Assume that a sequence contains some characters. For a sequence, we say the sequence is sorted if the sequence is listed in lexicographic order. For example, these four sequences 'AABBCCCDEESXYZ', 'BBCCCCDDESSVV', 'ADD', 'WWWW' are in lexicographic order

So, we can define that a sequence is unsorted if the sequence is not in lexicographic order. Then, we want to calculate the number of inversions of the sequence. For example, the character sequence 'DAABDC', the number of inversions is 5, because the first D is greater than 4 characters (i.e., A, A, B, C) to its right and the second D is greater than 1 character to its right. Another example is that the character sequence 'EDBA' has 6 inversions. Because that E is greater than three characters (i.e., D, B, A) to its right, D is greater than two characters (i.e., B, A) to its right, and B is greater than one character (i.e., A) to its right.

Write a program, which ask user to input a sequence, and then calculate the number of inversions.

```
ryanpan@RyanPanPC /Volumes/MyWorks/D_Data/teaching/111/C/week01$ gcc week01_solution.c
ryanpan@RyanPanPC /Volumes/MyWorks/D_Data/teaching/111/C/week01$ ./a.out
Please input a character sequence: DDD
  number of inversions: 0
ryanpan@RyanPanPC /Volumes/MyWorks/D_Data/teaching/111/C/week01$ ./a.out
Please input a character sequence: EDBA
  number of inversions: 6
ryanpan@RyanPanPC /Volumes/MyWorks/D_Data/teaching/111/C/week01$ ./a.out
Please input a character sequence: ZXCVB
  number of inversions: 9
ryanpan@RyanPanPC /Volumes/MyWorks/D_Data/teaching/111/C/week01$ ./a.out
Please input a character sequence: QWERTY
  number of inversions: 4
```