



Algorithms: Design  
and Analysis, Part II

# Huffman Codes

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Huffman's Algorithm: A  
More Complex Example

# Input and Steps 1 and 2

**Input:**

Characters	A	B	C	D	E	F
Weights	3	2	6	8	2	6

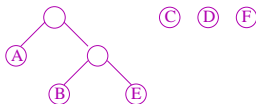
**Step 1:** Merge B and E:

A	BE	C	D	F
3	4	6	8	6



**Step 2:** Merge A and BE:

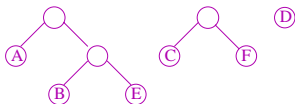
ABE	C	D	F
7	6	8	6



## Steps 3 and 4

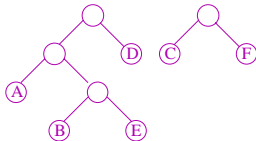
Step 3: Merge C and F:

ABE	CF	D
7	12	8



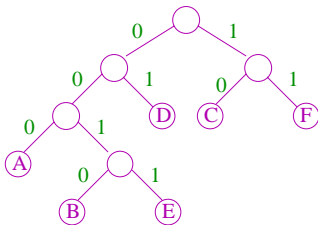
Step 2: Merge ABE and D:

ABDE	CF
15	12



# Final Output

Final tree:



Corresponding code:

A	000	D	01
B	0010	E	0011
C	10	F	11