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COMSC 140 Python

Program Documentation for

As7\_6\_Merge\_two\_lists

1/ Link  
<https://github.com/DVC-COMSC/assignment-7-6-enduringwriter/blob/main/main.py>

2/ Program Purpose  
This program merges two sorted lists into a single sorted list without using sort functions.

Assumptions: Inputted lists are sorted.

3/ Input/Output Description  
Input: sorted lists of integers.  
Output: merged and sorted list.

4/ Explanation of All Variables

num1 = first sorted list

num2 = second sorted list

merged = list to store the merged result

x, y = counters num1, num2

5/ Flow Chart  
Start > Input 2 lists of integers > Assume lists are sorted > Initialize loop counters and declare variable for empty list of the merged result > Create a while loop to compare both lists and append the smaller element to the merged list > Append the remainder of a list to the merged list, if applicable > Output merged list > End

6/ Lesson Learned  
Learned to merge lists using while and for loops, and to check for remaining values in lists after the loop comparison ended.

7/ Errors

* Used ‘insert’, which requires two arguments.
* Used one ‘append’ when I should have used two.
* Used ‘for’ loops instead of ‘while’ loop.
* Logic was wrong about using two appends as that would assume the compared number is next in list when there could be numbers from the other list still less than the compared number.
* Declare counter variables when switching from ‘for’ to ‘while’ loop
* Removed breaks that were left over from for loop
* Add remaining element after number comparison, if applicable
* =+ rather than +=