Algorithms Assignment 2

Huffman Compression and Decompression

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Compression rate = (Original file size / Compressed file size) in bytes

For Lecture6.pdf file that was the output

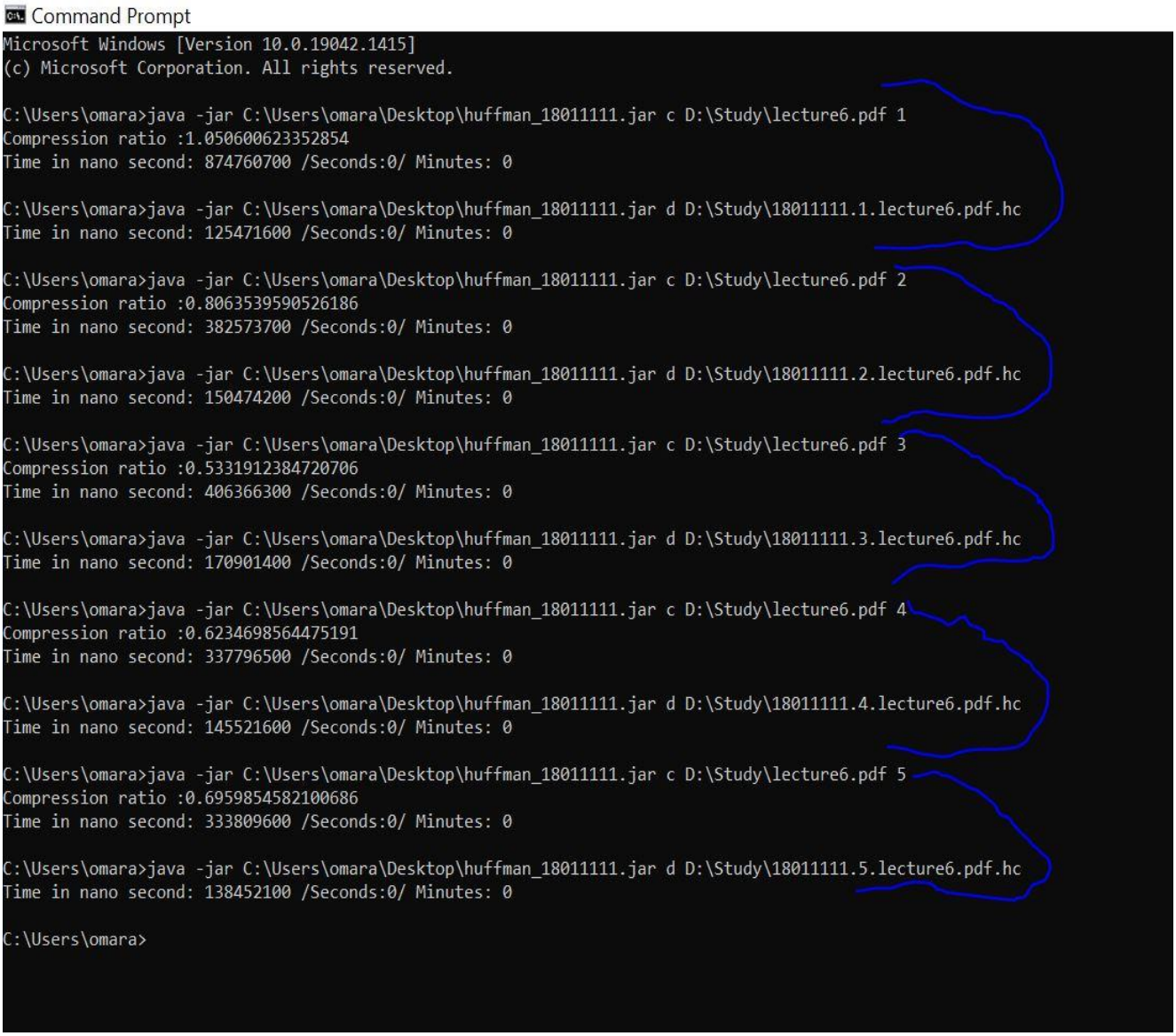

Table with the values below:

N	Compression rate
1	1.05
2	0.80
3	0.53
4	0.62
5	0.69

For gbbct10.seq file:

