	-	-	-

Mini Project

CRITERIA	LEVEL OF ACHIEVEMENT					WEIGHTAGE	SCORE GAINED	MARK	Cognitive
	0	1	2	3	4				
CO1									
Report proposed alternative solutions.		less than 40% problem identification and logical proposal related to image processing techniques		60% problem identification and logical proposal related to image processing techniques		more than 80% problem identification and logical proposal related to image processing techniques	1	0	C2

Demonstrate appropriate image input relevant to the problem		apply single image input to be tested		3 images are tested in the experiment		more than 5 images are tested in the experiment	1		0	C3
Analyze the experimental results		30% able to discuss and analyze the results		60% able to discuss and analyze the results		more than 80% able to discuss and analyze the results	2		0	C4
							2		0	
CO2									Psychomotor	
The presentation of final output		presentation of the final output, 30% complete		presentation of the final output, 60% complete		presentation of the final output, 100% complete	0.8		0	P2
Usage of arithmetic expression (calculation)		6 or 7 errors.		2 or 3 errors.		The calculation without error	1		0	P3
The overall program structure		6 or 7 errors.		2 or 3 errors.		Ability to execute without error	1		0	P4
Correct usage of selection control statement (if/if..else/case)		6 or 7 errors.		2 or 3 errors.		The selection control statement without error	1.5		0	P4

correct usage of loops statement (for/do-while/while...etc)		6 or 7 errors.		2 or 3 errors.		The loops control statement without error	1.5		0	P4
able to process array data (image) correctly		6 or 7 errors.		2 or 3 errors.		The programme working properly without any error	1.5		0	P4
Use correct calling function		30% correct usage of sequential statement		60% correct usage of sequential statement		100% correct usage of sequential statement	1.2		0	P4
Use appropriate process for each function body		6 or 7 errors.		2 or 3 errors.		The programme working properly without any error	1.5		0	P4
able to show different types of quality image measurements		1 parameter in quality image measurements		3 parameters in quality image measurements		more than 5 parameters in quality image measurements	2		0	P4
							12		0	
C03										Affective
LL1: Report Structure		less than 40% assignment organization complete		less than 60% assignment organization complete		more than 80% assignment organization complete	2		0	A4

