

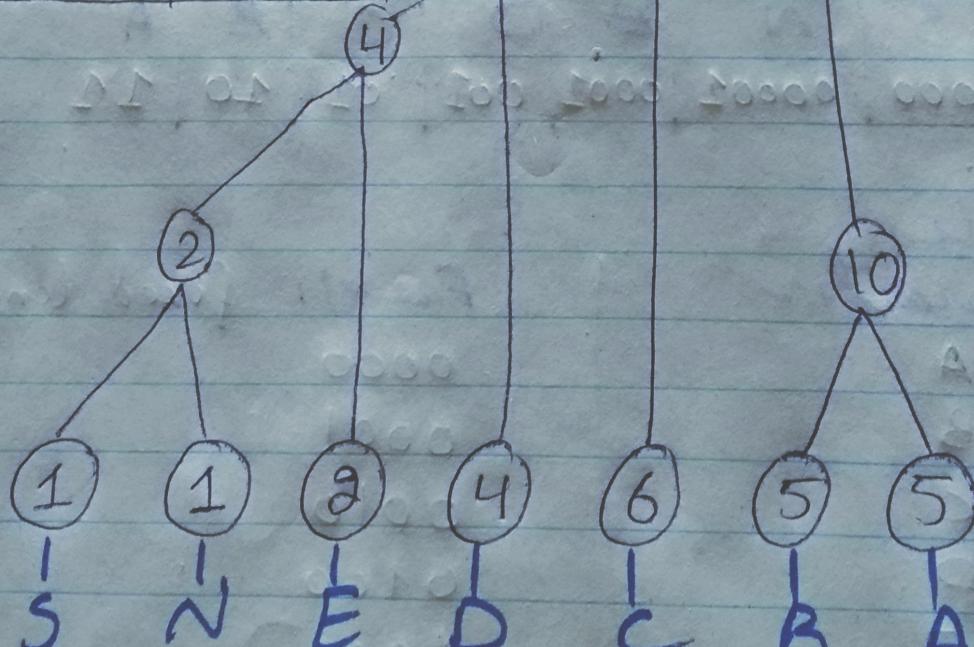
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Depart: BSCS
Section: 'C'
Assignment 01

①

BCCABBDDAECCBBAEODCC
+ SANA

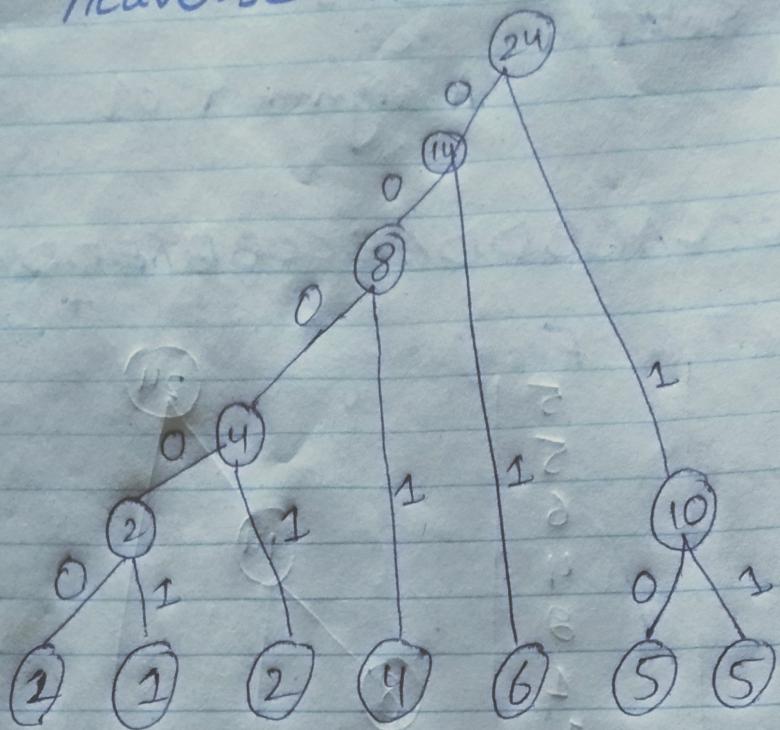
character Frequency

A	5
B	5
C	6
D	4
E	2
N	1
S	1



Huffman Tree

(2)
Traverse Tree..



S	N	E	D	C	B	A
000000	000002	00002	001	02	10	11

Table
character

A

B

C

D

E

N

S

Freq.: fixed length

0000

0001

0010

0100

1000

1100

1110

$$\begin{array}{l} \overline{7 \times 8 = 56 \text{ bits}} \\ 84 \text{ bits} \end{array}$$

$$\begin{array}{l} \overline{7 \times 4 = 28 \text{ bits}} \end{array}$$

(3)

character	frequency	Code	
A	5	11	$5 \times 2 = 10$
B	5	10	$5 \times 2 = 10$
C	6	01	$6 \times 2 = 12$
D	4	001	$4 \times 3 = 12$
E	9	0001	$9 \times 4 = 36$
N	1	00001	$1 \times 5 = 5$
S	1	000001	$1 \times 5 = 5$
<u>56</u>	<u>84</u>	<u>84</u>	<u>62</u>

The Total = Message + table
 $= 62 + 80 = 142$
 bits