ASSIGNMENT - 1 Ch-2

1. A file contains following character with probabilities. Perform Huffman coding Algorithm over the table.

Ch.	Prob.
a	.10
e	.15
i	.12
o	.03
u	.04
s	.13
t	.01

→ Find average length for the code.
→ Find length of Huffman Encoded message.

2. A source emits letters from an alphabet $A = \{a_1, a_2, a_3, a_4, a_5\}$ with probabilities $P(a_1) = 0.15$, $P(a_2) = 0.04$, $P(a_3) = 0.26$, $P(a_4) = 0.05$ $P(a_5) = 0.50$. Calculate
   (a) Entropy of the source.
   (b) Find Huffman code for source.
   (c) Find average length of code
   (d) Redundandy of code.

3. using minimum Variance Huffman Coding Procedure find the code for alphabet $A = \{a_1, a_2, a_3, a_4\}$ with Probabilities -

$P(a_1) = 0.1$, $P(a_2) = 0.3$, $P(a_3) = 0.25$, $P(a_4) = 0.35$.

4. Draw a Huffman coding Tree only from this character frequency table:

A = 0.6	B = 0.2	C = 0.07	D = 0.06	E = 0.05	F = 0.02

5. Perform Adaptive Huffman Coding for the sequence: [aabcdaad] for 26 lowercase letter of English alphabet. Only mention the code sequence after Encoding.

6. Perform Adaptive Huffman Coding for [abracadabra] along with verifying it with Decode Procedure.

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