Assignement #1 Multimedia

Evram Youssef Helmy

Sec.: 1

B.N: 9

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Problem 1: Huffman

- Original values

Image Name	Total Size (bytes)		Compression Ratio	
	My results	Book	My results	Book
Sena	56,221	57,504	1.16	1.14
Sensin	60,147	61,430	1.08	1.07
Earth	39,252	40,534	1.66	1.62
Omaha	57,092	58,374	1,14	1.12

The values is so similar to that in the book.

- Difference Values

Image Name	Total Size (bytes)		Compression Ratio	
	My results	Book	My results	Book
Sena	58,966	32,968	1.11	1.99
Sensin	56,733	38,541	1.15	1.70
Earth	39,255	33,880	1.669	1.93
Omaha	57,424	52,643	1,14	1.24

When using difference values, its like coding another image, in ‘Sena’ the compression ratio increased, while in ‘Sensin’ it decreases, while in ‘Earth’ and ‘Omaha’ it’s the same.

Problem 2: Arithmetic

Using M = 2.

Image Name	Total Size (bytes)		Compression Ratio	
	My results	Book	My results	Book
Sena	60071	53,431	1.09	1.16
Sensin	64053	58,306	1.023	1.27
Earth	43326	38,248	1.513	1.67
Omaha	60989	56,061	1,1	1.14

Answer not more similar to the book!

M =1 M = 2 M = 3 M = 4

The image is more noised as M increased becaue of C++ double precision (as Arithmetic is an Lossles Compression Algo.)

Problem 3: Lz77

Using S = 2, M = 2, A=50

- Pixel Values

Image Name	Total Size (bytes)		Compression Ratio	
	My results	Book	My results	Book
Sena	58,932	53,431	1.112	#
Sensin	64,296	58,306	1.019	#
Earth	51,653	38,248	1.268	#
Omaha	50,590	56,061	1.295	#

Using S = 2, M = 2, A=30 (as Diff decreases the Alphabet).

- Residual Values

Image Name	Total Size (bytes)		Compression Ratio	
	My results	Book	My results	Book
Sena	51,445	31,847	1,27	#
Sensin	54,230	37,126	1.20	#
Earth	48,073	32,137	1,36	#
Omaha	59,158	51,393	1,10	#

I Used the Normal Algorithm Not the Extended One, so the Values are a bit larger.