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#include <iostream>

#include <cctype>

using namespace std;

int DemKhoangTrang ( char \*s)

{

int dem = 0 ;

while (\*s)

{

if ( isspace (\*s))

{

dem++;

}

s++;

}

return dem;

}

int DemChuvaSo ( char \*s)

{

int dem = 0 ;

while (\*s)

{

if ( isalnum (\*s))

{

dem++;

}

s++;

}

return dem;

}

int DemKyTuInHoa ( char \*s)

{

int dem = 0 ;

while (\*s)

{

if ( isupper (\*s))

{

dem++;

}

s++;

}

return dem;

}

int DemInThuong ( char \*s)

{

int dem = 0 ;

while (\*s)

{

if ( islower (\*s))

{

dem++;

}

s++;

}

return dem;

}

void ChuyenInHoa ( char \*s)

{

/\*while ( \*s)

{

if ( isspace(\*s))

s++;

else

break;

}\*/

while ( \*s)

{

/\* while ( \*s)

{

if ( isspace(\*s))

s++;

else

break;

}

\*s = toupper(\*s);\*/

while ( \*s)

{

if ( islower(\*s))

\*s = toupper(\*s);

s++;

}

}

}

void ChuyenInThuong (char \*s)

{

while ( \*s)

{

if ( isupper(\*s))

\*s = tolower(\*s);

s++;

}

}

void InHoaKyTuDau ( char \*s)

{

while ( \*s)

{

if ( isspace(\*s))

s++;

else

break;

}

\*s = toupper(\*s);

s++;

while (\*s)

{

if (isspace(\*(s-1)) && isalpha(\*s))

\*s = toupper(\*s);

else

\*s = tolower(\*s);

s++;

}

}

int DemTu ( char \*s)

{

int dem = 0;

while ( \*s)

{

if ( isspace(\*s))

s++;

else

break;

}

if ( isalnum(s[0]))

dem++;

s++;

while ( \*s)

{

if (isspace(\*s) && isalnum(\*(s+1)))

dem++;

s++;

}

return dem;

}

int main ()

{

char s[50];

cout <<" Nhap vao mot chuoi: ";

cin.get(s, 50);

cout <<" So khoang trang cua chuoi la: " << DemKhoangTrang(s) << endl;

cout <<" So ky tu chu va so cua chuoi la: " << DemChuvaSo(s) << endl;

cout <<" So ky tu in hoa cua chuoi la: " << DemKyTuInHoa(s) << endl;

cout <<" So ky tu in thuong la: " << DemInThuong(s) << endl;

ChuyenInHoa(s);

cout <<" Chuoi sau khi in hoa la: " << (s) << endl;

ChuyenInThuong(s);

cout <<" Chuoi sau khi in thuong la: " << s << endl;

InHoaKyTuDau(s);

cout <<" Chuoi sau khi chuyen in hoa ky tu dau la: " << s << endl;

cout <<" Chuoi ban nhap co " << DemTu(s) <<" tu\n";

system ("pause");

return 0;

}