COMP20290 Algorithms

Huffman Compression Assignment

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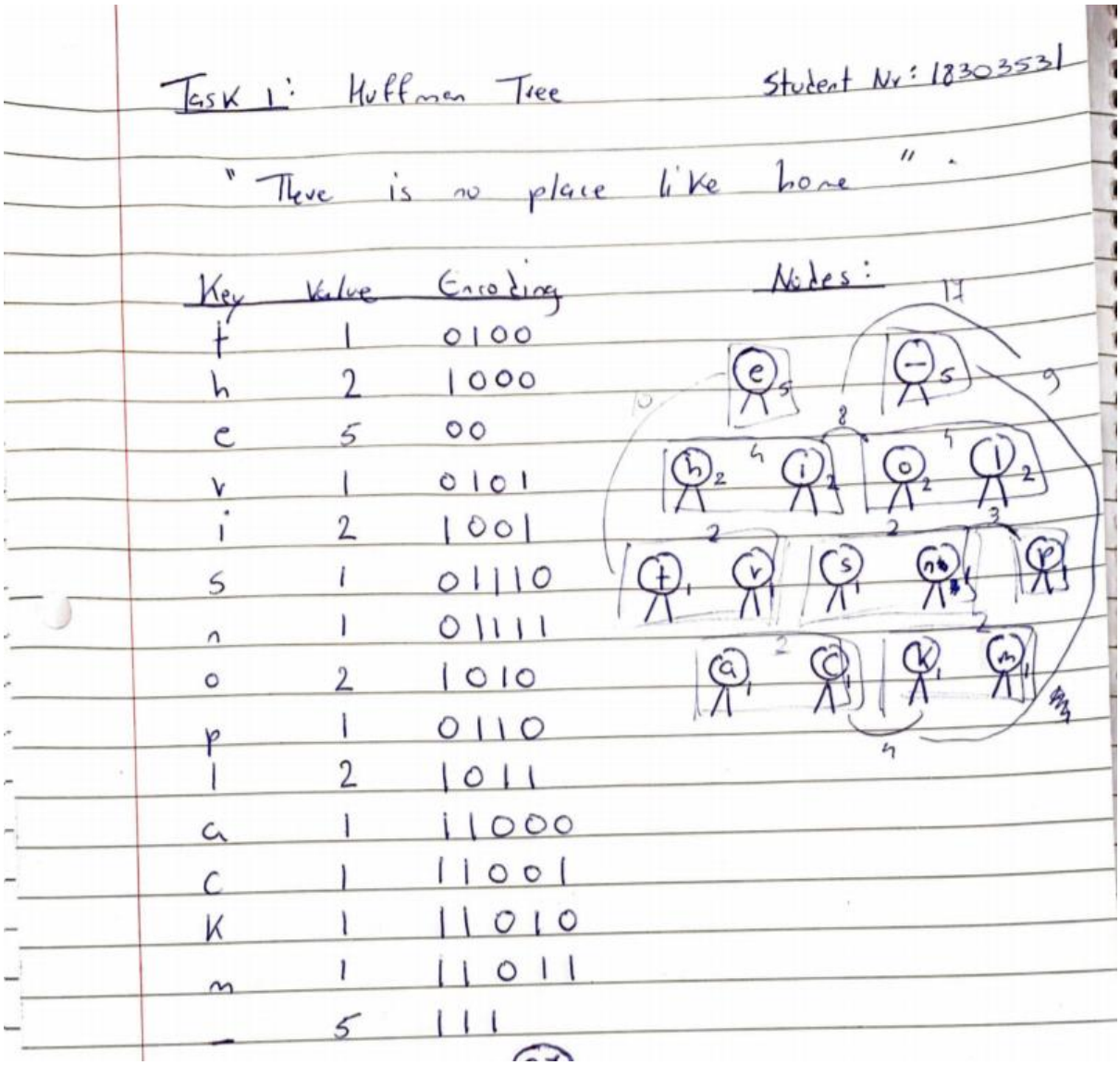
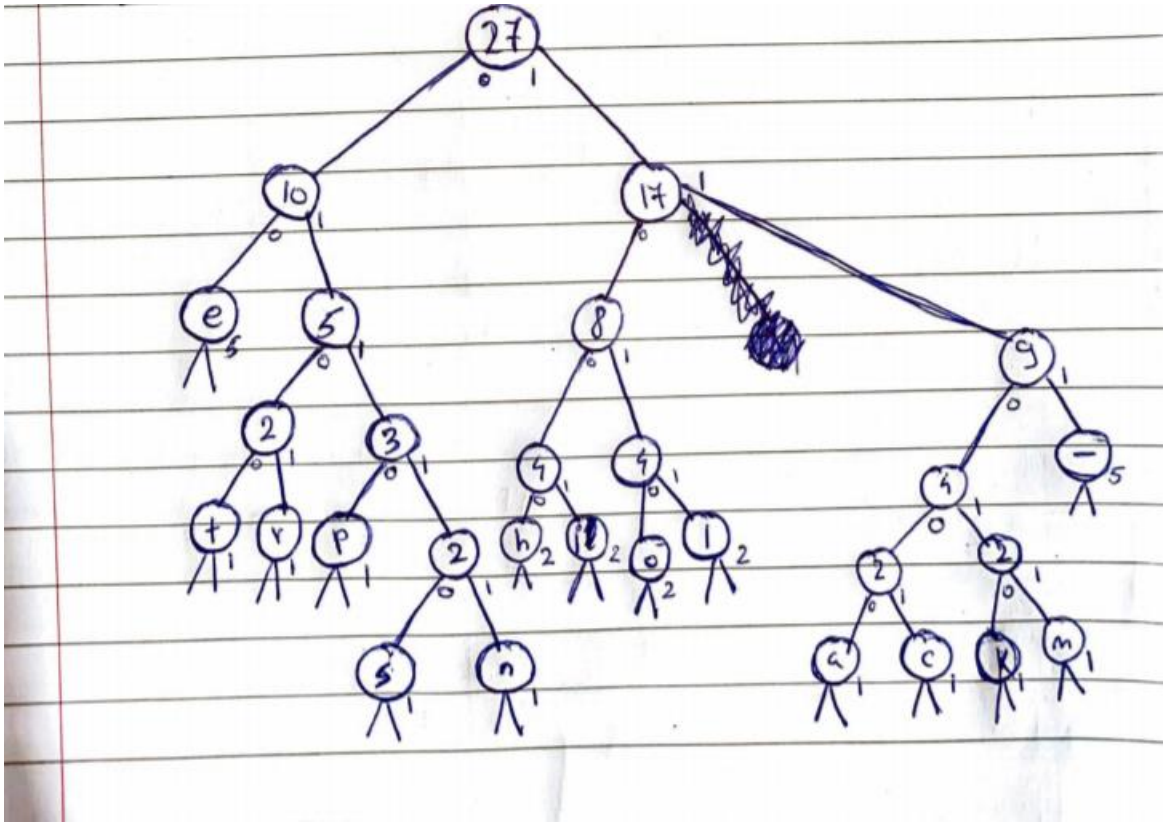
Task 1 . Code Huffman Tree of phrase by hand :

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Task 3 . Compression Analysis :

Step 1 : Compress the provided text files :

Original File	Bits	Compressed File	Bits	Comp Ratio
genomeVirus.txt	50008	genomeHuffman.txt	12576	0.251
medTale.txt	45872	medTaleHuffman.txt	24664	0.538
mobydick.txt	9708968	mobydickHuffman.txt	5505432	0.567
thinkingFastAndSlow.txt	1051400	thinkingFastAndAlowHuffman.txt	597800	0.569

Step 2 : Decompress the files toy compressed :

Decompressed File	Bits	Time
genomeHuff2.txt	50008	
medTaleHuff2.txt	45872	
mobydickHuff2.txt	9708968	
thinkingFastAndSlowHuff2.txt	1051400	

Step 3 : Analysis of results :

Q3. Compressing an already compressed file increases the compressed file .

Q4.

RunLength	Bits	Huffman	Bits
q32x48RunLength.bin	1144	q32x48Huffman.bin	816

RunLength in the worst case generates the output data which is 2 times more than the size of input data .

Huffman uses a static table therefore it is faster .