

Exercise: merge two sorted vectors into 1.

Inputs: vectors (of int) w/ $i \leq j \Rightarrow v[i] \leq v[j]$

Strategy? Imagine two stacks of cards, each sorted. How to produce 3rd sorted stack?

what variables to remember?

v_1

3	7	8	12	15
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v_3

1	3	4	5		
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v_2

1	4	5	6	9
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So, could store two indexes for the candidates...

size_t c1 = 0, c2 = 0; // candidate locations

while (c1 < v1.size() && c2 < v2.size()) {

if (v1[c1] < v2[c2]) {

v3.push_back(v1[c1]);

c1++;

} else {

v3.push_back(v2[c2]);

}

}

// Now add remaining stuff from whichever still has elements

~~if (~~*V2 ran out~~ ~~c2 == V2.size()~~)~~

while (c1 < V1.size()) V3.push_back(V1[c1++]);

~~else~~

while (c2 < V2.size()) V3.push_back(V2[c2++]);