```
// ***
// *** You MUST modify this file, only the ssort function
// ***

#include <stdio.h>
#include <stdbool.h>

#ifdef TEST_COUNTCHAR
bool countChar(char * filename, int * counts, int size)
{
  int onechar;
  FILE *fptr = fopen(filename, "r");
  if (fptr == NULL)
    {
     return false;
    }

  do
  {
   onechar = fgetc(fptr);

   if (0 <= onechar && onechar <= (size - 1))
   {
    counts[onechar]++;
   }

   if(feof(fptr))
     break;
  }while(!feof(fptr));

  fclose(fptr);
  // open a file whose name is filename for reading
  // if fopen fails, return false. Do NOT fclose
  // if fopen succeeds, read every character from the file
  //
  // if a character (call it onechar) is between
  // 0 and size - 1 (inclusive), increase
  // counts[onechar] by one
  // You should *NOT* assume that size is 256
  // reemember to call fclose
  // you may assume that counts already initialized to zero
  // size is the size of counts
  // you may assume that counts has enough memory space
  //
  // hint: use fgetc
  // Please read the document of fgetc carefully, in particular
  // when reaching the end of the file
  //
  return true;
}
```

```
#endif

#ifdef TEST_PRINTCOUNTS
void printCounts(int * counts, int size)
{
  int i; //array index counter
  for (i = 0; i < size - 1; i++)
  {
   if(counts[i] == 0)
   {
    //i++;
   }
   else if(counts[i] != 0)
   {
    if((i >= 65 && i <= 90) || (i >= 97 && i <= 122))
    {
     printf("%d, %c, %d\n", i, i, counts[i]);
    }
    else
    {
     printf("%d,  , %d\n", i, counts[i]);
    }
   }
  }
  // print the values in counts in the following format
  // each line has three items:
  // ind, onechar, counts[ind]
  // ind is between 0 and size - 1 (inclusive)
  // onechar is printed if ind is between 'a' and 'z' or
  // 'A' and 'Z'. Otherwise, print space
  // if counts[ind] is zero, do not print
}
#endif
```