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ENGLISH IN LOW-LEVEL AND HIGH-LEVEL PROGRAMMING LANGUAGES

English is in demand in IT - this is the language that every person in this field should know. It is interesting that all communication between a computer and a person, communication with partners, employers takes place in English. Since all the work is closely related to the terms that are used during writing program code, people learn the language as they learn to program.

Programming languages actually consist of English words and abbreviations, so it is impossible not to use English when working in IT. Knowing this, I want to explore the use of English in different programming languages. Programming languages can be divided into two groups: high-level and low-level.

A high-level programming language is a programming language designed for speed and ease of use by the programmer. The main feature of high-level languages is abstraction, that is, the introduction of semantic constructions that briefly describe such data structures and operations on them, the descriptions of which in machine code are very long and difficult to understand [1].

Low-level programming language is a programming language close to programming directly in machine codes of the used real or virtual processor [2].

Let's take a look at typical assembly language instructions.

The most commonly used mov instruction, which copies the second operand (source operand) into the first operand, is short for MOVE. Also such commands as CMP (COMPARE), JL (JUMP LESS), JG (JUMP GREATER), LOOP, commands OR, AND, TEST, NOT (performs inversion), jcxz (Jump if cx is Zero).

```
include \masm32\include\masm32rt.inc

StrLen proto :DWORD; prototype procedure

.data
lpstring dd 0; row addresses
nc dd 0; digit counter

.code
start:; this is the label <point of entry> in the program
mov lpstring, input ("Type a line and press Enter:")

; procedure StrLen defines the length of the parameter row
; and returns the result in eax
invoke StrLen, lpstring
mov ecx, eax; init loop counter

mov ebx, lpstring
xor eax, eax; starting offset in row = 0. Same as mov eax, 0

jcxz PrintResult
@@:; loop body start mark
cmp byte ptr [ebx + eax], '0'
jl nextChar; if character code <code '0' - go
cmp byte ptr [ebx + eax], '9'
jg nextChar; if character code> code '9' - go
; here the symbol is a number
inc dword ptr [nc]; digit counter increment
nextChar:
inc eax; move to next character
loop @B

; ------------ outputting the result ----------
PrintResult:
print "Digits found in a row -"
print str$(nc),13,10

inkey "Press the button!"
; ------ end of the program --------------
invoke ExitProcess, 0; exit to Windows
end start; end of source and entry point name
```

Fig. 1 – MASM code

Let's look at a simple MASM program. We enter a string, and the program counts how many digits it contains. You can see the program code in figure 1, and its work in figure 2.

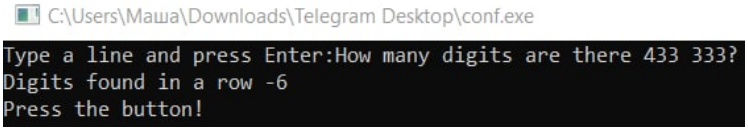

Fig. 2 – MASM code test

Without knowing the programming language, we can figure out how the program works, just by knowing the abbreviations of the commands.

High-level programming languages also consist entirely of English words. Let's take an example of a high-level programming language like Java. This code is easy to read without knowing programming, but knowing English. You can see the program code in figure 3, and its work in figure 4.

```
1  package konf;
2
3  import java.util.Scanner;
4
5  public class conference {
6
7          public static void main(String[] args) {
8              StringBuilder sb = new StringBuilder ("Enter data for this template: \n");
9              sb.append("Surname and name/number of unsatisfactory/average score/\n");
10             sb.append("For example: \ncat Basilio/2/2,4/");
11             System.out.println(sb);
12             Scanner sc = new Scanner(System.in);
13             sc.useDelimiter("/");
14             String name = sc.next();
15             int n = sc.nextInt();
16             float b = sc.nextFloat();
17             sc.close();
18             System.out.println(name + ": twos " + n + "; average score-" + b);
19     }
20 }
```

Fig. 3 – Java code

```
Enter data for this template:
Surname and name/number of unsatisfactory/average score/
For example:
cat Basilio/2/2,4/
Antonova Mariia/0/95/
Antonova Mariia: twos 0; average score-95.0
```

Fig. 4 – Java code test

Words such as System, Scanner, Input, Output, Print are familiar to many people outside the IT world.

It is quite logical that on lines 8, 9, 10 we declared a string variable, which we then output to 11. We also declared variables for the name, the number of twos, and the average score. On line 18, we just printed these values. Obviously, the code in Java is easier to read, since we get rid of abbreviations and can describe the algorithm of actions in a language understandable to a person as simply as possible.

Here is the answer to the question why the IT world speaks English - English is the main tool in programming.

Thus, we believe that it is possible to be able to read the program code by knowing English. Working in the IT sphere becomes easier and more understandable, because it is more convenient to communicate and program in one language.

Список використаних джерел

1. High-level programming language [Електронний ресурс] – Режим доступу до ресурсу: https://dic.academic.ru/dic.nsf/ruwiki/1464.

2. Low-level programming language [Електронний ресурс] – Режим доступу до ресурсу: https://dic.academic.ru/dic.nsf/ruwiki/16257.

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FOREIGN LANGUAGE AS AN INTEGRAL PART OF STUDENTS' VOCATIONAL TRAINING IN NON-LINGUISTIC UNIVERSITIES

The conclusion of the Bologna Agreement and the integration of Ukraine into the single European educational space has significantly influenced on the orientation and reorientation of Ukrainian educational standards.

The significant expansion of international, business, economic and cultural contacts observed in Ukraine has led to a change in the needs and goals of mastering foreign languages not only in language but also in non-linguistic institutions of higher education. Modern programs of higher professional education are aimed at a competency-based approach, which is designed to form the key competencies of specialists in any field.

Since the study of foreign languages at the present stage is based on an interdisciplinary integrative basis and is aimed at the complex formation and development of communicative, cognitive, informational, sociocultural, professional and general cultural competencies of students of non-linguistic universities, the ability to translate professional information from Ukrainian into Ukrainian is extremely valuable for professionals of any training profile.

Nowadays, there is a trend in job advertisements when specialists with knowledge of one or two foreign languages are invited. This is evidence that there is a demand for professionals with the appropriate level of knowledge of a foreign language.

In Europe, according to the German Institute for Economic Research, one in five workers uses a foreign language skill in their professional activities. According to the organizers of the International Conference on Foreign Languages and Business Communication in the International Economy, Workshops and Exhibitions (ICWE), which was held under the slogan "Languages and Professions", "intercultural knowledge in economics has long been a competitive advantage but a social necessity." [1].

The above mentioned indicates that knowledge of a foreign language becomes an integral part of the professional competence of specialists with higher education in various fields of training and makes them competitive in the international labor market. All this necessitates qualitative changes in the teaching of foreign languages to students of non-language specialties, in order to improve their level of knowledge of a foreign language and the possibility of its practical use in future professional activities.