# Write a Python function that takes a sequence of numbers  
# and determines whether all the numbers are different  
# from each other.  
  
def setOfNumbers (sequence):  
 if len(sequence) == len(set(sequence)):  
 return True  
 else:  
 return False;  
  
print(setOfNumbers([4, 5, 7, 8, 9]))  
print(setOfNumbers([5, 5, 7, 8, 9]))

# Write a Python program to remove and print  
# every third number from a list of numbers  
# until the list becomes empty.  
  
listOfNumbers = [2, 3, 4, 5, 6, 7]  
i = 0  
  
while len(listOfNumbers) > i:  
 print(listOfNumbers.pop(2))  
 print(listOfNumbers)

#Write a Python program to create all possible  
# strings by using 'a', 'e', 'i', 'o', 'u'.  
# Use the characters exactly once.  
  
from itertools import permutations  
list1 = ['a', 'e', 'i', 'o', 'u']  
list2 = list(permutations(list1))  
for list in list2:  
 str1 = ""  
 for j in list:  
 str1 += j  
 if len(str1) == len(list1):  
 print(str1)