

Here are the commands I used to set up the github and export environment.

```
echo "# HW1" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/ChenweWu/HW1.git
git push -u origin main
conda create --name medai
conda activate medai
conda env export > environment.yml
```

```
PS C:\Users\chenw\cs197\hw1> ls

Directory: C:\Users\chenw\cs197\hw1

Mode                LastWriteTime         Length Name
----                -
-a----          9/15/2022  10:44 PM             80 environment.yml
-a----          9/15/2022  10:38 PM             30 README.md

PS C:\Users\chenw\cs197\hw1> git add .\environment.yml
PS C:\Users\chenw\cs197\hw1> git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        new file:   environment.yml
```

Using Lint helped me correct up a lot of bad coding styles such as extra whitespaces and long lines.

```
sol.py > Solution
1 class ListNode(object):
2     def __init__(self, val=0, next=None):
3         self.val = val
4         self.next = next
5
6
7
8 class Solution(object):
9     def mergeKLists(self, lists):
10         """
11         :type lists: List[ListNode]
12         :rtype: ListNode
13
14         CS197 HW1 Q2. LC https://leetcode.com/problems/merge-k-sorted-lists/solution/
15
16         """
17         return lists
```

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER

sol.py 3

- too many blank lines (3) flake8(E303) [Ln 8, Col 1]
- line too long (85 > 79 characters) flake8(E501) [Ln 14, Col 80]
- no newline at end of file flake8(W292) [Ln 17, Col 21]

I

It also helps me with minor issues like reminding me of variables created but not used, and using != None versus using is not

```

None.
class Solution(object):
    def mergeKLists(self, lists):
        """
        :type lists: List[ListNode]
        :rtype: ListNode

        CS197 HW1 Q2.
        LC https://leetcode.com/problems/merge-k-sorted-lists/solution/

        brute force iteration
        """
        all_list_val = []

        for list in lists:
            while list.next != None:
                all_list_val.append(list.val)
        results = ListNode()
        return lists

```

I am going to use a brute force iteration method that suprisingly beat 97% of the solutions. At first the code wasn't even runnable, but with the help of debugger and keeping track of my variables, I was able to get my solution accepted.

```

class Solution(object):
    def mergeKLists(self, lists):
        """
        :type lists: List[ListNode]
        :rtype: ListNode

        CS197 HW1 Q2.
        LC https://leetcode.com/problems/merge-k-sorted-lists/solution/

        brute force iteration
        """
        all_list_val = []

        for list in lists:
            while list.next is not None:
                all_list_val.append(list.val)
        results = ListNode()
        for val in all_list_val:
            results.next = ListNode(val)
            results = results.next
        return lists

```

VARIABLES	sol.py > [0] res
<ul style="list-style-type: none"> Locals > special variables > class variables > l1: <__main__.ListNode object... > l2: <__main__.ListNode object... > l3: <__main__.ListNode object... > l4: <__main__.ListNode object... > l5: <__main__.ListNode object... > l6: <__main__.ListNode object... > sol: <__main__.Solution objec... > Globals 	<pre> 29 results = results.next 30 return lists 31 32 33 l1 = ListNode(1) 34 l2 = ListNode(2) 35 l3 = ListNode(3) 36 l3.next = l1 37 l1.next = l2 38 39 l4 = ListNode(4) 40 l5 = ListNode(5) 41 l6 = ListNode(6) 42 l5.next = l4 43 l4.next = l6 44 45 sol = Solution() 46 res = sol.mergeKLists(l3, l5) </pre>
WATCH	<p>Exception has occurred: TypeError ×</p> <p>mergeKLists() takes 2 positional arguments but 3 were given</p> <p>File "C:\Users\chenw\cs197\sol.py", line 46, in <module></p> <pre> res = sol.mergeKLists(l3, l5) </pre>
CALL STACK	<p>mergeKLists() takes 2 positional</p> <p><module> sol.py (46)</p>
<p>PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL JUPYTER</p> <p>PS C:\Users\chenw\cs197> & 'C:\Program Files (x86)\Microsoft Visual Studio\Shared\Python37_64\python.exe' 'c:\Users\chenw\.vscode\extensions\ms-python;</p>	

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Runtime: 82 ms, faster than 97.30% of Python online submissions for Merge k Sorted Lists.

Memory Usage: 18.9 MB, less than 99.24% of Python online submissions for Merge k Sorted Lists.

Next challenges:

[Merge Two Sorted Lists](#)
[Ugly Number II](#)

Show off your acceptance:

Time Submitted	Status	Runtime	Memory	Language
09/15/2022 23:29	Accepted	82 ms	18.9 MB	python
09/15/2022 23:23	Runtime Error	N/A	N/A	python
09/15/2022 23:16	Runtime Error	N/A	N/A	python
09/15/2022 23:13	Accepted	131 ms	18.9 MB	python
09/15/2022 23:08	Time Limit Exceeded	N/A	N/A	python
09/15/2022 23:08	Time Limit Exceeded	N/A	N/A	python

Python

Autocomplete

```

1: class ListNode(object):
2:     def __init__(self, val=0, next=None):
3:         self.val = val
4:         self.next = next
5:
6:
7: class Solution(object):
8:     def mergeKLists(self, lists):
9:         """
10:         :type lists: List[ListNode]
11:         :rtype: ListNode
12:
13:         CS197 Mid Q2
14:         LC: https://leetcode.com/problems/merge-k-sorted-lists/solution/
15:
16:         brute force iteration
17:
18:         """
19:         all_list_val = []
20:         head = results = ListNode(0)
21:         for i in range(len(lists)):
22:             while lists[i] is None:
23:                 all_list_val.append(lists[i].val)
24:                 lists[i] = lists[i].next
25:
26:         for val in sorted(all_list_val):
27:             results.next = ListNode(val)
28:             results = results.next
29:         return head.next

```

Here is the github link: <https://github.com/ChenweWu/HW1>