



All questions are mapped to CLO-4

- Q1. Write a function called *is_sorted* that takes a list as a parameter and returns *True* if the list is sorted in ascending order and *False* otherwise. For example:
- ```
>>> is_sorted([1, 2, 2])
True
>>> is_sorted(['b', 'a'])
False
```
- Q2. Two words “interlock” if taking alternating letters from each forms a new word. For example, “shoe” and “cold” interlock to form “schooled”. Write a program that finds all pairs of words that interlock.
- Q3. Two words form a “metathesis pair” if you can transform one into the other by swapping two letters; for example, “converse” and “conserve”. Write a program that takes a word as an input and prints the “metathesis pair”, if it forms, and appropriate message otherwise.
- Q4. Write a function that prints characters using the following header:
- ```
def printChars(ch1, ch2, numberPerLine):
```
- This function prints the characters between ch1 and ch2 with the specified numbers per line. Write a test program that prints ten characters per line from 1 to Z.
- Q5. Write a function to compute the following series:

$$m(i) = \frac{1}{2} + \frac{2}{3} + \dots + \frac{i}{i+1}$$

Write a test program that displays the following table.

<i>i</i>	<i>m(i)</i>
1	0.5000
2	1.1667
...	
19	16.4023
20	17.3546