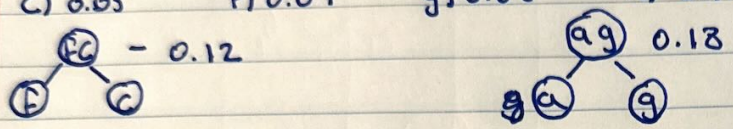
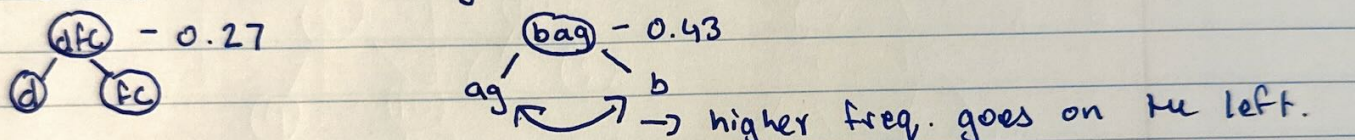
Part 2

1. use Huffman Coding to encode these symbols with given freq.
a) 0.10 b) 0.25 c) 0.05 d) 0.15 e) 0.30 f) 0.07 g) 0.08

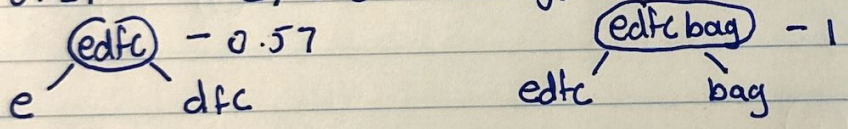
ordered:
c) 0.05 f) 0.07 g) 0.08 a) 0.10 d) 0.15 b) 0.25 e) 0.30

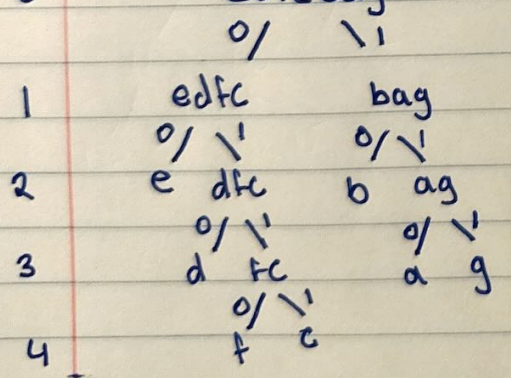


fc) 0.12 d) 0.15 ag) 0.18 b) 0.25 e) 0.3



dfc) 0.27 e) 0.3 bag) 0.43





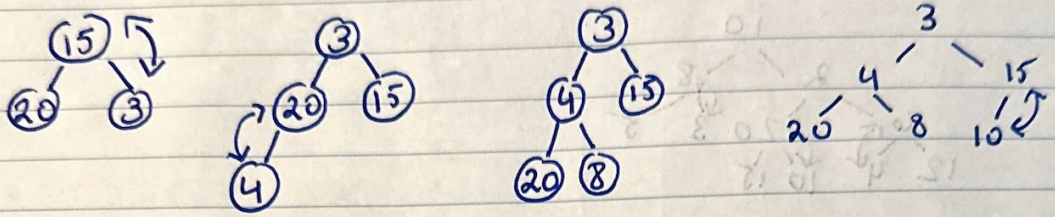
Avg. code length

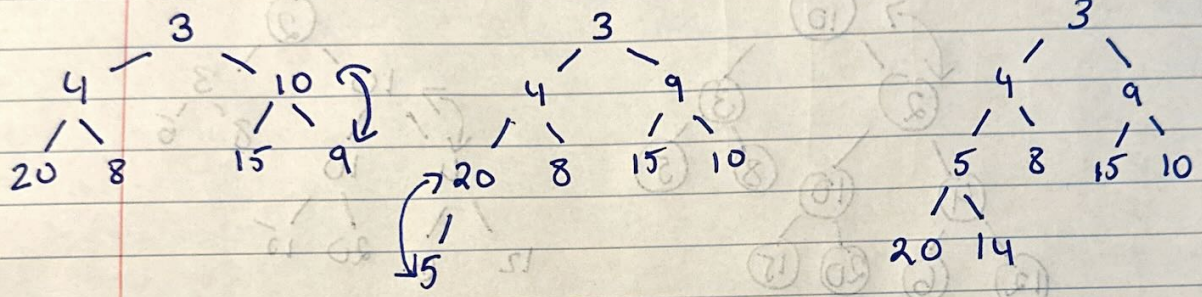
e lvl b lvl d lvl a g
(0.3) 2 + (0.25) (2) + (0.15) (3) + (0.10) (3) + (0.08) (3)
+ (0.07) 4 + (0.05) 4 = 2.57 bits/char
f c

