

Text information, like any other, is stored in memory in binary form. To do this, each character is associated with some negative number, called a character code, and this number is written to the PC memory in binary form. Specific mapping between characters and their codes is called coding or system code table PC. At any given time in each position output can be sent to only one character with a limited set of so-called code table PC.

Depending on the operating system and specific applications, using 8-bit (odnobaytni) and 16-bit (dvobaytni) character codes.

The use 8-bit codes allow encode 256 different characters. This is sufficient for representing many characters that are used in practice. In this case, the character code to allocate enough memory one byte.

In personal computers commonly used coding system ASCII (American Standard Code for Information Interchange - American Standard Code for Information Interchange).

This coding introduced in 1963 and placed in line with each character somyrozryadnyy (!) Binary code. It is easy to determine that this code can be represented by ASCII 128 characters.

A total of 8-bit ASCII codes attached two tables encoding basic and expanded. Basic values table establishes codes from 0 to 127, and expanded to include characters with numbers from 128 to 255.

The first 32 positions of basic code table starting from zero, given the hardware manufacturers. From 32 to 127 positions are character codes of the alphabet, punctuation marks, arithmetic and some supporting characters. For example, the symbol 13 - return koretky symbol 10 - key input symbol 0 - blank character, 32 - code space; 48-57 digits 0..9 codes; 65-90 codes lowercase letters AZ; 97-122 codes lowercase Latin letters az.

Show table usually contains character codes PC user's language. Table codes all modern PCs are programmable and may need to change the symbols that fixed the number. Character encoding Cyrillic known as encoding Windows-1251, was introduced by Microsoft and is widely spread.

Other common coding is called koi-8 (code sharing information, vosmiznachnyh) - its origin dates back to the actions of the Council for Mutual Economic Assistance

countries of Eastern Europe.

The international standard, which envisaged Cyrillic character encoding is called ISO (International Standard Organization - International Institute for Standardization).

A limited set of 8-bit codes (256 images variants characters) arose system that is based on the 16-bit character encoding. She called universal - UNICODE. Sixteen bits can provide unique codes for 65,536 images of different characters. This field is sufficient for placing one symbol table as most of the planet. Today the most common text encoding system.

UNICODE symbol sostoyt IZ 2 bytes (16 bits) and depending on the size of memory that is allocated under it, the character set can be represented by different numbers of characters.

Change encoding Console Commands CHCP. CHCP 866 console layout is the Cyrillic ASCII, and command CHCP 1252 - Cyrillic Windows-1251. In edit mode or viewing manager FAR-coding change key [F8]. Keep in mind that Windows-based applications tend to provide images Cyrillic characters encoded in Windows-1251.

In the second part of the ASCII character set and the characters are pseudo. By combining these characters can build a table in the console.

The output symbols of the console may be three ways. You can find a character on the keyboard and press the desired key. The standard keyboard allows display 104 characters. However, these opportunities enough. Using keyboard shortcuts [ALT + N], where N - number of characters in the code table. With FORTRAN char (N), where N - number character from 0 to 255 in the code table, the program may bring images of any character on the console.

Example.

Write a program for code table PC using the char (n).

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Program lab61
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DO 10 N = 0, 256
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10 write (*, *) N, '->', char (N)
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stop

end

The feature works very simple composite applications is that some service control characters (code of 0 to 32) the derivation of the console perform controlling actions they are intended for all others. This causes undesirable results of the program. To eliminate this phenomenon should redirect the program results to a text file.