**Question 7 [8 marks]:**   
Let A be a sequence with n nonzero numbers. Design an algorithm by using induction to compute the sum of the reciprocal of the numbers in A. Specify your algorithm using recursive implementation. Note that for a number x, its reciprocal is 1/x.

def recursive\_sum\_of\_reciprocals(A):

# A is a list of non-zero numbers

# Base case: if the list is empty, return 0

if len(A) == 0:

return 0

# Recursive case: compute the sum for the first n-1 elements, then add the reciprocal of the nth element

else:

# Use array slicing to pass the first n-1 elements to the recursive call

return recursive\_sum\_of\_reciprocals(A[:-1]) + 1/A[-1]