

Algorithm

1. Ask the user to enter a 9-digit number with no repeated digits.
2. Save this number as the “original” reference number.
3. Start testing numbers one by one, beginning from the original number + 1.
4. For each candidate number:
 - Make a fresh copy of the digits from the original number.
 - Check each digit of the candidate against the copy.
 - If the digit is in the copy, remove it (so we don’t count it twice).
5. After checking all digits of the candidate:
 - If all digits from the copy are gone, then the candidate uses exactly the same digits: this is the next highest number we want.
 - Stop searching and print this number.
6. If we reach 999,999,999 without finding such a number, report that no acceptable answer exists.