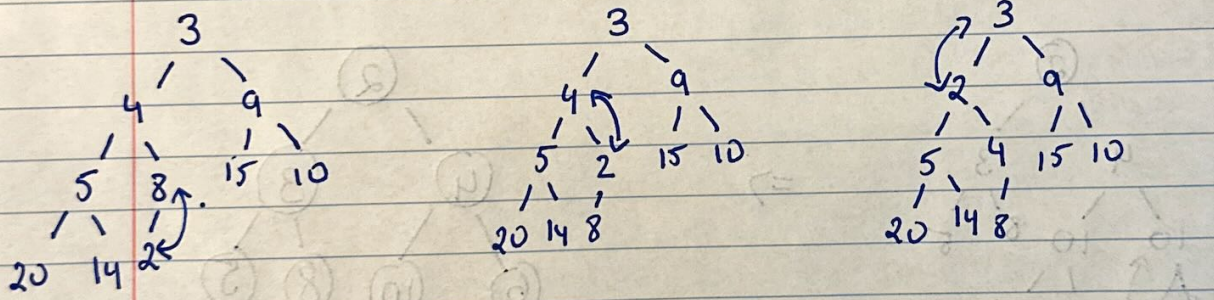
e: 00 b: 10
d: 010 a: 110
f: 0110 g: 111
c: 0111

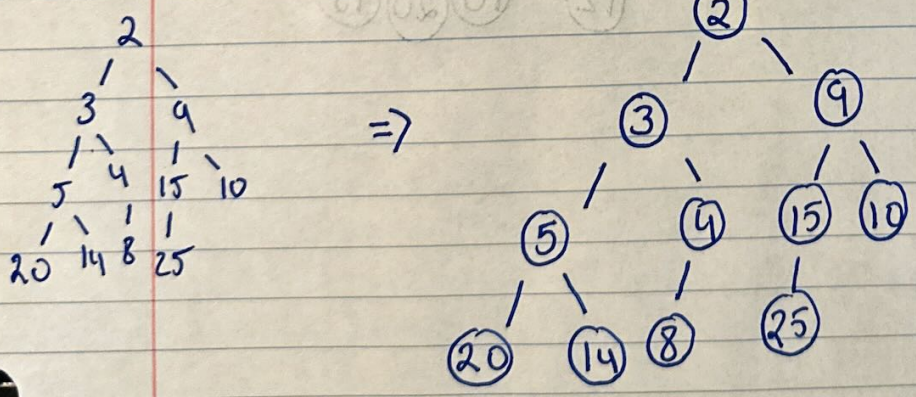
2. build (draw) a heap (minheap, smallest value at root) by inserting one item at a time. w/ the values.

15 20 3 4 8 10 9 5 14 2 25





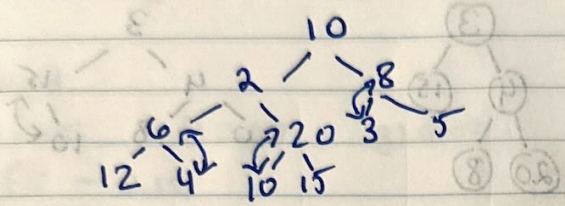


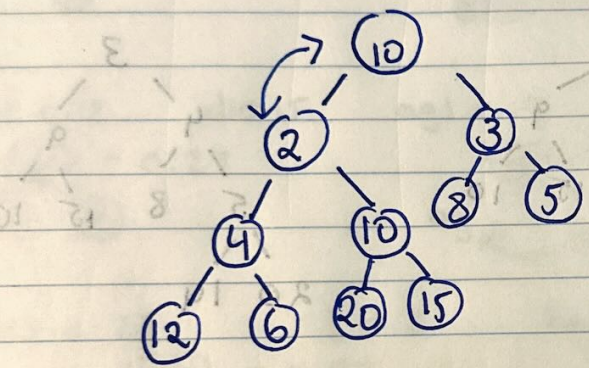


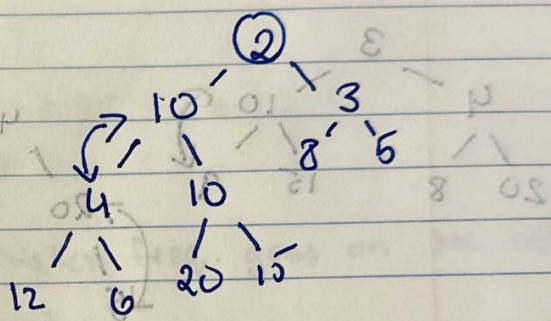
Smallest value at root

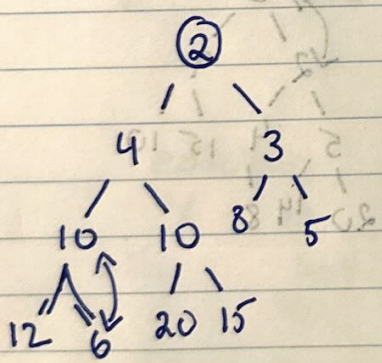
3. build (draw) a heap (min heap) using the linear algorithm with the values:

10 2 8 6 20 3 5 12 4 10 15









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