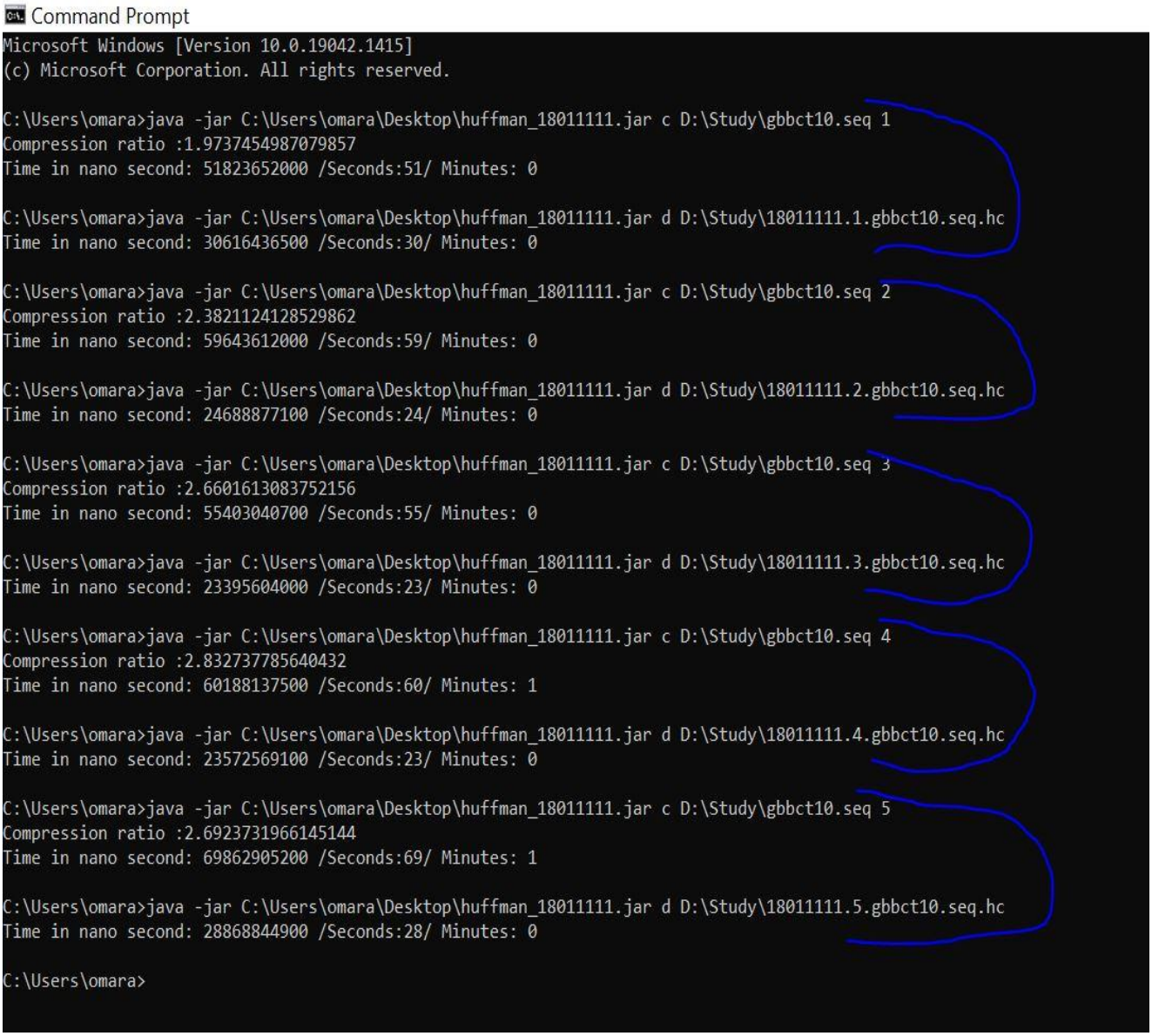

Table with the values below:

N	Compression Rate
1	1.97
2	2.38
3	2.66
4	2.83
5	2.69

Note that :

Compression rate = (Original file size / Compressed File size) in bytes

Comparing with 7-zip:

Lecture6.pdf file

Using 7-zip the rate was (1.34), while using my program was (1.05) at n = 1 , but when n increase the rate decreases and the compressed file becomes larger than the original one, so this file doesn't has many frequent n grouped characters.

gbbct10.seq file:

using 7-zip the rate was (4.16), while using my program was (1.97) at n = 1, and by increasing n the ratio increase so we got a compressed file which smaller than original one twice as shown in the above table, so this file has many frequent n grouped characters.